

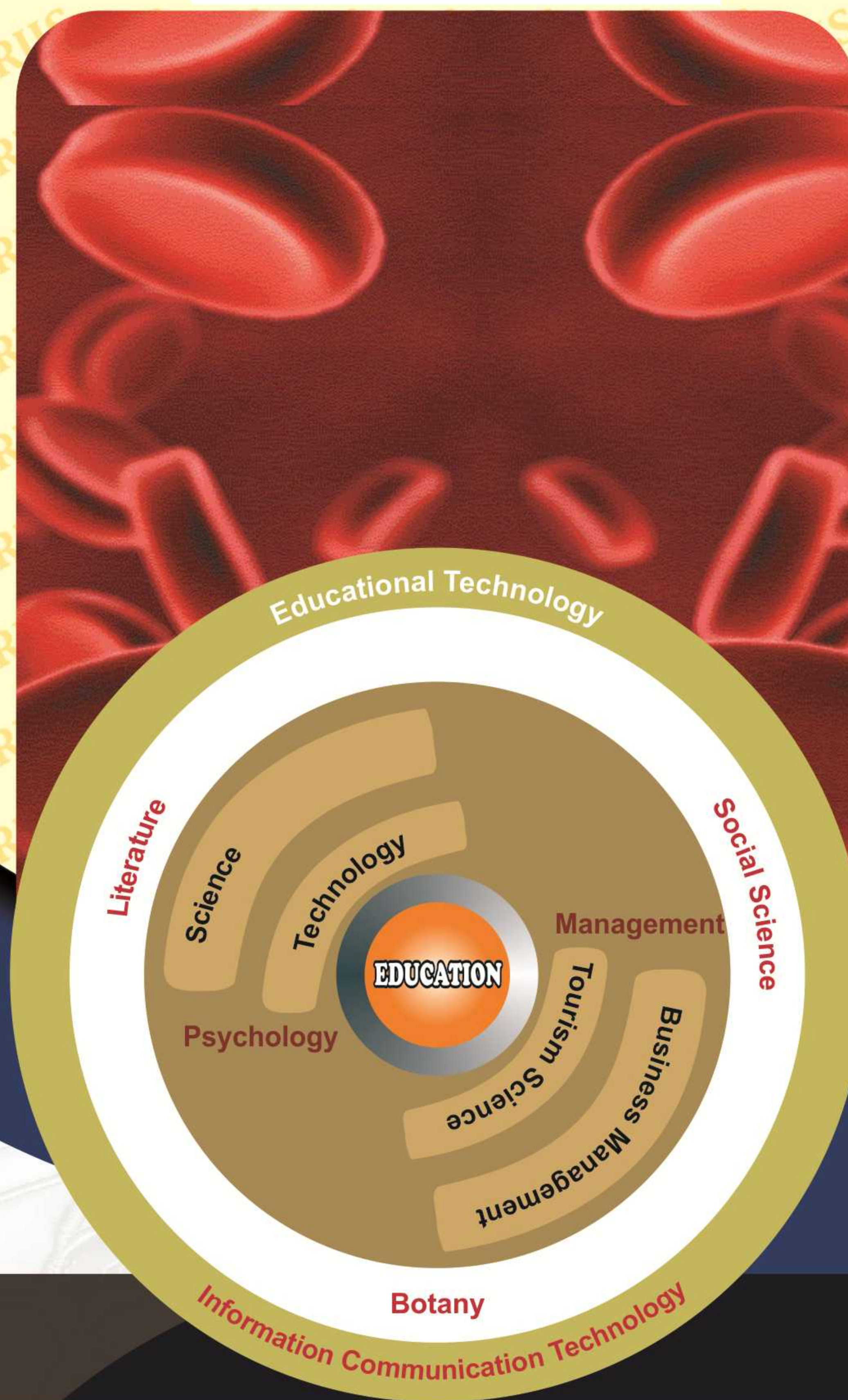
Scholarly Research Journal for Interdisciplinary Studies JULY-SEPT, 2017. VOL. 6/33

UGC Approved Sr. No. 49366



**SRJIS**

Online ISSN -2278-8808



An International  
Peer Reviewed

Referred  
Quarterly

# SCHOLARLY RESEARCH JOURNAL FOR INTERDISCIPLINARY STUDIES

SPECIAL ISSUE JULY-SEPT, 2017. VOL. 6, ISSUE -33

EDITOR IN CHIEF : YASHPAL D. NETRAGAONKAR, Ph.D.

# INDEX

SR. NO.	TITLE & AUTHOR (S) NAME	PAGE NO
1	<b>INNOVATIONS IN COUNSELLING EDUCATION</b> <i>Ms. Rupal Vora &amp; Dr. Vidhya Satish</i>	1-5
2	<b>TEACHING, LEARNING AND ASSESSEMENT - RESEARCH INITIATIVES</b> <i>M. M. Puranik &amp; Sushma G. Katti</i>	6-9
3	<b>BEST PRACTICES FOR QUALITY EDUCATION IN 21<sup>ST</sup> CENTURY</b> <i>Mohd.Muntazim</i>	10-13
4	<b>TO WHAT EXTENT ARE OUR ECONOMICS PRE-SERVICE TEACHERS EQUIPPED WITH ADEQUATE ECONOMICS SUBJECT MATTER KNOWLEDGE TO TEACH? A COMPARATIVE PERSPECTIVE</b> <i>Dr. Sneha Raikar</i>	14-18
5	<b>CITATION ANALYSIS OF DOCTORAL DISSERTATIONS: A COLLECTION MANAGEMENT TOOL FOR TEACHER EDUCATION COLLEGE LIBRARY</b> <i>Mrs. Shakuntala S Nighot</i>	19-30
6	<b>A STUDY OF TEACHER ENGAGEMENT AMONG SECONDARY SCHOOL TEACHERS OF MUMBAI</b> <i>Ms. Sandhya Sarwade</i>	31-37
7	<b>EDUCATION FOR GLOBAL PEACE AND SUSTAINABLE DEVELOPMENT</b> <i>Mr. Bhimappa Ramappa Rangannavar</i>	38-45
8	<b>IMPACT OF OUTCOME BASED LEARNING ON TEACHING,LEARNING AND ASSESSMENT</b> <i>Dr. Sunita Wadikar</i>	46-50
9	<b>GIFTING A LIFE: A QUASI EXPERIMENTAL STUDY OF ATTITUDES AND AWARENESS OF COLLEGE STUDENTS TO ORGAN DONATION</b> <i>Patricia D'Souza</i>	51-56
10	<b>A STUDY OF PERCEPTION OF STUDENTS REGARDING EDUCATION FOR GLOBAL PEACE IN SCHOOLS</b> <i>Dr. Sheetal S. Chaudhari</i>	57-61
11	<b>INFORMATION AND COMMUNICATION TECHNOLOGY: STUDENT'S FRIEND, TEACHER'S HELPING HAND</b> <i>Dr. Sr. Tanuja Waghmare</i>	62-68

12	<b>HURDLES IN INNOVATING TECHNOLOGY IN EDUCATION</b> <i>Jinklod Babu Sayabu</i>	69-71
13	<b>EDUCATION FOR GLOBAL PEACE AND SUSTAINABLE DEVELOPMENT</b> <i>Shital Yogesh Potdar</i>	72-75
14	<b>AWARENESS OF PEACE EDUCATION AMONG STUDENT TEACHERS OF PUNE CITY</b> <i>Dr. Namrata Anand Kamble</i>	76-80
15	<b>INNOVATIVE PRACTICES IN THE CURRICULUM TRANSACTION OF THE B. ED. COLLEGES</b> <i>Umakant V. Deshmukh</i>	81-85
16	<b>EDUCATION FOR GLOBAL PEACE AND SUSTAINABLE DEVELOPMENT</b> <i>Mrs. Joyce Kurian</i>	86-89
17	<b>AUGMENTED REALITY: TOOL FOR THE 21<sup>ST</sup> CENTURY CLASSROOM</b> <i>Dr. Reni Francis</i>	90-92
18	<b>ICT – A BOON FOR TEACHERS IN LANGUAGE ASSESSMENT</b> <i>Dr. Rukmini Jamdar</i>	93-97
19	<b>A STUDY TO ASSESS THE EXISTING STATUS IN THE TEACHER EDUCATION COLLEGES REGARDING THE MULTIPLE INTELLIGENCES THEORY BASED CLASSROOM PRACTICES FOLLOWED BY THE TEACHER EDUCATORS IN PUNE CITY</b> <i>Dr. Lalita Vartak &amp; Ms. Priya Singh</i>	98-109
20	<b>STRESS MANAGEMENT: MANIFESTATION OF INNER AND GLOBAL PEACE</b> <i>Dr. Helen Jadhav</i>	110-115
21	<b>A STUDY OF MOTIVATION OF STUDENT-TEACHERS IN RELATION TO THEIR SELF-EFFICACY ON THE BASIS OF THE TYPE OF MANAGEMENT OF THE COLLEGE</b> <i>Cerena Aurin D'Cunha</i>	116-121
22	<b>ALTERING THE LANDSCAPE OF EDUCATION 3.0 THROUGH MASSIVE OPEN ONLINE COURSES</b> <i>Dr Agnes D'Costa</i>	122-127
23	<b>A STUDY OF CHARACTERISTICS IN MARATHI BALBHARTI STD. VII TEXTBOOK</b> <i>B.G.Khade</i>	128-138
24	<b>ROLE OF RESEARCH IN PEDAGOGICAL DISCOURSE: FAMILIAR CHALLENGES AND NEW APPROACHES</b> <i>Samya Shinde</i>	139-143

25	<b>A STUDY OF RELATIONSHIP BETWEEN ATTITUDE TOWARDS TEACHING PROFESSION AND TEACHER EMPOWERMENT OF TEACHER EDUCATORS'</b> <i>Dr. Jayesh Raghunath Jadhav</i>	144-149
26	<b>CREATING GOOD CITIZENS: ROLE OF FAMILY IN POLITICAL SOCIALIZATION</b> <i>Dr. Cindrella D'Mello</i>	150-154
27	<b>DEVELOPING AND IMPLEMENTING A MOOC – THE CHALLENGES</b> <i>Ms. Sandychris Inchiparamban &amp; Dr. Sudha Pingle</i>	155-159

**INNOVATIONS IN COUNSELLING EDUCATION**

**Ms. Rupal Vora**, *Coordinator & Faculty, SIES Institute of Comprehensive Education, Sion, Mumbai, India rupalv@sies.edu.in*

**Dr. Vidhya Satish**, *Director, SIES Institute of Comprehensive Education, Sion, Mumbai, India vidhyas@sies.edu.in*

**Introduction:** For a nation to achieve optimum growth, development of human capital is critical. For growth of quality human capital, quality education through carefully designed and well-planned educational systems is essential (Das, M, 2005). At SIES Institute of Comprehensive Education (SIES ICE), a training institute specializing in counselling training all efforts are taken to offer counselling education that is contemporary, insightful and skill-based leading to quality education. The present paper discusses the innovations in counselling education that is carried out at our institute. In the American Counselling Association Conference in Pittsburg in the year 2010 a unified definition of counselling was decided upon which is stated as follows: *-Counselling is a professional relationship that empowers diverse individuals, families and groups to accomplish mental health, wellness, education and career goals*". The counsellor thus needs to be trained to be sensitive, humane and capable of facing diverse issues that confront him or her. As a training institute, various innovative activities listed below are carried out to achieve this end.

**Presentations of topics beyond the syllabus:** Presentations have become an essential skill to be developed in the new age counsellor. Gone are the days when counselling was restricted to only individual or group therapies. Counsellors of today are expected to conduct various presentations for their clients. It is common now in counselling settings such as schools, to conduct presentations to the class on varied vital issues from prevention of drug abuse, to dealing with bullying to sexuality issues and so on. We believe that this leads to dual consequences – one through these contemporary presentations, students learn about topics that are beyond the syllabus and the other benefit being overcoming their fear of public speaking. Thus presentations are conducted on geriatric issues, common neurosis and psychosis, child psychopathology, and a gamut of other counselling related issues. By the end of the year, students become so confident that they serve as experts and conduct career presentations and pre-marital counselling presentations in various NGO's, schools and colleges. There are numerous benefits of student presentations which include not only improvement in presentation and communication skills but greater class interaction and interest in learning. When non-presenting students observe others, they are not only able to understand different perspectives of the topic but also develop their communication skills (Girard, Pinar & Trapp, 2011).

**Peer Assessment:** One method that we found very useful in overcoming the challenge of non-presenting students from losing interest is through the introduction of peer evaluation. In peer evaluation/assessment *students individually assess each other's contribution using a predetermined list of criteria. Grading is based on a predetermined process, but most*

*commonly it is an average of the marks awarded by members of the group* (<https://teaching.unsw.edu.au>). Peer assessment has numerous benefits. It not only promotes students' involvement but also creates a sense of responsibility and develops ownership during the process. It also allows students to reflect on and assess their own learning. This activity helps students work cooperatively, think critically, give constructive feedback and most crucially learn from critical appraisal given by others (<https://teaching.unsw.edu.au>). The various criteria that are deployed for assessment are first discussed with the students. Since student participation in this activity is very high, they feel that the marking system is more transparent and student friendly leading to better performance. Peer assessment is conducted by our students during presentations on the upcoming new age careers as well as presentations on topics such as common psychosis and neurosis.

**Inviting eminent practitioners as guest speakers:** Counselling is a dynamic field. Counselling issues are constantly changing. We have found that in order to bridge the gap between classroom lectures and the real world, it is the need of the hour to invite eminent practitioners as guest speakers. Hoek, V, (2011) found that experts from the field carried as much or more credibility than those from the academic side. Recognizing the importance of having experts in the field, the teaching faculty comprise of guest speakers, host of experts and number of other luminous practitioners who bring their insight, knowledge and valuable experience to the classroom along with only one full time faculty. The students receive a refreshing real perspective in their chosen counselling fields. We at SIES ICE go a step further and try to invite our successful alumni to conduct guest sessions. Thus we have past students who conduct sessions on behavior modification, school counselling to name a few. Students see their role models and aspire to be like them.

**Use of Role Play:** The new age student is different from the past. A student-centred approach needs to be taken to make lecture sessions interesting and yet meaningful. Role playing was developed by Jacob Moreno who believed that people could gain more from acting out their problems than from talking about them. To create interest and keep them engaged and make them feel they are -part of the teaching process, the use of role play as a pedagogical method is used extensively at SIES ICE. Role plays are conducted which focus on issues in marital counselling, parenting, drug abuse, conflict resolution, crisis intervention to name a few. Role play helps the trainee counsellors to understand underlying issues in counselling related cases and at the same time allows them to learn how to strategically use it with their clients once they become professional counsellors.

**The usage of flipped Classroom:** The flipped classroom model is a teaching innovation introduced by Bregman and Sams in 2007. It has 'flipped' traditional teaching strategies. Teaching now is no longer teacher focused but becoming more student focused. It is a reversal of traditional teaching where students receive an exposure to relevant material/resources outside the classroom first, in our case via online links and relevant reading material and then in class the knowledge is assimilated by means of discussions and debates. We at SIES ICE, have found this pedagogy very useful in topics such as marital problems and issues regarding unemployment. We are able to focus on student understanding rather than on traditional

lecture method. We have found two profound benefits that are created. One is greater interest in the topic and the other is onus in their own learning. This methodology helps in increasing student involvement in their own education.

**Self Enrichment Workshops:** Some of the essential qualities a counsellor must possess and display in their interaction with the client are *empathy, congruence, positive regard, respect* and *genuineness* for the client. For the counsellor to display positive regard and respect for the client, it is essential they have positive regard and respect for their own self in the first place (Satish & Vora, 2015). Welfel, E. & Patterson, L, 2000 have also reiterated that it is essential that a counsellor should like and respect themselves. For students to imbibe these essential qualities to become effective counsellors a number of self-enrichment workshops are conducted. Sessions on Enhancing Self Esteem, Bringing about an Attitudinal Change, Developing Sensitivity and the like are carried out by the faculty. Sessions have been also arranged and conducted by NGOs, private bodies and experts. Students particularly have found the sessions conducted by the Chinmaya Mission on Emotional Intelligence, Spiritual Intelligence, very transforming and enriching.

**Agency Visits:** Agency Visits is an integral part of our counselling programme at SIES. We have realised that mere classroom lectures are not enough to make an effective counsellor. There is a need to bridge the gap between theoretical training and the real life environment. Holistic learning cannot be achieved from mere textbooks and lectures. Agency visits are organised and this facilitates active practical learning in a real life environment. It broadens the outlook of the student. For example, after sessions on counselling special children, a visit to an integrated school is organised so the students can interact with autistic, physically and mentally challenged children and also observe classroom management strategies. Visit to Streechetna, an NGO working for women allows them to discuss with the committee members the latest issues in marital problems and the necessary counselling required. Similarly, visit to a Thalesemmia Unit at a local hospital allows the students to not only meet the patients but also their caregivers and understand the problems related to this terminal illness. We have found that students who were regular and attended the agency visits were more confident when taking up jobs at the end of the course as the visits gave them a clear understanding of what their profession will entail having observed the conditions in detail.

**Participation in National and International Conferences /Seminars:** As an institute which aims at creating counsellors with a global perspective, students are encouraged to attend National and International Conferences and Seminars. Students regularly attend seminars organised not only by colleges but also of NGOs such as The Foundation, DRISHTI, the Bombay Psychiatry Association as well as seminars conducted by Loka Manya Tilak Medical and Government Hospital and Masina Hospital. Such participation gives students opportunities to meet experts and also learn about the latest developments in the field. These interactions with experts helps the trainee counsellors to identify role models in the field, leading to a focussed career and academic pathways in many instances.

**Art Therapy:** Art therapy can be defined as a type of psychotherapy that employs art and artistic medium to help people explore their thoughts and emotions in a unique way. This

therapy uses art as a primary means of communication which is found useful for those who find it difficult to verbalise their feelings (<http://www.counselling-directory.org.uk/art-therapy.html>). Students are oriented to art as a therapeutic method at our institute. Art is cathartic in nature offering an outlet to release negativities, fears, and anxieties. It helps an individual come to terms and work on one's shortcomings (Satish & Vora, 2015). The use of art based techniques/therapies is taught to them not only to help their future clients but also to help themselves grow into emotionally stable and balanced individuals. Thus art therapy is conducted on the trainee counsellors who in turn use it in their internship and then with their clients. The trainee counsellors can use it with a number of clientele. It is recommended by the National Institute for Health and Care Excellence (NICE) in the treatment of schizophrenia, dementia and other few other terminal illnesses. Our trainee counsellors who intern with an NGO MIMANSA have used this technique and have reported positive results when art based therapy was used with clients who were children having learning difficulties and those who were into substance abuse.

**Community Outreach Projects:** The principal objective of education is not only merely knowledge enhancement but also making people work with a spirit of service dedicated to nation-building (Cherian, 2008). As an institute with an aim to develop holistic, sensitive and humane counsellors, we lay great emphasis on community outreach projects. Our counselling trainees are exposed to a number of social settings. Every year our students conduct workshops on issues such as Peer Pressure, Study Skills, and Time Management for inmates of Antar Bhariya Balgram, Khandala, an SOS home for destitute children. Interactions with these children bring to light the issues faced by destitute children. Various projects are conducted with the NGO - Cancer Patients Aid Association (CPAA) which gives an in-depth understanding of this terminal illness and offers the counselling trainees a chance to interact with cancer afflicted patients. These projects help them not only to practice classroom knowledge in a real life context but also help to develop critical thinking skills while dealing in the real world. This leads to learning beyond the classroom. Sessions on anger management, stress management for NGOs such as BRIGHT FUTURE, SHEILD to name a few for youth from the lower socio economic strata are carried out. Community outreach thus has reaching benefits for the students themselves. In the most positive light, such service teaches children and teenagers to look beyond themselves and understand the role they can play in their community and country (Tugend, A, 2010). Stenger, M (2013) has enumerated numerous benefits of community service: as a chance to work with professionals, enhancement of problem solving skills, team skills, planning skills, social skills and a realisation that they are making a difference in others' lives thus leading to enhancement of self-esteem, self-confidence and self-efficiency.

**Conclusion:** Education is the most powerful tool you can use to change the world stated Nelson Mandela. It is through quality education that any change can be expected. In our counselling education program, this is clearly emphasised. Reflective counsellors are the need of the hour. Counsellors must not only reflect on, but learn to deal with their beliefs, assumptions, biases and prejudices. Clarity in thinking will aid them in offering quality



counselling. As a training institute it is our duty to aid students to receive holistic learning. We retrospect and introspect our activities on a regular basis and carry out few of the innovations discussed in the paper in the best possible manner.

**References**

- Das, M. (2015). *Innovative Practices in Teacher Education*. *International Research Journal of Interdisciplinary & Multidisciplinary Studies Journal*, V- (I), ISSN: 2394-7950, Page No. 15-18, Scholar Publications
- Girard, Pinar, Trapp. (2011). *An Exploratory Study of Class Presentations and Peer Evaluations: Do Students Perceive the Benefits?* *Academy of Educational Leadership Journal*, January 2011, V (15), ISSN: 1095-6328. *The Dream Catchers Group*
- Patterson, L. & Welfel, R. (2000). *The Counselling Process*. Belmont. Wadsworth Brooks-Cole
- Satish, V., & Vora, R. (2015). *Taking Education beyond the Curriculum for Better Employability*. *Research Dimensions*, V (II), ISSN 0976-8564, 155.
- Satish, V., & Vora, R. (2015). *Art as a Medium of Curricular Transaction to Foster Holistic Development*. *PCERP Seminar Proceedings, Book 8*, ISSN 978-81-924684-7-1, Page 11-15
- Stenger, M. (2013). *Students Can Benefit from Participation in Community Service Studies* May 23rd, 2013. Retrieved from <http://www.opencolleges.edu.au/informed/other/students-can-benefit-from-participation-in-community-service-studies-show-4147/>
- Ward, S.F. (2011). *The Impact of Guest Speakers in the Science Classroom*, (Unpublished Masters Dissertation). Montana State University. Retrieved from [scholarworks.montana.edu](http://scholarworks.montana.edu)
- Summiya Y. (2016). *New Pedagogies Changing Indian Education*, *Education World*, November 2016
- Tugend A. (2010, July 31). *The Benefits of Volunteerism, if the Service Is Real*, *The New York Times*, p.p. B2  
<https://teaching.unsw.edu.au/peer-assessment>  
<http://www.teachhub.com/classroom-management-guest-speakers-support-learning>  
[https://www.researchgate.net/publication/284166003\\_Role\\_Play\\_as\\_a\\_Teaching\\_Strategy](https://www.researchgate.net/publication/284166003_Role_Play_as_a_Teaching_Strategy) [accessed Sep 10, 2017]  
<http://www.teachthought.com/learning/10-pros-cons-flipped-classroom/>  
<http://wisewe.com/objectives-of-industrial-visit/>  
<http://www.counselling-directory.org.uk/art-therapy.html>

**TEACHING, LEARNING AND ASSESSEMENT - RESEARCH INITIATIVES**

**M. M. Puranik**, *Department of Physics and Electronics, KLE Society's Raja Lakhamagouda Science Institute, Belagavi-590001, Karnataka, India.*

**Sushma G. Katti**, *Department of Physics and Electronics, KLE Society's Raja Lakhamagouda Science Institute, Belagavi-590001, Karnataka, India.*

***Abstract***

*Education is an important aspect in individual's life as it nurtures thinking capability, develops confidence through knowledge, creativity, personality and skill development. This article focuses research initiatives on teaching, learning and evaluation aspects of education. Teaching approach should not just be transfer of information but it should be empowerment of knowledge. Learning approach should not be learning about skill but it should be about developing the skill. These teaching and learning approaches are discussed in detail. The interactive and creative techniques like value-added-programs, collaborative learning, designing and fabricating working models, developing softwares, motivating students towards research activities are discussed with a view to make teaching as well as learning more students centric and to enhance effectiveness. Innovative approaches in the teaching and learning process are briefed by incorporating new technologies like Audio-Visual aids, NPTEL, Simulations, Virtual-Labs, PPTs etc., to impart lecture. Digital-library-access and computer-assisted-learning aspects are described which help in visualizing, analyzing, understanding and interpretation of data. In addition, research initiatives are outlined considering faculty development programs, training programs etc. which encourage the students to take up innovative projects and present/publish articles in conferences/workshops/seminars and/or refereed journals. Online student evaluation is also incorporated to receive reliable and valid data.*

**Keywords:** *Teaching, Learning, Evaluation, Faculty development programs and Research on education.*

**Introduction:** Education is the most powerful architectural tool kit used to shape and design the life structure of the student. It is the systematic process through which an individual gets strength to face the challenges, develops culture, personality, creativity, thinking and analyzing capability. Education is the foremost factor that makes both man and society civilized. Three essential tools used in architectural kit of education are teaching, learning and assessment. Teaching is the combined process of empowering the knowledge and imparting the skills by conveying information, explaining the principles, discussing the facts, contents etc that facilitate learning. Teaching provides variety of opportunities to learn, interpret and inculcate the knowledge through experimentations, innovations, discoveries, inventions, analyses etc. Learning is process of acquiring knowledge by inculcating and developing the skills, attitudes, beliefs and values through a better understanding of concepts. Quality teaching is very essential for best learning outcomes. Recent developments in science and technology have drastically changed the education processes through the advancement in research. Research in education is necessary to make education more effective, informative and productive as it involves a cautious investigation of new facts and contribution of information.

**Why research is necessary in education?** In order to keep abreast of the changes, improvements and innovations in the field of education, it is essential to be knowledgeable, reputed practitioner and educator in the education field. Research helps in improving educational practices as it gives detailed knowledge and conclusions of the subject through

rigorous investigation, experimentation, hypothesis, research queries, surveys, case studies etc [1-3]

**Teaching and learning:** The educational research is important as it gives new ideas to improve competences for efficient teaching and learning outcomes. Research initiatives in teaching and learning build up a strong link between educational research and teaching by inducing scientific temper among teachers and student. It increases research capability and capacity of the teacher and learner, thus contributes towards holistic development and improved student learning by transforming them into life-long learners and innovators [4-6].

Apart from lecture method, the other methods which can be predominantly used to facilitate teaching learning are discussed below.

**a) Use of Interactive and Creative Methods:** Interactive as well as creative methods encourage and promote interest to acquire knowledge in the process of teaching – learning [6]. These methods give high motivation by strengthening the knowledge, team spirit and thus contribute to the competences required to enhance the effectiveness.

**b) Value Added Programs:** The ever increasing quality and demands are making the world more competitive and need high levels of thinking spirit to cope up with the challenges. Therefore the formal teaching should also include some value added programmes like entrepreneurship programs, communication and personality development skills, Research tools development Preparation for NET/SET

**c) Collaborative learning:** It is an approach in which group of students involve to solve a problem or complete the task. In this method students get an opportunity to exchange ideas, thinking's, beliefs, concepts, experiences etc through discussion, clarifications and evaluations of ideas. Collaborative learning promotes positive attitude, develops social interaction skills, stimulates critical thinking, fosters interpersonal relationships, encourages assessment techniques and thus contributes towards better learning and teaching environment [6].

**d) Self learning/Experiential Learning topics/ Project-based learning:**

It is one of the most important methods used to focus on individual growth, skill and potential development as it is a process of learning through experience. It involves self initiative, self assessment and hands-on activity. In this method learning and development can be achieved through personally determined experience and involvement. It bridges gap between theory and practice by providing the accurate assessment result through personalized learning [7].

**(e) Seminar Method:** Seminar is the most effective method in education which involves the student in active learning process. In this method a student comes with preparation on a particular topic and presents a seminar before the faculty and students. This method motivates students towards extensive reading, development of communication and presentation skills and also builds up self confidence.

**(f) Computer – Assisted Learning (CAL):** Use of technology has become an integral part of today's education. Computer- assisted Learning is dynamic and integrated approach to make teaching and learning process more easy, effective, interactive and stimulating. This method can be used as supplementary tool for self learning, teachers training programs. It helps in

visualizing, analyzing, understanding complex topics and in interpretation of large data. It helps to teach tough topics at ease. CAL can also be used for virtual laboratory learning.

**g) Power Point Presentation (PPT):** It is a presentation created using Microsoft PowerPoint that can be used for presenting the concepts. ppt is most useful tool to aid learning, the user can make use of text, graphics, multimedia, effects, audio-visual impacts to hold listener attention. , it motivates students by providing a better understanding of the subjects.

**h) Audio-visual aids:** Audio Visual Aids are also most effective instructional materials used in the process of teaching and learning. A device which makes the learning more real, efficient, sensible and self-motivated can be taken as audio visual material. They are categorized into three groups

**i) Audio Aids:** Radio, Tape-recorder, Gramophone, Linguaphone, Audio cassette player, Language laboratory etc

**ii) Visual Aids:** Chart, Black and white board, Maps, Pictures, Models, Text-books, Slide projector, Transparency, Flash-cards, Print materials etc [11].

**iii) Audiovisual Aids:** LCD projector, Film projector, TV, Computer, VCD player, Virtual Classroom, Multimedia etc.

These aids help to make learning process more effective and conceptual by grabbing the attention of students and building interest through realistic approach and experience, it enhance teachers skills, makes students good observer and listener thus makes teaching-learning process effective

**i) National Programme on Technology Enhanced Learning (NPTEL):**

NPTEL is a joint initiative undertaken by of the IITs and IISc. It project funded by the Ministry of Human Resource Development (MHRD) to avail learning materials to students of engineering institutions through easier means. NPTEL provides online web courses and video lectures making use of chalk-and-talk, tablet writing, power point, two and three dimensional animations, interactive codes, etc. this program facilitates the competitiveness of Indian industry in the global markets through improving the quality and reach of engineering. NPTEL is useful in preparing for technical jobs and competitive exams. It provides platform for constant learning and updating knowledge for the ever-changing environment and market realities.

**j) Virtual Labs**

Virtual labs provide remote-access to Labs in various disciplines of Science and Engineering and caters the needs of students at the undergraduate level, post graduate and research scholars. These labs help them in learning basic and advanced concepts through remote experimentation by providing various tools for learning, including web-resources, video-lectures, animated demonstrations and self evaluation.

- In addition to these methods, students and faculty can be encouraged to use Edusat materials, e-books, e-Journals, e-learning material, QEEE (Quality Enhancement in Engineering Education)-online teaching by the professors of IIT's, Tools like Matlab, c-Programming for effective teaching-learning.

- Regular orientation programs, workshops, pedagogy training, faculty development programs must be adopted as innovative teaching learning approaches which encourage the students to take up innovative projects and present/publish articles in conferences/workshops/seminars and/or refereed journals.
- Industry visits, study tours are can be arranged to make aware of the practical challenges faced by industry and advanced technologies. It gives information about the expectations of industry and helps students to prepare for employability.

**Assessment**

- Evaluation is a means of collecting, analyzing and interpreting information about teaching and learning which gives the output to make firmed decisions that increase student achievement and gives information about the success of teaching and learning. Online student evaluation process can be used for assessment to receive valid and reliable data . Online student evaluation is completely confidential and more convenient. . The information students provide will help the review process of subject and is used to support academic review and promotion. Students can complete their evaluations via an email link that is sent directly to the student email.

**Conclusion:** Teaching, Learning and Assessment form an important part of education system. An effective, teaching-learning process has objectives, productive classroom activities including mini projects, major projects, seminars, co curricular activities etc. Apart from classroom interactions, the other methods of learning experiences like use of ICT, Audio-visual aids must be used to enhance effectiveness and learning more students centric . Online student evaluation process can be used for assessment to receive valid and reliable data

**Acknowledgement:** Authors thank to Mr. G.H. Pujar for his needful discussion and timely help. Authors acknowledge RLS institute for kind support and encouragement.

**References**

- Keri Facer, International Journal of Educational Research 61 (2013) 135–143.*
- Suanne Gibson, Deli Baskerville, Ann Berry, Alison Black, Kathleen Norris, Simoni Symeonidou, International Journal of Educational Research 81 (2017) 108–118.*
- Terence Lovat, International Journal of Educational Research 50 (2011) 148–152.*
- Luce C. A. Claessens, Jan van Tartwijk, Anna C. van der Want, Helena J. M. Pennings, Nico Verloop, Perry J. den Brok & Theo Wubbels (2017) Positive teacher–student relationships go beyond the classroom, problematic ones stay inside, The Journal of Educational Research, 110:5, 478-493, DOI: 10.1080/00220671.2015.1129595.*
- The Importance of Classroom Assessment and Evaluation in Educational System Taghi Jabbarifar Yazd University, Iran (jabbaree2000@yahoo.com).*
- Proceedings of the 2<sup>nd</sup> International Conference of Teaching and Learning (ICTL 2009). INTI University College, Malaysia*
- Student''s Perceptions about New Modes of Assessment in Higher Education: a Review Katrien Struyven, Filip Dochy & Steven Janssens University of Leuven, Department of Instructional Science, Centre for Research on Teacher and Higher Education, Belgium*
- <http://www.sciencedirect.com/science/article/pii/S1229545014000175>*
- [www.businessballs.com](http://www.businessballs.com)*
- <http://vlab.co.in/>*
- <http://www.studylecturenotes.com/curriculum-instructions/audio-visual-aids-in-education-definition-types-objectives>*

## BEST PRACTICES FOR QUALITY EDUCATION IN 21<sup>ST</sup> CENTURY

**Mohd.Muntazim**, *Research scholar, Department of Education and Training, Maulana Azad National Urdu University, Gachibowli, Hyderabad-500032*

### **Abstract**

*The change in education practice and tools over the last two decades has been truly remarkable. The old dichotomy of traditional face-to-face and distance education is becoming obsolete as more diverse mixed-mode forms of education delivery emerge. However the relationships between what is now possible in education, what various education stakeholders demand, and what is educationally effective are not clear as yet. Here are some imperatives for 21st Century education that promote the quality of education. Increased capacity and efficiency, Improved effectiveness, Easy accessibility, A competitive mindset, A resource-based emphasis and The personal touch. The challenge to course designers and educators is how to realise these benefits practically without compromising the principles of sound education. The overall aim of education is develop learners who are able to think as experts think; best practice principles should enable this transformation to take place in any subject area. High quality and efficiency in higher education will provide a complete and unique educational experience for the student. Enhancing the quality and relevance of education will give confidence to students. Every higher education institute should perform quality checks and grow the entire community. Higher education is slow to respond to changes in the system and fail to anticipate or shape the career of students using modern learning technologies and delivery models. Sophisticated and innovative learning approaches in higher education will improve quality in the fast-changing education industry. The key ways of achieving this milestone is to harness the transformational benefits of cloud, mobile and digital technologies to enrich teaching and learning, and improve the student's experience.*

**Introduction:** Education, being a social institution serving the needs of society, is indispensable for society to survive and thrive. It should be not only comprehensive, sustainable, and superb, but must continuously evolve to meet the challenges of the fast-changing and unpredictable globalized world. This evolution must be systemic, consistent, and scalable; therefore, school teachers, college professors, administrators, researchers, and policy makers are expected to innovate the theory and practice of teaching and learning, as well as all other aspects of this complex organization to ensure quality preparation of all students to life and work.

The imperatives for 21st Century education, that promote the quality of education, are:

- Increased capacity and efficiency.
- Improved effectiveness.
- Easy accessibility.
- A competitive mindset.
- A resource-based emphasis and
- The personal touch.

**Increased capacity and efficiency** - through enabling institutions to cater for the learning of a relatively large number of students at once.

**Improved effectiveness** - by encouraging deep learning approaches and the adaptation of knowledge to the real world.

**Easy accessibility** - by removing distance barriers and catering for a variety of learners' prior educational experience, physical abilities, and time commitments /lifestyles.

**A competitive mindset** - education with the potential to be offered internationally, within industry, and at a distance; providing more choice and convenience for the student.

**A resource-based emphasis** - enabling more student control over what, where, when and how they study and permitting non-linear learning.

- **The personal touch** - with more interaction between students and between individual student and tutor, enabling a degree of customisation and the pursuit of individual students' learning goals in addition to the prescribed course learning outcomes.

The challenge to course designers and educators is how to realise these benefits practically without compromising the principles of sound education. The overall aim of education is develop learners who are able to think as experts think; best practice principles should enable this transformation to take place in any subject area. The six best practice principles identified by forum members are:

1. **Individualisation** – adaptability to the learning needs of the individual.
2. **Meaningful Interactivity** – providing opportunities for students to apply what they are learning.
3. **Shared Experience** – enabling students (and encouraging them) to learn from one another.
4. **Flexible and Clear Course Design** – preparing the entire course with a view to maximising student control while still providing clear expectations.
5. **Learner Reflection** – encouraging students to mentally engage with course concepts and to consider their progress.
6. **Quality Information** – providing actual content that is accurate and especially designed to facilitate understanding.

Let us know these principles in details.

**Individualisation:** Individualisation or personalisation requires a mentor or facilitator to make an effort to determine the individual's learning progress and support learning as required. One-on-one mentoring addresses the cognitive and emotive aspects of the learner, enhancing educational outcomes and providing personalised feedback on student efforts. Essentially, individualisation involves discovering a student's initial understanding, testing it, and helping the student to build a new understanding as required. Individualisation is best achieved through tutors-as-mentors, though it is acknowledged that there is a shortage of tutors with the required skills. 'Best practice' tutors need to draw from a range of strategies if they are to meet the diverse needs that individuals may have and to help students to become more independent learners. A tutor who meets the requirements for this principle of individualisation must be accountable, adaptive, encouraging, emancipating, education expert and a subject matter expert. The Oxford / Cambridge models were provided as examples of how such a system might work, however the potential pitfalls of the tutor / student relationship were also admitted to. While the personality and preferences of the tutor should be allowed in individualisation, they can result in conflict. Pure technological individualisation is at too early a stage to

effectively replace a tutor in this role, but tutors can act as agents of individualisation using communications technologies.

**Meaningful Interactivity:** It is not enough to just have students active in their learning; any tasks they perform as a part of their learning process must be carefully formulated so that they are somehow meaningful and educationally useful. Meaningful interactivity requires students to actively process information and apply it to real world contexts, perhaps through simulation and problem-solving. However meaningful interactivity need not involve expensive technologies. Contributors expressed frustration with learning exercises that were trivial, contrived and draining, and did not require high-level thinking. Effective interactivity provides opportunities for feedback and reflection. Problem-based learning was identified as an effective strategy that can provide meaningful interactivity in a real-world context.

**Shared Experience:** Students always bring their own unique experiences and perspectives related to course materials. Students should be encouraged to share their experiences and learn from the perspectives of their peers. One contribution mentioned interpersonal communication as a vital component of knowledge acquisition. Shared experience may need the skills of a skilled moderator, whose task it is to help students to form effective academic relationships and to encourage reflection.

**Flexible and Clear Course Design:** The overall way in which a course is constructed should intentionally facilitate students' cognitive and emotional development. It is possible to construct a course in such a way that flexibility is maximised alongside clear objectives and instructions. A clear and concise interface, clear directions, attention to sequencing and feedback and providing students with control whenever possible are all characteristic of flexible and clear course design. One contributor used the term 'contextualised flexibility' to describe how overall course design should be sensitive to contexts and adaptive.

**Learner Reflection:** Reflection initially referred to the student considering their progress through the course, but later the term was used to include purposefully considering course concepts so that they are adopted as one's own. Reflection helps students to learn from their experiences and to evaluate and apply course content. Several contributors pointed out the link between learner reflection and individualisation, and between learner reflection and shared experience. The main hindrances to effective reflection were identified as time, opportunity, and a general lack of student ability to reflect. It was felt by forum contributors that reflection had to be definite, even guided. Many students dislike reflection at the time, but appreciate its importance for learning later.



**Quality Information:** It was pointed out that ‘information is not knowledge,’ and that ‘what is obvious to a teacher might be completely unfamiliar to students.’ There is a need for quality information that is well-prepared and explains course concepts well. Quantity of information is no problem in the information age; rather, the need is for information of good quality. Part of information quality involves multiple representations of content to reach different populations of students; other aspects include relevance to the student and to learning objectives and accuracy. Quality information should particularly emphasise the ‘core elements’ of a subject. The preparation of quality information was helpfully described by one contributor as an ‘art form.’ Content is one thing; flow is certainly another.

**Applying Best Practice Principles:** While the six principles identified are universal in scope, not all may be appropriate in particular cases because of the nature of what is being taught, or the restrictions of budgets or ability. As can be seen in the coverage above, there is a strong sense of interdependence between the six principles. A carefully constructed ‘meaningful interactivity’ exercise, for example, might encourage shared experience and reflection that can lead on to individualisation. A single learning opportunity may combine all six principles.

**Conclusion:** Finally, educators need to develop a sense of ownership of the six principles; otherwise the best practice principles may just become another set of unproductive rituals that are mindlessly applied just to meet best practice criteria. Educators would do well to exercise the principles in their own practice so that the principles permeate their education philosophy. Applying best practice is one thing; commitment to it quite another.

#### **References**

- Entwistle, N. (1998). *Motivation and approaches to learning*. London: 15-23.
- Knowles, M. (1990). *The Adult Learner*. Fourth Edition. Houston: Gulf Publishing Co.
- Newstead, S. (1998). *Individual differences in student motivation*. In Brown, S., Armstrong, S., and Thompson, G. (eds), *Motivating Students*, 189-199.
- Nichols, M. (2001). *Teaching for Learning*. New Zealand: Traininc.co.nz
- Rowntree, D. (1997). *Making Materials-Based Learning Work*. London:
- Sanchez, I. And Gunawardena, C. (1998). *Understanding and supporting the culturally diverse learner*. In Gibson, C. (ed.), *Distance Learners in Higher Education*, pp.47-64. Wisconsin: Atwood Publications.
- Sparkes, J. (1993). *Distance education and conceptual learning*. In Parer, M. *Designing Open Courses*. 15-37.

**TO WHAT EXTENT ARE OUR ECONOMICS PRE-SERVICE TEACHERS  
EQUIPPED WITH ADEQUATE ECONOMICS SUBJECT MATTER KNOWLEDGE  
TO TEACH? A COMPARATIVE PERSPECTIVE**

**Dr. Sneha Raikar**, Assistant Professor, Pillai College of Education & Research Chembur

Recent research findings consistently point to the critical roles of teachers in helping students to learn and achieve. An effective, qualified teacher is the single most important factor affecting students' academic achievements. Becoming an effective teacher is a continuous process that stretches from pre service experiences in undergraduate years to the end of a professional career. This study examined the level of overall economics knowledge based on economics concepts given in IX Std economics textbook and investigated how economics knowledge differed by pre-service students of different B.Ed colleges. There were 96 pre-service economics teachers (PSETs) who participated in this research from B.Ed colleges in Mumbai. The findings showed a significant difference in the level of understanding of economic concepts based on Revised Blooms Taxonomy. The study also helped the researcher to analyze how economics subject matter knowledge differs based on gender and educational background of PSETs. It is hoped that the findings of this study will be useful to Teacher educators, and institutions related with teacher training.

**Introduction**

*"In order to be able to transform subject matter content knowledge into a form accessible to students, teachers need to know a multitude of particular things about the content that are relevant to its teach ability".*

- Geddis (1993)

In every country, economic education is an important part of education because it enables students to understand their roles in their economic system, as consumers, citizens and future employees or employers, and it helps them to succeed in playing these roles. At the higher secondary stage, being opted by largest number of students, it emerges as the most popular social science subject. Despite its importance and popularity, development of economics curriculum remains a major challenge. Economists as well as economics educators in the country seem to be disinterested in the teaching-learning process of this dynamic subject as it has been known a relatively difficult and dry subject to learn. Previous research examining the effectiveness of short-term in-service training programs on improving teacher knowledge and attitudes show that teachers' knowledge of economics and their attitudes toward economic education have a significant impact on student learning (Arize, 1982; Chang & Tuckman, 1989; Charkins, 1980; Davison & Kilgore, 1971; Hazlett, 1973, Pierce, 1982). However, the world's leading economic education researchers (for example, Anderson, 1992; Becker, 1997, 2000; Walstad & Soper, 1988) have questioned the aims and effectiveness of economics teaching in recent years. It appears that lack of content knowledge and skills among the graduates and their inability to perform effectively in workplaces raised deep concerns among parents, teachers, business communities, teacher educators, researchers, and so on. For

example, a survey in the US carried out by Walstad and Soper (1988) found most students who have completed a secondary course in economics still exhibit significant deficiencies in their knowledge of economics, especially macroeconomics. Such deficiencies have been indicated in knowledge and skills amongst secondary school economics students in the Maldives (Nazeer, 2002). Leinhardt et al. (1991) discussed the influence of subject-matter knowledge on teacher's agendas, curriculum scripts, explanation, and representation. The agenda is the mental plan for the goals and actions of the lesson, the curriculum script is the overarching content presentation for the lesson, and explanations and representations are the examples and demonstrations teachers choose to explain or represent subject matter knowledge. The goals of pre service teacher education are to prepare future teachers with competency in both content knowledge and teaching ability. In order to cultivate future teachers with these competences, teacher education programme provides with two branches of courses – subject matter courses and educational courses. Many general beliefs held by this kind of design are that after taking these courses, the Pre-service teachers would automatically integrate these two separate knowledge – pedagogy and subject matter, and fluently implement them into classroom teaching. To be successful, teachers must have strong subject matter knowledge, understand the nature of the subject, be able to translate the concepts into meaningful learning experiences for their students, and highlight applications for the subject within society and in the lives of students (Gess-Newsome, 1999). Schwab (1971) described teacher knowledge in practical terms as the wisdom of practice developed through classroom experience. However, studies have found teachers' content knowledge is often thin and inadequate to provide instruction for students in today's classrooms (Ball, 1988a, 2003b; Ball & Bass, 2000; Fuller, 1996; Ma, 1999; Mewborn, 2001; Stacey, et al, 2001). There is a body of literature that suggests that the lack of subject matter preparation also influences teaching (Ball, 1990; Borko, 1992). Researchers recommend that teacher education program leaders reconsider how subject matter knowledge is included in courses in a manner that challenges pre service teachers' beliefs.

**The role of subject matter knowledge (SMK) in teaching:** Philosophical arguments as well as common sense support the conviction that teachers' own subject matter knowledge influences their efforts to help students learn subject matter. SMK is the amount and organization of the knowledge per se in the mind of the teacher. It is a substantive knowledge (the key facts, concepts, principles and explanatory frameworks in a discipline) and syntactic knowledge (the nature of enquiry in the field, and how much knowledge is introduced and accepted in that community).

The key characteristics of optimal teacher knowledge:-

1. **Conceptual** – having a sense of size and proportion, understanding the central ideas in the discipline, understanding the relationships among ideas, having detailed and elaborated knowledge, and being able to reason, analyse, and solve problems within the discipline.
2. **Epistemological** – having an understanding of the nature of work in the disciplines.
3. **Attitudinal** – having respect for and an appreciation of the process by which knowledge is generated through these disciplines.

**The Study:** The aim of the study was to assess the economics subject matter knowledge of PSETs.

The following research questions provided the framework for the study:

1. What is the level of economics subject matter knowledge based on Revised Blooms Taxonomy among PSETs?
2. How does the economics subject matter knowledge differ in PSETs on the basis of gender and educational qualification?

**Methodology:**

**Instrument:** A subject matter knowledge test developed by the researcher for the investigation of the SMK of pre-service economics teachers in B.Ed colleges consists of 10 items. The proposed items involved a more comprehensive coverage of the standard IX economics curriculum. The test was based on Revised Blooms Taxonomy.

**Participants:** For the purpose of this study, there were ninety six PSETs participated (N=96), with a range of gender, and educational background (i.e., B.A, B.Com, M.A). In this study the researcher used purposive sampling technique.

**Statistical Analyses Of The Results**

What is the level of economics subject matter knowledge of economic concepts among PSETs?

**Table 1: Level of ESMK based on Revised Blooms Taxonomy**

S/N		Total Score	Percentage
01	Remembering (4)	272	70.83
02	Understanding (15)	752	52.22
03	Applying (12)	421.75	36.61
04	Analysing (04)	222	57.81
05	Evaluating (06)	117.5	20.39
06	Creating (04)	80	20.83

**\*N = 96**

Economic concepts were tested in sets of ten questions, including concepts such as Introduction to Economics, Basic concepts of Economics, Sources of Income and Family Budget. Results revealed that, as a whole, PSETs were relatively weak in Creating, which required respondents to think out of the box and come up with creative ideas based on economic concept. Even the PSETs scored less in Evaluating, which concerned exploring economic concepts or generalization of economic concepts. PSETs scored highest on the lowest level of Revised Blooms Taxonomy as they possessed adequate basic knowledge of economic concepts. PSETs performed better in analyzing the economic concepts which required them to connect economic concepts in real life situation. PSETs were able to explain and describe the economic concepts in their own words, which reflected in their Understanding

mean scores. The Applying mean score was slightly lower, which can be due to the lack of application of the existing subject matter knowledge in a new and unfamiliar situation.

How does the economics subject matter knowledge differ in PSETs on the basis of gender and educational qualification?

**Table 2: Gender differences in the mastery of Economics SMK**

<b>Economics Preservice Teachers</b>	<b>N</b>	<b>Mean Score</b>
Male	10	22.20
Female	86	21.42

The result revealed that in general, male PSETs performed slightly better than the female PSETs. This show male PSETs possess better subject matter knowledge in various economic concepts on the whole. Male PSETs must have understood the economic concepts better than the female PSETs.

**Table 3: Role of educational qualification in the mastery of Economics SMK**

<b>Educational Qualification</b>	<b>N</b>	<b>Mean Score</b>
B.A (Economics)	20	23.78
B.Com	68	20.51
M.A (Economics)	08	24.22

The explanation for the higher mean score of M.A (Economics), followed by B.A (Economics) PSETs may be related to their prior experience with economic concepts and better exposure to some economic concepts during their educational journey. These pre service teachers had majored in Economics which enabled them to relate economic concepts better and showcase their mastery on economics subject matter knowledge test as compared to pre-service teachers from B.Com background.

**Conclusion:** This study offered a general picture showing to what extent our economics pre-service teachers are equipped with adequate knowledge of economic concepts to teach. The results point to the importance of promoting proficiency in economic concepts as well as procedures in economics methods courses, because inadequacies in both types of knowledge appear to be associated with enhanced levels of economics anxiety. Recent research findings consistently point to the critical roles of teachers in helping students to learn and achieve. An effective, qualified teacher is the single most important factor affecting students' academic achievements. Becoming an effective teacher is a continuous process that stretches from pre service experiences in undergraduate years to the end of a professional career. This study examined the level of economics knowledge of economic concepts among PSETs. Supporting pre service teachers with weaker subject matter knowledge more effectively, teacher education institutes need to provide ongoing support earlier in the B.Ed course. Overall, the type of instruction that PSETs receive at both the secondary, higher secondary and undergraduate levels, including the relative emphasis on conceptual and procedural economics, may play a

larger role in enhancing SMK than originally thought, which underscores the need for further study.

**References:**

Corcoran, D. (2005). *Mathematics subject knowledge of Irish primary pre-service teachers*. [www.leeds.ac.uk/educol/documents/144080](http://www.leeds.ac.uk/educol/documents/144080).

Even, R. (1993). *Subject-matter knowledge and pedagogical content knowledge: prospective secondary teachers and the function concept*. <http://www.jstor.org/discover/10.2307/749215?uid=3738256&uid=2&uid=4&sid=21103035496443>.

Goulding, M. (2003). *An investigation into the mathematical knowledge of pre-service primary teachers*. [http://math.unipa.it/~grim/21\\_project/21\\_brno03\\_Goulding.pdf](http://math.unipa.it/~grim/21_project/21_brno03_Goulding.pdf)

Jungsoon, Choi. (2011). *Preservice Teachers' Beliefs about Knowledge and Effective Teaching in Economics*. <file:///D:/Economics%20Review/economics%20review.htm>

Nazeer, Abdulla. (2006). *Teaching economics at secondary school level in the maldives: a cooperative learning model*. <http://researchcommons.waikato.ac.nz/handle/10289/2540>

**CITATION ANALYSIS OF DOCTORAL DISSERTATIONS:  
A COLLECTION MANAGEMENT TOOL FOR TEACHER EDUCATION COLLEGE  
LIBRARY**

**Mrs. Shakuntala S Nighot, Librarian, St. Teresa's Institute of Education**

***Abstract***

*Shrinking funds and ever increasing publication prices are making it tough for Teacher Education (TE) College Libraries to meet the information needs of researchers. This hampers learning and research. Librarians must have crucial understanding of information needs and resources used by researchers. Researcher analyzed 1765 Citations in 23 PhD theses in Teacher Education submitted to University of Mumbai during 1995- 2014. Study revealed that Educational Sociology is the most researched area while Educational Technology is the least researched area. Books are the most used information sources followed by Journals and Theses till year 2000. After Y2K Journals were prominently used. Half life of TE Journals is 6 years and that of TE Books is 18 Years. Researcher also brought out list of highly cited authors, papers and core Journals in TE. Its also discovered at literature of TE is spread over many allied subjects like Philosophy, Sociology, Psychology, Public Heath etc. along with Education and subtopics. TE Researchers have preferred Indian literature followed by USA and UK published English language. Impact of Internet citing is seen remarkably after 2005. List open Access Journals in TE is also produced as a byproduct of this research. Findings of this Citation Analysis will be useful for developing evidence based Collection Management Policy for TE College Libraries. It will intern promote quality education and research.*

**Introduction:** In the era of information explosion it is highly impossible for any library to possess all the scholarly publications in its area of specialization. Main reasons for this are high publication and subscription prices, tremendously accelerating growth in no of publications with multiple Medias and emergence of interdisciplinary areas of knowledge. On the other hand, space and budgetary constraints force the academic librarian to set the priorities in their library acquisition, maintenance and withdrawal policies. While overcoming this paradoxical scenario, librarian always should stick to user information needs and institutional goal.

**Overview of past studies:** Collection development demands strategies and techniques that make the selection and acquisition processes more objective, accurate and less laborious. Citation analysis is among such techniques. According to Haycock (2004) citation analysis can guide and support decisions related to selection, for example, to decide on the acquisition of a journal, subscription maintenance (and cancellation), or even providing electronic access. The analysis of cited references can help recognize those who are interested in a specific subject and the research fronts, as well as identify the potential of journals and authors (Norton, 2001). It also assists in identifying information use trends in a particular subject; it also identifies the authors that publish as well as the most quoted works on a specific theme, the information sources where the papers were published and the relationships between documents and researchers. As stated by Williams & Fletcher (2006) citation analysis is a nonintrusive method of finding patterns in a specific population's use of research materials. The postulation behind this is citations reflect the library needs of the citing authors. According to Araújo (2006), the data obtained from citations allow us to identify the most cited authors, the most

productive authors, the research elite, the research front, the impact factor of authors and publications, geographic and/or institutional origins of the most influential authors in a particular field of research, the most used document types, average age of the literature used, literature obsolescence, geographic and/or institutional origin of the used bibliography, the most cited and core journals in the field. Citation analysis assists the librarians to check whether users are using the library collection also if the library has the documents cited in scientific papers. Fernandes & Cendón (2010) evaluated the collection of CAPES Portal through articles and journals cited in theses and dissertations from an Information Science Graduate Program. The citations were analyzed to verify their availability throughout the Portal. The bibliometric analysis results showed that the Portal collection contained 45% of the articles cited in the analyzed theses and dissertations, indicating that the collection can be expanded to better meet the needs of its users. Authors recommended that the bibliometric analysis as a part of criteria of selection process. In Indian and international literature several such citation or bibliometric studies are done considering various parameters resulting in extremely useful findings which proved helpful for collection management and development process.

**Aim:** To map the trends in research and literature used pattern in the area of Teacher Education

**Objectives:**

1. To reveal the most and least researched areas in Teacher Education
2. To identify and rank the various types of sources of information used by TE researchers.
3. To take chronological review of cited references.
4. To calculate half life of books and journals in TE
5. To rank highly cited papers and authors
6. To prepare a ranked list of periodicals in TE
7. To study the impact of internet citing and open access journals in TE research.

**Hypotheses:**

1. TE researchers use Journals more than any other material
2. TE researchers prefer Indian Publications
3. Literature of Education is spread over wide range of allied subjects.

**Methodology and sample:** Total 23 theses of Teacher Education in Bombay Teachers Training College, Colaba (one of the PhD center of University of Mumbai) submitted during the period 1995-2014 are used as data sample. Photocopies of pages from the theses were not permitted. So References, Bibliography at the end of the theses, at the end of chapters and in footnotes (if available) are scanned using free version of CamScanner Application in mobile phone. Incomplete entries along with duplicate entries were eliminated after careful examination. Remaining citations are tabulated in Ms-Excel worksheets for quantitative analysis and interpretation. Total 60 different bibliographic forms of literature used in TE research are identified which are grouped under 15 core types (Table 2) for handiness.

**Data Analysis, Findings and Interpretation:** Enduring 1765 references from 23 theses directed the Average Citation Count (No of References cited per thesis) for TE to be 77



**1) Areas of Research in TE**

<b>Rank</b>	<b>Sub-Area in Teacher Education</b>	<b>No Of Theses</b>	<b>%</b>
1	Educational Sociology	7	30.43
2	Educational Philosophy	4	17.39
3	Curriculum, Textbooks & School Subjects	3	13.04
4	Educational Psychology	2	8.70
5	Inclusive & Special Education	2	8.70
6	Teacher Education and Teaching Personnel	2	8.70
7	Educational Administration	1	4.35
7	Educational Technology	1	4.35
7	Methods of Instruction and Study	1	4.35
	Total	23	100

‘Educational Sociology’ is highly researched (30.43%) area by TE researchers as it covers many conventional topics like Human and Child Rights, Right To education, Life skills education, Education of marginalized i.e. women, SC, ST, Rural Education, Global and Comparative Education, Peace/Population/Environment Education etc. Conversely Educational Administration, Different Methods of Instruction and Study and Educational Technology (4.34% each) are the least researched areas which needs to be discovered for progression of the subject.

**2) Types of sources of information used**

<b>Sr. No</b>	<b>Document Types</b>	<b>Count</b>	<b>Percent</b>
1	<b>Books</b>	848	48.05
2	<b>Journals</b>	385	21.81
3	<b>Thesis</b>	92	5.21
4	<b>Web</b>	70	3.97
5	<b>Surveys</b>	67	3.8
6	<b>Other Media</b>	50	2.83
7	<b>Papers</b>	44	2.49
8	<b>Reports</b>	42	2.38
9	<b>Encyclopedias</b>	38	2.16
10	<b>PG Dissertation</b>	34	1.93
11	<b>Proceedings</b>	31	1.76
12	<b>Reference Material</b>	29	1.64
13	<b>Gray Literature</b>	24	1.36
15	<b>Govt policy/Law/Circulars</b>	11	0.62
	<b>Total</b>		100

Books (48.04%) and Journals (22%) takes first and second rank among highly cited sources followed by Doctoral Theses (5.21%), Web Resources(3.96) and Surveys of Research in Education (3.79%). There 5 forms of information sources constitute nearly 83% of the total

cited references. **Hypothesis 1 is disproved here as Books being highly referred documents and not Journals in TE Referencing.**

**3) Chronological Review Cited References**

<b>Year Span</b>	<b>No of Cited Ref.</b>	<b>%</b>	<b>Cumulative</b>
Not Given	121	6.855524	121
1911-1920	5	0.283286	126
1921-1930	8	0.453258	134
1931-1940	9	0.509915	143
1941-1950	17	0.963173	160
1951-1960	55	3.116147	215
1961-1970	170	9.631728	385
1971-1980	278	15.75071	663
1981-1990	310	17.56374	973
1991-2000	376	21.30312	1349
2001-2010	382	21.64306	1731
2011 onwards	34	1.926346	1765
Total		100	

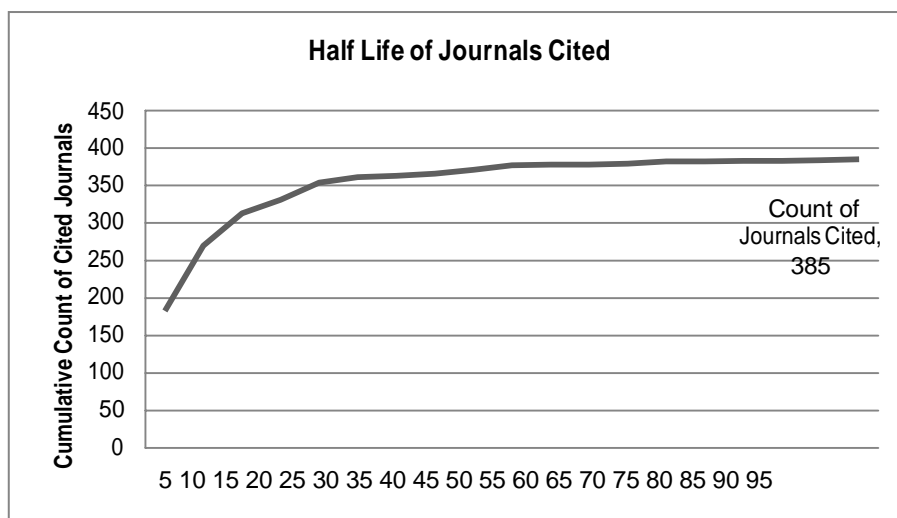
The analysis from the table indicates that 90% of the total references are ranging from 1951 to 2013. Current literature is less used (1.9%) may be due to lack of awareness or availability of Current Information Sources like Journals. This underlines the need to Qualitative Journal Subscription should be done University and Colleges of Education Libraries.

**4) Half Life of highly cited material in Teacher Education:** Analysis of citations by age of the cited documents can indicate the ‘useful life’ or the ‘Half life’ or the ‘Obsolescence rate’ of the documents. The half life of literature used for any study in a particular discipline depends on the number of years respectively needed to satisfy one half of all the literature cited on the subject or one half of the citations made to the literature in the current year. (Hadagali et. Al, 2009). To calculate the half life of journal citations in the present study, a graph was plotted using the data presented in Table No 4.1. Mapping the age of citations in years at the interval of 5 years on x-axis and cumulative no of citations on y-axis. The lines drawn in the graph indicate total citations (385)/2=192.5=approx. 200, cuts X axis at 6. Hence Half life of TE Journals 6 Years.

**Half Life of Journals**

<b>Age of Journals Cited</b>	<b>Counts</b>	<b>% of Counts</b>	<b>Age</b>	<b>Cumulative Count</b>	<b>% of Cumulative Count</b>
0-5	183	47.53247	0	0	0
6-10	87	22.5974	5	183	47.53247
11 -15	43	11.16883	10	270	70.12987
16-20	18	4.675325	15	313	81.2987

21-25	23	5.974026	20	331	85.97403
26-30	7	1.818182	25	354	91.94805
31-35	2	0.519481	30	361	93.76623
36-40	3	0.779221	35	363	94.28571
41-45	5	1.298701	40	366	95.06494
46-50	6	1.558442	45	371	96.36364
51-55	1	0.25974	50	377	97.92208
56-60	0	0	55	378	98.18182
61-65	1	0.25974	60	378	98.18182
66-70	3	0.779221	65	379	98.44156
71-75	0	0	70	382	99.22078
76-80	1	0.25974	75	382	99.22078
81-85	0	0	80	383	99.48052
85-90	1	0.25974	85	383	99.48052
91-95	1	0.25974	90	384	99.74026
Total	385	100	95	385	100



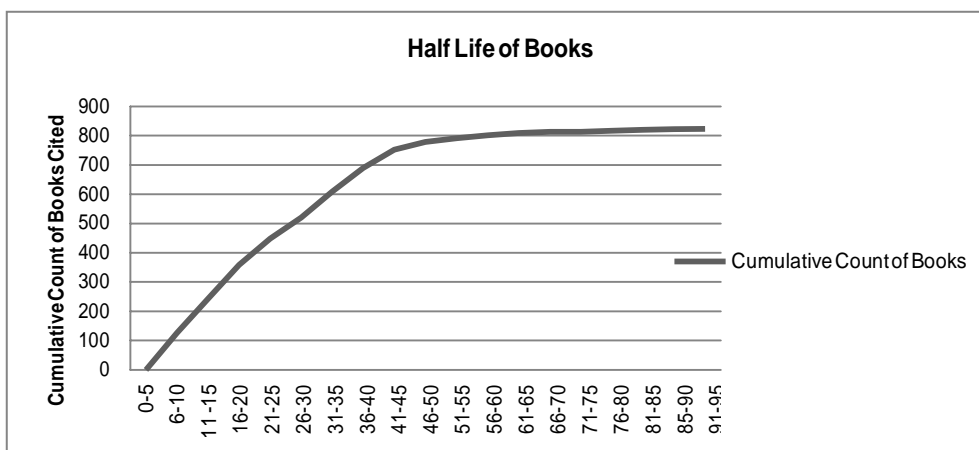
Graph 4.1

Total Cumulative Citation/2=385/2=192.5= approx. 200 cuts X axis at 6 so Half life of Journals in education is 6 Years

**Half Life of Books**

Age of Books Cited	Counts	% of Counts	Age	Cumulative Count	Cumulative Percentage of Counts
0-5	126	15.29126	0	0	0
6-10	116	14.07767	5	126	15.29126
11 -15	116	14.07767	10	242	29.36893
16-20	90	10.92233	15	358	43.4466
21-25	72	8.737864	20	448	54.36893

26-30	89	10.80097	25	520	63.1068
31-35	81	9.830097	30	609	73.90777
36-40	62	7.524272	35	690	83.73786
41-45	26	3.15534	40	752	91.26214
46-50	14	1.699029	45	778	94.41748
51-55	9	1.092233	50	792	96.1165
56-60	8	0.970874	55	801	97.20874
61-65	4	0.485437	60	809	98.17961
66-70	0	0	65	813	98.66505
71-75	4	0.485437	70	813	98.66505
76-80	3	0.364078	75	817	99.15049
81-85	2	0.242718	80	820	99.51456
85-90	1	0.121359	85	822	99.75728
91-95	1	0.121359	90	823	99.87864
Total	824	100	95	824	100



**Graph 4.2**

Total Cumulative citation/2=824/2=412 if we draw a line from 412 perpendicular to X axis it will cut X axis at 18. Hence half life of TE Books is 18 years.

Such a small half life period for TE books and Journals compared to half life of other social sciences material indicated that TE is fast changing and growing branch of knowledge.

The study of half life or the obsolescence of library material enables the librarians to take decisions for withdrawal and maintenance policy that, which document is to be too kept for how many years and which is to be discarded after how many years.

**Highly Cited Papers**

<b>Authors</b>	<b>Papers</b>	<b>Count</b>	<b>Rank</b>
Xiaofu Pan/Qiwen Qin	<b>An Analysis of the Relation between Secondary School Organizational Climate and Teacher Job Satisfaction</b>	4	1
Rishabhchand	<b>Education of the Vital</b>	3	2
Seager Martin L	<b>A Twenty years sampling of Teachers Attitudes</b>	2	3
Indrasen	<b>Child Education in the Spiritual Light</b>	2	3
VanVoorhis Richard W/Levinson/Edward M	<b>Job Satisfaction among School Psychologists: A Meta-Analysis</b>	2	3
RGNIYD	<b>Optimising Positive Strengths Through Life Skills</b>	2	3
Chopra Vanita/Dutta Indrajeet	<b>Relevance of Peace Education in Teacher education Programme</b>	2	3
Worrell Travis G/etal	<b>School Psychologists' Job Satisfaction: A 22-Year Perspective in the USA</b>	2	3
Sabu S/Jangaiah C	<b>Stress and teaching competence</b>	2	3
Weiqi Chen	<b>The Structure of Secondary School Teacher Job Satisfaction and Its Relationship with Attrition and Work Enthusiasm</b>	2	3
Ajzen I	<b>The theory of planned behavior</b>	2	3

**Highly cited among all types of Authors**

	<b>Authors</b>	<b>Count</b>
1	Buch M B (Ed)	55
2	Best J W	24
3	Lulla B P	19
4	Kahn J V	16
5	Aggarwal J C	15
6	Good C V	9
7	UNESCO	8
8	MSBTPCR	7
8	Gmelch Walter H	7
8	Gandhi M K	7
9	Vaswani J P	6
9	Kothari C R	6
9	Taneja V R	6
10	Singh L C	5
10	Rao Usha	5

**6) Highly Used Periodicals**

<b>Rank</b>	<b>Jr. Title</b>	<b>No of Citations</b>	<b>Percentage</b>
1	Edutracks	39	10.12987
2	University News	22	5.714286
3	New Frontiers in Education	16	4.155844
4	Chinese Education and Society	11	2.857143
5	Geevan Shishan	9	2.337662
6	Journal of Indian Education	8	2.077922
7	Bharatiya Shikshan	8	2.077922
8	Iranian Education Quarterly	6	1.558442
9	The Educational Review	5	1.298701
10	Research in Education	5	1.298701
11	Mother India	5	1.298701
12	Anweshika Indian Journal of Teacher Education	4	1.038961
13	The International Journal of Child Abuse and Neglect	4	1.038961
14	Miracle of Teaching	4	1.038961
15	Journal of Educational Administration	4	1.038961

All the above analysis for highly cited authors, papers and journals helps the librarian to take decisions in acquisition policy, Subscription policy of Journals and if multiple copies are needed to be purchased for certain books.

**7) Impact of Internet and OPEN Access:** All the cited references with weblinks are considered as E-Citations here irrespective of their bibliographic forms. Following table is theoretically supposed to give exact idea of Impact of Internet Citing in TE research,

**7A) Physical Documents Vs. Internet Resources**

Type	Count	Rank	% of Counts	Time Span	No of E-Citations
P-Citation	1596	1	90.42	1995-1999	2
E-Citations	169	2	9.58	2000-2004	12
				2005-2009	53
				2010-2014	103

Table 7A indicates that though contribution of internet resources is only 9.58% as against 90.42% physical documents in total references, graph specifies that trend of internet citing is growing after Y2K and its greater than ever after 2010 The low use of online material compared to printed material is may be due to lack of effective internet searching skills and its training. Nevertheless, a major problem regarding lack of standardization in reference citing observed in TE Research. So it may be highly possible that although researchers have referred online resources, its not indicated through URL, date of access or DOI. 1) ready citation entry in various databases or Google Scholar doesn't give indication of its online presence or 2) Lack of knowledge about standard referencing styles or mere negligence towards it are possible reasons. Absence of standardization in referencing style challenges the authenticity of the cited bibliography which may hamper the research and development in TE as it will become difficult for succeeding researchers to trace the original research and findings.

**7B) Impact of Open Access Journals on TE Research:** Among 188 journals cited in 1765 references, total 16 (9% of total journal citations) OPEN access journals from different subjects like education, public and community health , medicine are consulted by TE Researchers. Remaining 91% references are through Physical Journals.

**List of open Access Journals used from Education**

NO	Title of OPEN Access Journals cited (Education)
1	Journal of All India Association for Educational Research
2	Journal of Educational Administration and Foundation
3	New Frontiers in Education
4	American Educational Research Association Journal
5	Current Issues in Comparative Education

6	English Language Teacher Education and Development
7	International Education Journal
8	Issues in Educational Research
9	Journal of Indian Education
10	Turkish Online Journal of Educational Technology—TOJET

TE libraries can upload links to these openly available Journals on their webpage for easy and fast access.

**8) Raking of Country for Total Citations**

Rank	Country	Citation Count	%
1	India	1062	62.98932
2	USA	301	17.85291
3	UK	187	11.09134
4	Iran	34	2.016607
5	Canada	21	1.245552
6	England	15	0.88968
7	Netherland	13	0.771056
8	Australia	12	0.711744
9	France	7	0.415184
10	Other	18	1.067616

Table 8 confirms the **second hypothesis that majority (62.99%) TE researchers prefer Indian publications** over 27% foreign publications. Among foreign publications, USA and UK Publications takes leading positions with 17.85% and 11.09% respectively.

**9) Is TE literature spread over allied subjects?**

Education and Subtopics	No of Cited References
Education General	277
Educational Research	201
Educational Sociology	136
Educational Philosophy	116
Educational Administration	95
Educational Technology	78
Educational Psychology	60
Teaching profession and Personnel	42
Inclusive & Special Education	30
Curriculum, Textboks & School Subjects	27
Teaching methods	14
International & Comparative Education	10
Primary Education	9
Higher Education	6
Health & Physical Education	4
Secondary Education	3
Guidance & Counseling	2



Primary Education	1
Total	1111
<b>Non Education Subjects</b>	<b>No of Cited References</b>
Sociology	164
Philosophy	106
Psychology	67
Health and Medicine	64
Ethics and Values	62
Research Methodology	54
Language & Literature	30
Statistics	26
Management & HR	22
Environmental Studies	18
Political Science	13
Geography	8
Applied Science & IT	6
Economics	5
Industrial Psychology	3
History	3
Agriculture	1
Physics	1
Law	1
Total	654

<b>Subjects of Cited Documents</b>	<b>Percentage</b>	<b>Counts</b>
Education and Subtopics	62.94618	1111
Non Education	37.05382	654
Total	100	1765

Table proves third hypothesis that literature of TE is not only spread in publication covering sub braches of education but also varies subjects like Philosophy, Management, Public Health, Sociology etc. So the TE college libraries can allocate the part of their budget to these allied topics also. Or these libraries can undergo ILL MOU with the surrounding libraries in those allied subjects.

**Conclusion:** Regarding the library collections, citation analysis enables us to check The needs of users, what they are reading and using in their work, whether users are using the collection as well as if the library has the documents cited in scientific papers. But even citation being a good indicator of informational needs, it does not mean that the works cited are the most renowned in a particular area or the ones with the highest quality. Citations usually reflect usage in a given context and not always classic or higher quality works in all fields of knowledge. This limitations can be minimized by conducting a study with a complementary method, such as interviews with faculty about their reading habits, Then only it will give a fuller picture of the citation analysis study’s with multiple and judicious approaches.

**References**

- Araújo, C. A. (2006). *Bibliometria: evolução histórica e questões atuais. Em Questão, 12(1), 11- 32.*
- Fernandes, W. R., & Cendón, B. V. (2010). *Portal de Periódicos da Capes: proposta de um modelo de estudo bibliométrico para avaliação da coleção. (Portuguese). [Article]. Capes Portal of Periodicals: proposal for a bibliometric model for evaluation of the collection. (English). Revista Brasileira de Pós-Graduação: RBPG, 7(13), 318-349. Retrieved from <http://ojs.rbpg.capes.gov.br/index.php/rbpg/article/view/196/190>.*
- Haycock, L. A. (2004). *Citation analysis of education dissertation for collection development. Library Services and Technical Services, 48 (2), 102-106. Retrieved from <http://yunus.hacettepe.edu.tr/~tonta/courses/spring2011/bby704/citation-analysis-Haycock.pdf>.*
- Norton, M. J. (2001). *Bibliometrics. In: Norton, M. J. Introductory concepts in information science. Medford: ASIS.*
- Hadagali Gururaj S, Kumbar B D and Benahal Amrut (2009), *Citation Analysis of Ph D Thesis submitted to Karnataka University, Dharwad in the field of Physics, Information Studies, Vol. 15, Issue 2. Located at <http://www.indianjournals.com/ijor.aspx?target=ijor:is&volume=15&issue=2 &article=005> accessed on 25.05.2011.*
- Williams, V. K. & Fletcher, C. L. (2006). *Materials used by master's students in engineering and implications for collection development: a citation analysis. Retrieved from <http://www.istl.org/06-winter/refereed1.html>.*

**A STUDY OF TEACHER ENGAGEMENT AMONG SECONDARY SCHOOL  
TEACHERS OF MUMBAI**

**Ms. Sandhya Sarwade**, *Asst. Professor, Pillai College of Education and Research, Chemburr*

**Abstract**

*The goal of this study was to understand the extent of teacher engagement and characteristics of teachers' work in classroom and school. Teacher engagement is the level of commitment and involvement teacher has towards the organization. The paper focused on four factors of teacher engagement consists of: Professional interest, dedication, innovation and support. Researcher collected data from secondary school teacher (Total N = 341). Random sampling technique was used in order to conduct the survey.*

**Keywords:** *Teacher Engagement*

**Introduction:**

*"The learning journey begins in the classroom,  
Where teachers perform their craft, create an environment for learning,  
And engage and motivate their students to learn, innovate and achieve."*

Teacher engagement is a workplace approach resulting in the right conditions for all members of an organisation to give of their best each day, committed to their organisation's goals and values, motivated to contribute to organisational success, with an enhanced sense of their own well-being. Teacher engagement is based on trust, integrity, two way commitment and communication between an organisation and its members. Teacher engagement is about understanding one's role in an organisation, and being sighted and energized on where it fits in the organization's purpose and objectives. Teacher engagement is about having a clear understanding of how an organisation is fulfilling its purpose and objectives, how it is changing to fulfill those better, and being given a voice in its journey to offer ideas and express views that are taken account of as decisions are made. Teacher engagement is about being included fully as a member of the team, focused on clear goals, trusted and empowered, receiving regular and constructive feedback, supported in developing new skills, thanked and recognized for achievement. Engaged organisations have strong and authentic values, with clear evidence of trust and fairness based on mutual respect, where two-way promises and commitments – between employers and employees – are understood and fulfilled. Engaged teachers are concerned about the quality of education they deliver and that concern is observable in their classroom practices. Engaged teachers search for new ideas, innovations and implement best teaching practices, modify instruction to meet the instructional needs of their students, have high expectations for their students, take responsibility, dedicate towards the task, and get great support from the Principal as well as management. The work of an effectively engaged teacher is inspired by the meaningfulness of the success of the work itself. Engaged teachers experience pride and confidence in their efforts when organization achieve

as well as disappointment and new challenges when unable to reach to goal. Additionally, engaged teachers show characteristics of enthusiastic and positive interest into vigorous work.

**Literature review:**

- **Gülbahar, Bahadir, (2017):** The Relationship between Work Engagement and Organizational Trust: A Study of Elementary School Teachers in Turkey. The relationships based on trust which are established by a teacher with a school's internal stakeholders can provide greater engagement in work. The main purpose of this study is to determine the relationship between elementary school teachers' sense/understanding of work engagement and their understanding of organizational trust. The research is a correlational research study. Its environment consisted of 4016 elementary school teachers. 559 of the teachers were included in the sample. In the research, it is concluded that there is a positive, high level of significant relationship between participant teachers' perceptions of work engagement and their perceptions of organizational trust.
- **Elzette Pieterse-Landman(2012):** ‘The relationship between transformational leadership, employee engagement, job characteristics and intention to quit’: The results indicate that there are significant positive relationships between transformational leadership and employee engagement, the motivating potential of a job and employee engagement, and transformational leadership and the motivating potential of a job. Also significant negative relationships exist between transformational leadership and intention to quit, and employee engagement and intention to quit.
- **Ross, John A. (2006):** Gray, Peter Transformational Leadership and Teacher Commitment to Organizational Values: The Mediating Effects of Collective Teacher Efficacy. Transformational leadership researchers have given little attention to teacher expectations that mediate between goals and actions. This study examined the mediating effects of teacher efficacy by comparing two models derived from Bandura's social-cognitive theory. Model A hypothesized that transformational leadership would contribute to teacher commitment to organizational values exclusively through collective teacher efficacy.
- ‘The relationship between charismatic leadership, work engagement and organizational citizenship behaviour’: This study tested a mediation model linking leader charisma to organizational citizenship behaviors (OCB) via work engagement. The results indicated a significant positive relation between charismatic leadership and work engagement, between work engagement and OCB, and between charismatic leadership and OCB.

**Statement of the problem:** A study of Teacher Engagement among Secondary school teachers of Mumbai.’

**Operational Definition:**

**Teacher Engagement:** Teacher engagement is defined as a positive, work-related state of mind that is characterized by professional interest, dedication, innovation, support.

□ **Professional interest:** includes exchange ideas, share information, identify and solve problems, grow professionally, establish collegial relations.

- **Dedication:** being strongly involved in one's work, and experiencing a sense of significance, enthusiasm, inspiration, and commitment towards task.
- **Innovation:** refers to new ideas or methodology use to involvement in teaching profession.
- **Support:** includes all cooperation and help from the superior (Principal and management) and colleagues for professional development of each other.

**Objectives of the study:**

1. To study the level of teacher engagement among the secondary school teachers on the basis of gender and types of school.
2. To study the level of teacher engagement among the secondary school teachers on the basis of its components: Professional interest, Dedication, Innovation and Support.
3. To study the level of teacher engagement among the secondary school female / male teacher on the basis of its components: Professional interest, Dedication, Innovation and Support.
4. To study the level of teacher engagement among the different type of schools on the basis of its components: Professional interest, Dedication, Innovation and Support.

**Research design:**

**Method:** The descriptive survey method was used. In descriptive research, the research seeks to find answers to questions through the analysis of differences in groups.

**Sample:** The study has been aimed at the population of teachers at secondary school level in Mumbai city. Random sampling method has been used for obtaining the sample. The sample size was 341. The sample included 266 female and 75 male teachers.

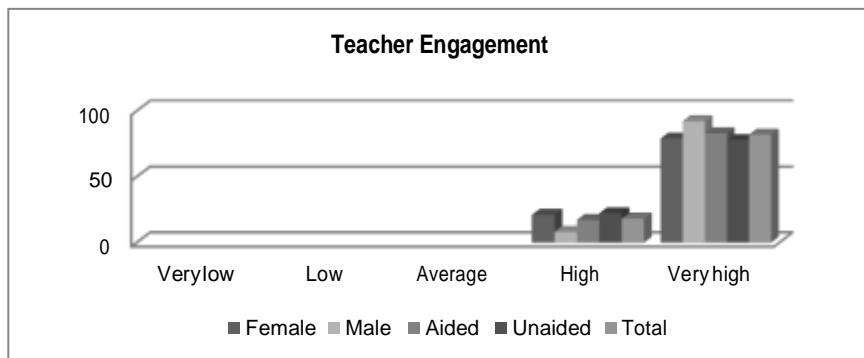
**Tools:** The data was collected through the questionnaires provided to the secondary school teachers. The tool used in the present study is Teacher engagement questionnaire: prepared by researcher (Validity: 0.86)

**Analysis of data:**

**Obj. 1** To study the level of teacher engagement among the secondary school teachers on the basis of gender and types of school.

**Table 1 Different Levels of Teacher Engagement Among The Secondary School Teachers On The Basis Of Gender And Types Of School**

Teacher Engagement		N	Very low	Low	Average	High	Very high
			39-59	60-90	91-121	122-155	161-195
Gender	Female	266	--	--	--	21.05 %	78.95 %
	Male	75	--	--	--	8 %	92 %
Types of school	Aided	269	--	--	--	17.1 %	82.9 %
	Unaided	72	--	--	--	22.22 %	77.78 %
Total		341	--	--	--	18.18 %	81.82 %



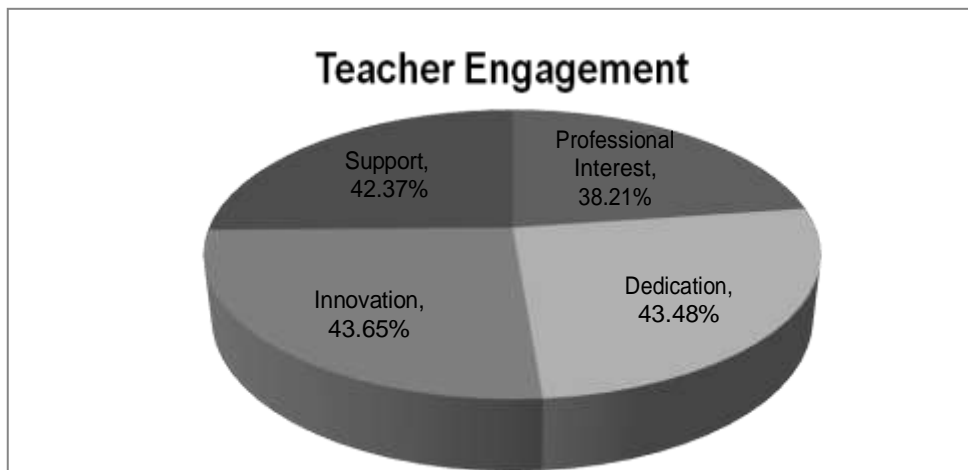
**Findings:** From the research findings, it is seen that overall 81.82 % of the teachers are highly engaged in their school activities. Majority are highly engaged and involved due to their motivation and commitment as well as supportive organizational environment.

**Obj. 2** To study the level of teacher engagement among the secondary school teachers on the basis of its components: Professional interest, Dedication, Innovation and Support.

**Table 2 Different Levels Of Teacher Engagement Among The Secondary School Teachers On The Basis Of Its Components**

Teacher Engagement	
Professional Interest	38.21%
Dedication	43.48%
Innovation	43.65%
Support	42.37%

**N : 341**



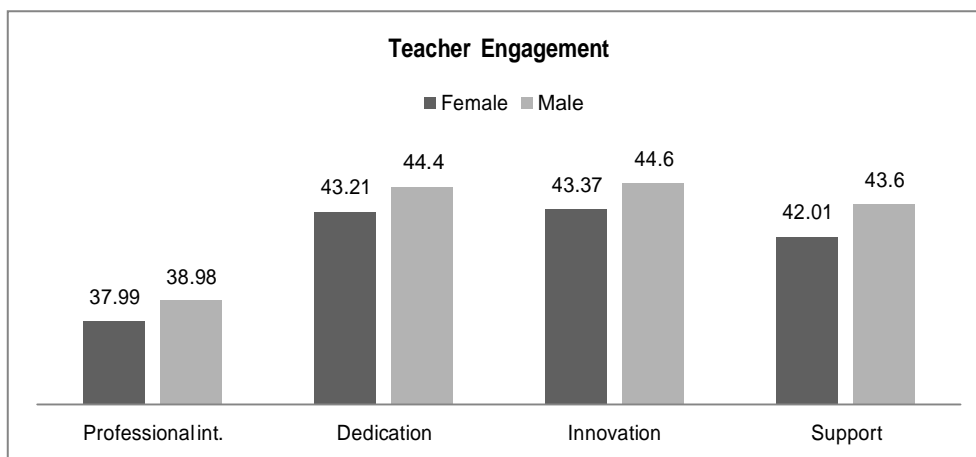
**Findings:** From the research findings, it is seen that according to the components of the teacher engagement in total sample 38. 21 % teachers showed professional interest, 43. 48 %

teachers showed dedication, 43. 65 % teachers showed innovation and 42. 37 % teachers are agreed that they get support from principal and management.

**Obj. 3** To study the level of teacher engagement among the secondary school female / male teacher on the basis of its components: Professional interest, Dedication, Innovation and Support.

**Table 3 Different Level Of Components Of Teacher Engagement Among The Secondary School Teachers On The Basis Gender**

Gender	N	Professional int.	Dedication	Innovation	Support
Female	266	37.99 %	43.21 %	43.37 %	42.01 %
Male	75	38.98 %	44.4 %	44.6 %	43.6 %



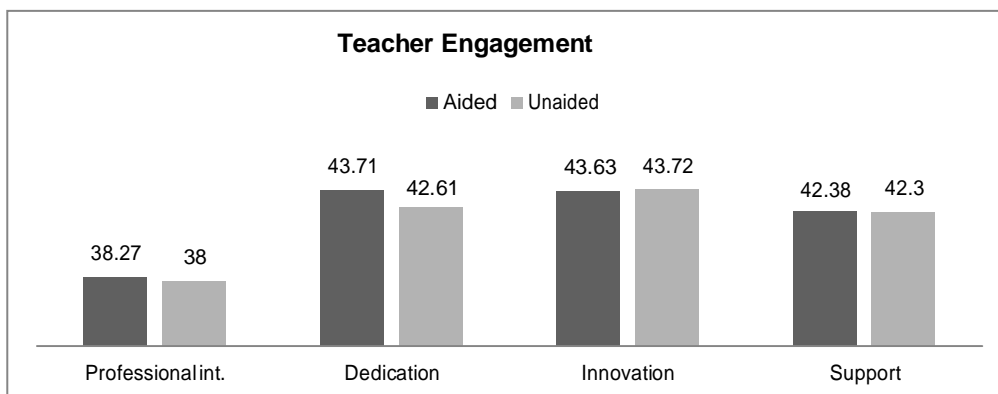
**Findings:** From the research findings, it has been observed that,

(i) Professional interest of male teachers is higher i.e. 38.98% as compared to female teachers at 37. 99%; (ii) Dedication of male teachers is higher i.e. 44.4 % as compared to female teachers at 43. 21 %; (iii) Innovation of male teachers is higher i.e. 44.6 % as compared to female teachers at 43. 37 % (iv) Support of male teachers is higher i.e. 43.6 % as compared to female teachers at 42.01 %. This may be due to more professional attitude as compared to female teachers.

**Obj. 4** To study the level of teacher engagement among the different type of schools on the basis of its components.

**Table 4 Different Level Of Components Of Teacher Engagement Among The Secondary School Teachers On The Basis Of Types Of School**

Types of school	N	Professional int.	Dedication	Innovation	Support
Aided	269	38.27 %	43.71 %	43.63 %	42.38 %
Unaided	72	38 %	42.61 %	43.72 %	42.3 %



**Findings:** From the research findings, it has been observed that,

(i) Professional interest of teachers in aided school is higher i.e. 38.27% as compared to teachers of unaided school at 38 %; (ii) Dedication of teachers in aided school is higher i.e. 43.71 % as compared to teachers of unaided school at 42.61 %; (iii) Innovation of teachers in aided school is i.e. 43.63 % as compared to teachers of unaided school at 43. 72 % and (iv) Support of teachers in aided school is higher i.e. 42.38 % as compared to teachers of unaided school at 42.3 %. This may be due to teachers from aided schools get all the facilities, job security and great cooperation from institution.

**Suggestions:**

1. Mentoring programs for new teachers.
2. Developing and expanding professional development that leads to career opportunities for teachers.
3. Developing or improving teacher evaluation systems to use multiple measures and give teachers timely and useful feedback.
4. Training to integrate technology in the classroom.
5. Professional development to integrate career and technical education into academic instruction.
6. Improving school leadership preparation programs and additional professional development for principals.
7. Build Trusting Relationships among teachers, Principal and Management . Motivate teachers individually.
8. Recognize Teachers' Value: focus on their strengths and provide them with opportunities to use those strengths, their motivation increases and they begin to reconnect to the reasons they went into education in the first place.
9. Set clear targets, with explicit intended outcomes that reach teachers, the communities they work with, and particularly the students they teach.
10. Cultivate a culture of professionalism, with transparent communication, respect for teacher time commitments and demands, and openness to authentic collaboration.



**Conclusion:** Teacher engagement plays a vital role for the success of any education institution. Teacher engagement is a process which contains various aspects, on fulfillment of which a teacher becomes a loyal employee and performs at his high level coupled with job satisfaction and a feeling of belongingness. It is a positive behavior held by the teacher towards the organization and its values. Teacher engagement leads to increased productivity, retention, trust and commitment. Teacher who believe that their management / Principal cares about their professional growth and wellbeing are more likely to be loyal and stay in their work for longer. This can bring huge gains for organization who deliver more effectively through increased productivity and performance and can reduce teachers turnover.

**References:**

- Cathie E. West (2013) – „The 6 keys to teacher engagement” Eye on Education Publication, New York, USA, ISBN – 978-1-596-67238-3 (pbk)
- Elzette Pieterse-Landman(2012) „The relationship between transformational leadership, employee engagement, job characteristics and intention to quit” thesis, Stellenbosch University
- Evans, Thomas Jack (1996) *Elementary Teachers' and Principals' Perceptions of Principal Leadership Style and School Social Organization.*:
- Gülbahar, Bahadır (Feb 2017) *The Relationship between Work Engagement and Organizational Trust: A Study of Elementary School Teachers in Turkey*, , *Journal of Education and Training*
- Peter Lorain : *Teaching That Emphasizes Active Engagement : Improving Learning for Middle School Students*, <http://www.nea.org/tools/16708.htm>
- Paul F. Amoroso (2002) *The impact of principal's Transformational Leadership Behaviour on Teacher Commitment and Teacher Job Satisfaction*, Ph.d., Seton Hall University, *Studies*, v5 n2 p149-159
- Ross, John A. (2006); Gray, Peter *Transformational Leadership and Teacher Commitment to Organizational Values: The Mediating Effects of Collective Teacher Efficacy*  
[https://www.edfunders.org/sites/default/files/GFEToolkit\\_FNL.pdf](https://www.edfunders.org/sites/default/files/GFEToolkit_FNL.pdf)  
[https://www.edfunders.org/sites/default/files/GFEToolkit\\_FNL.pdf](https://www.edfunders.org/sites/default/files/GFEToolkit_FNL.pdf)  
[http://fisherpub.sjfc.edu/cgi/viewcontent.cgi?article=1050&context=education\\_etd](http://fisherpub.sjfc.edu/cgi/viewcontent.cgi?article=1050&context=education_etd)  
<http://www.Quality-feedback-Teacher-Engagement-and-student-achievement-1.pdf>-adobe reader

## EDUCATION FOR GLOBAL PEACE AND SUSTAINABLE DEVELOPMENT

**Mr. Bhimappa Ramappa Rangannavar**, Assistant Professor, Maulana Azad National Urdu University, College of Teacher Education, Shaheen Nagar, Bidar Karnataka  
9448369736 / bhimappa10@yahoo.co.in

### **Abstract**

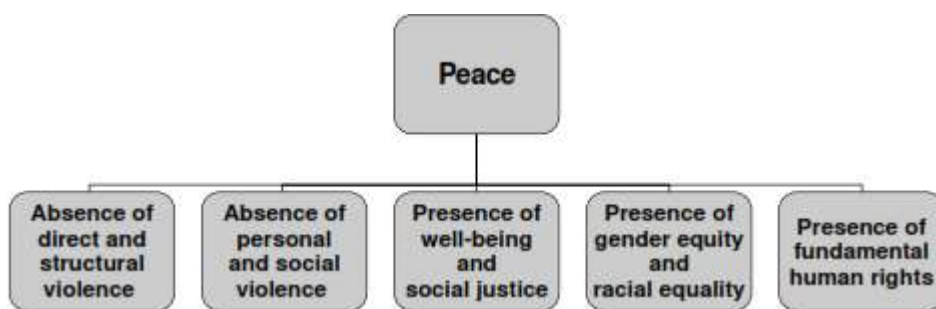
*There is no route to peace. Peace is the route. Education for Sustainable development is a dynamic undertaking where every person has a chance to benefit from educational opportunities and learn the life style, behaviour and values necessary to create a sustainable future. A framework of education for peace and sustainable development must address the social economic and environmental issues relevant to its context. It means education for sustainable development must contend with the challenges of poverty and inequality, debt, ill-health, poor nutrition and environmental degradation. It will help and play the central role in establishing cohesion and harmony within the local context of mistrust, social unrest, violence and aggression. Peace education plays a dual role in not only attempting to analyse and reduce conflict and violence in its many forms, but to purposefully and actively create the conditions for achievement of a positive peace for individuals, groups and nations. It must bring people together in creative collaboration and cooperation to assist in breaking down ethnic, economic, class, gender and political barriers that cause people to feel alienated. It must involve, learning the knowledge, skills, perspectives and values that will guide and motivate people to lead sustainable livelihoods, to participate in a democratic society. An attempt is made in this paper to throw light on the impediment leading to Peace Education and to develop a culture of peace by using Education.*

**Keywords:** Education for Global Peace Sustainable development

**Introduction:** At the dawn of the 21 century, what is called –cross-cultural century, international education for peace is becoming more urgent as the result of globalization. What is globalization? First, let us define the term, —globalization. Globalization cannot be explained only by means of economy and information. It is a more complex interaction of people, culture, politics, economy, science, technology, art and education. Globalization is a process of transnational and transcultural interactions whereby global and regional events, decisions and human activities from the remotest corners of the world come to have significant influences on individuals, communities and the world beyond cultural and national borders. Baylis and Smith (2001) states that the word ‘globalization’ can be distinguished with five general usages. ‘globalization’ can be distinguished with five general usages.

- ❖ **Internationalization:** intensification of cross-border interactions and interdependence between countries.
- ❖ **Liberalization:** a process of removing government-imposed restrictions on movements between countries in order to create an ‘open’, ‘integrated’ world economy.
- ❖ **Universalization:** the spread of various objects and experiences to people at all corners of the earth. Westernization, especially in an Americanized form.
- ❖ **Territorialisation:** a shift in geography whereby territorial places, territorial distances and territorial borders lose some of their previously overriding influence.

**Concept of Peace:** "Peace is more than the absence of war." "Peace is living in harmony and not fighting with others." "Peace is a calm and relaxed state of mind." Galtung (1996) describes peace in terms of the conditions that hold when a peaceful state is maintained and promoted "Peace consists of positive thoughts, pure feelings, and good wishes." "To stay peaceful requires strength and compassion." "World peace grows through non-violence, acceptance, fairness and communication." "Peace is the main characteristic of a civilized society" (Boulding, 1996). Peace is not just the absence of war; it is the practice of love. In a peaceful society people would work together to resolve conflicts, develop morally, treat each other with justice, satisfy basic needs, and respect each other. In essence, they would live in unity.



As the diagram shows, peace can be categorized into positive and negative phases. In the negative phase, we can see the absence of direct violence such as wars and terrorism as well as the absence of indirect violence such as poverty and hunger. Another negative phase is the absence of personal, social or institutional violence, that is, assault, rape and bullying. In the positive phase of peace we see well-being, social justice, gender equity and racial equality as well as a guarantee of fundamental human rights.

**A frame work for Peace education for Peace loving Global citizens**



The liberal democracy is a prerequisite of peace education as liberal democracies do not fight one another. A liberal democracy is a starting point for peace education and nurturing peace-

loving global citizens in the 21 century. It is not too much to say that human history is the history of striving for pursuing liberal democracy through the Magna Carta (1215), the Petition of Rights (1628), the Civil War in England (1642-46, 1648-50), the Bill of Rights (1689), the French Revolution (1789-1799), the Civil War St in the US (1860-1865), World War I (1914-1918) and World War II (1939-1945).

**Necessary Knowledge, Skills and Attitudes through Peace Education:** One of the goals of international education for peace is to provide all students with the knowledge, skills and attitudes they need to function in their local civic cultures as well as global civic cultures, living responsibly in a multi-cultural and interdependent world. Whether it is local or global, as Palmer (1981) states, civic culture represents the patterning of how we share a common space, common resources, and common opportunities and manage interdependence in that —company of strangers— which constitutes *The Public*. What kind of knowledge, skills and attitudes should be fostered through peace education? In order to avoid national, cultural, religious, racial, ethnical and personal conflicts, we should increase knowledge, develop several skills and transform our attitudes through peace education. The necessary scope of knowledge, skills and attitudes in peace education are interwoven and interrelated with each other. These are the centre nerve of local and global actions in order to link ourselves to the rest of the world. We can summarize knowledge, basic skills and necessary attitudes for creating cultures of peace for sustainable human society as follows:

**Necessary Knowledge for Peace Education**

- ❖ Globalization: positive and negative effects of globalization and cultural identities North-South Problems: global interdependence and poverty, civil wars, refugee, child labour and AIDS
- ❖ Direct violence: war and terrorism and structural violence: poverty and discrimination The structure of peace and the meaning of well-being
- ❖ The concept of citizenship: the legal and fundamental human rights and social responsibility Environment, ecology and sustainable society.

**Necessary Skills for Peace Education**

1	Communication skills with active listening
2	Reconciliation by integrating opposed ideas and value systems
3	Balancing ethnic, cultural, religious, national and global identities
4	Harmony and cooperation
5	Critical thinking and problem-solving skills
6	Empathy and compassion
7	Patience and self-control
8	Leadership and membership
9	Mediation and negotiation for conflict resolution

**Transformative Attitudes for Peace Education**

- Global village concern and neighbourhood concern for peaceful coexistence
- Ecological awareness for a sustainable environment
- Respectful attitude towards human dignity and diversity

- Reflective and transformative attitudes towards daily life
- Reflective and transformative teaching and learning
- Non-violent attitude with tolerance and reconciliation

In the process of peace education, knowledge, skills and attitude above listed should be acquired as practical objectives. Both teachers and students should be familiar with these. The necessary knowledge, skills and attitudes in peace education are interrelated and could be brought to life through the continuous reflective and transformative thinking and actions by educators and their students. As we have learned from history, teachers and students can become influential activists in making today's confused world into more peaceful and sustainable one with a globally shared culture of peace.

**Role of Teachers in Peace and sustainable development:** Teachers plays pivotal role in developing skills in: empathetic listening, democratic leadership, developing children's self-esteem and conflict resolution. They also integrate concepts relating to peace education such as national harmony, democratic principles and non-violent conflict resolution skills into their regular classes using a child centred approach. Teachers also create intergroup relationships through sports events art competitions and language camps designed to create opportunities for children of different backgrounds and schools to mix and meet. They teach non-violent attitudes and skills in class rooms and stimulate children's creativity and play through extracurricular activities of drama, painting, songs, poems and sporting events. Creativity humour and play form essential elements of any peace education programme where children learn how to be team players, how to cooperate and how to be creative thereby training nonviolent patterns of communication and behaviour. In addition, exercises for inner peace are sometimes included and said to help develop non-violent attitudes. Students are also stimulated to practice democratic values and attitudes through creation of a peaceful school environment which includes democratically **organized** schools and friendly relationships among students and staff and cooperative relationships with parents and community —A culture of peace will be achieved when citizens of the world understand global problems, have the skills to resolve conflicts and struggle for justice non-violently, live by international standards of human rights and equity, appreciate cultural diversity, and respect the Earth and each other. Such learning can only be achieved with systematic education for peace (Hague Agenda for Peace & Justice for the 21<sup>st</sup> Century).

**Sustainable Development:** Education is a basic component of human development, it's the single most important means for empowerment and sustained improvement in all well-being. Sustainable development is 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs (United Nations, 1987). Sustainable development is seeking to meet the needs of the present without compromising those of future generations. We have to learn our way out of current social and environmental problems and learn to live sustainably. Sustainable development is a vision of development that encompasses populations, animal and plant species, ecosystems, natural

resources and that integrates concerns such as the fight against poverty, gender equality, human rights, education for all, health, human security, intercultural dialogue,

**Education for Sustainable Development and Peace:**

Education for Sustainable Development and Peace is about learning rather than teaching. It therefore requires:

- ✓ reforming the structure and nature of basic education;
- ✓ reorienting existing education programmes;
- ✓ developing public awareness about what sustainability means; and
- ✓ building capacity within education systems and across all other ESD partners.

**Discriptipons of the Basic terms**

<b>Basic terms</b>	
Education	Means of transferring culture, knowledge, skills, and habits across generations and between peoples; a human right, incurring learning from experience, guided instruction, training, and research in ways which shape identities and capacities in social, cultural, political and economic arenas
Citizenship	Broadly conceptualized as a status of equality between members of a political community, more narrowly as the link between a person and a state or association of states (Simon: 20120 sometimes synonymous with nationality, rights of residence, employment, and other kinds of participation in political, economic, cultural and social life.
Peace	A state of harmony and stability (without violence, conflict, or fear), suggestive of healthy relationships, within and between groups, communities, and nations, with the social, economic, and political order serving a common interest.
Development	Multiple processes claimed to be oriented at ensuring growth, equality and well-being, from household to national levels.

**Going global through Peace and sustainability**

<b>Going global</b>	
<b>Global peace</b>	An ideal of planetary non-violence by which nations willingly cooperate to prevent warfare, voluntarily or by virtue of a system of governance. It sometimes refers to a cessation of all hostility, crossing disciplinary boundaries to engage with ideas of human rights and animal rights, technology, education, engineering, medicine and diplomacy (Harris 2008).
<b>Global citizenship</b>	An umbrella term for the social, political, environmental and economic actions of globally-minded individuals and communities on a world scale; the belief is that, rather than affecting isolated societies, individuals are actors in diverse, local and non-local networks, extending to national and supra-national levels
<b>Sustainable global development</b>	Generic advocacy to promote the needs of the present without compromise to future generations; a vision of development encompassing respect for all life and natural resources, integrating concerns such as poverty reduction, gender equality, human rights,

	education for all, health, human security and intercultural dialogue (UNESCO: 2008).
<b>Global education</b>	A means to reveal realities of a globalized world and awaken people to seek justice, equity, and human rights for all; it is seen to encompass Development Education, Human Rights Education, Education for Sustainability, Education for Peace and Conflict Prevention, Intercultural Education and the global dimension of Education for Citizenship . Global education is a process of transformative learning, essential to mutual understanding across racial, cultural, religious, political and geographical divides

**Role of Education in Promoting Peace and Sustainable Development:** We have seen above that Education for Sustainable Development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. By embracing key sustainable development issues into teaching and learning, education plays a determinant role in critical areas, such as, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. However, for addressing these, education requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. Education for Sustainable Development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way. Since education affects all aspects of our lives, we confine this role to three thematic areas in this paper: education, economy and society; education and global citizenship; and education and peace. It is important to mention here that these roles are not exclusive rather they are overlapping.

**Education for Sustainable Development and Peace helps children to:**

- ✚ Recognize their worth as individuals, knowing that they are unique;
- ✚ Understand that we are all different in many ways;
- ✚ See things from other people’s point of view;
- ✚ Recognize right from wrong and to have the confidence to choose right;
- ✚ Understand that they have rights and responsibilities; and
- ✚ Understand the democratic process.

**In particular, MGIEP’s role in implementing the EDSGC should focus on the following:**

- ❖ Promote nationally, regionally and internationally the lessons of the Gandhian philosophy on peace and non-violence for fostering sustainable development, peace, and global citizenship; Promote regional and international cooperation;
- ❖ Catalyze new partnerships with the private sector, with youth, and with media groups;
- ❖ Foster monitoring and evaluation;
- ❖ Encourage a research agenda and serve as a forum for relevant research on ESDGC;
- ❖ Serve as a forum for bringing together important stakeholders such as: representatives of the private sector, faith-based institutions, youth associations, indigenous people, etc.;
- ❖ Share good ESDGC practices;

- ❖ Link Member States that have put in place ESDGC curricula, policies, research, etc., with those Member States that are requesting help;
- ❖ Convene flexible working groups on particular topics;
- ❖ Fulfil its strategic role with regard to ESDGC; and
- ❖ Serve as a clearing house.

**Education for Sustainable Development: MGIEP's Framework for 21<sup>st</sup> Century**

Education for Sustainable Development and Peace develops people's skills to take action that improves our quality of life now and for future generations. As the starting point for developing its framework for the 21 century, it would be meaningful for MGIEP to recognize the fact that there are several crucial questions/issues facing people in all societies. These include:

- How-to preserves and protect the environment, reduce pollution and manage natural resources in a sustainable way;
- How to reduce the inequalities that exist between different people in all parts of the world and protect their human rights; and
- How to develop peaceful and harmonious communities by promoting understanding between people who are different from one another.

A new report issued on June 2013 by a top-level United Nations knowledge network under the auspices of UN Secretary General Ban Ki-moon lays out an action agenda to support global efforts to achieve sustainable development during the period 2015-2030. -The post-2015 process is a chance for the global community to work towards a new era in sustainable development, said UN Secretary-General Ban Kimoon. This report from the Sustainable Development Solutions Network, the result of collaboration Between top scientists, technologists, businesses, and development specialists, could be a critical input to the work of MGIEP to shape the post-2015 agenda on Education for Sustainable Development and Peace in the Asia-Pacific region. The report, entitled —An Action Agenda for Sustainable Development, outlines 10 sustainable development priorities, covering the four main dimensions of sustainable development: economic growth and the end of poverty, social inclusion, environmental Sustainability and good governance. The 10 priority challenges of sustainable development

**Identified in this report are:**

1. End extreme poverty and hunger;
2. Achieve development and prosperity for all without ruining the environment;
3. Ensure learning for all children and youth;
4. Achieve gender equality and reduce inequalities;
5. Achieve health and wellbeing at all ages;
6. Increase agricultural production in an environmentally sustainable manner, to achieve food security and rural prosperity;
7. Make cities productive and environmentally sustainable;
8. Curb human-induced climate change with sustainable energy;



9. Protect ecosystems and ensure sound management of natural resources; and
10. Improve governance and align business behaviour with all the goals.

**Conclusions:** In conclusion, developing global literacy for peaceful coexistence is a key to foster a sense of human solidarity and neighbourhood concern, which enable us to create cultures of peace in multicultural diversity and sustainability. This is a central mission of international education for peace at school. Students and teachers can be major activists of making peace and creating cultures of peace. Peace and security are fundamental to human dignity and development. The sustainable development of any culture is always endangered insecurity and conflict. Human tragedies result in overwhelmed health systems, the destruction of homes, schools and often whole communities, and increased numbers of displaced people and refugees. Education for Sustainable Development plays a key role in promoting values for peace. Under the present predicament there is a growing realization in the world of education today that children should be educated in the art of peaceful living. As a result, more and more peace concepts, attitudes, values and behavioural skills are being integrated into school curricula in many countries. There is also renewed interest to develop peace related disciplines such as values education, moral education, global education, etc.

#### **References**

- Koji NAKAMURA, Promoting Cultures of Peace in Japan , International Education for Peace in Higher Education*
- Maiyo K. Julius, Gladys Ngao, Mulwa David and Mugambi Paul 2012 on Peace Education for Sustainable Peace and Development: A Case of Kenya in Journal of Research in Peace, Gender and Development (ISSN: 2251-0036) Vol. 2(2) pp. 028-033 February 2012*
- Prof. Nilima Bhagabati 2009 The Green Changemakers: Peace Education for Sustainable Development UNESCO and the Canadian Commission for UNESCO 2017, Ottawa, Canada on The UNESCO Week for Peace and Sustainable Development: The Role of Education*
- UNESCO, 2016. MGIEP Education for Peace And Sustainable development Concepts, Clarity and Cohesion*
- <http://www.unesco.org/new/en/education/mgiep/>
- <http://www.interestjournals.org/JRPGD>

## IMPACT OF OUTCOME BASED LEARNING ON TEACHING, LEARNING AND ASSESSMENT

**Dr. Sunita Wadikar**, Principal – Pillai College of Education & Research, Chembur

*swadikar@mes.ac.in*

*„If a child can't learn the way we teach, may be we should teach the way they learn“.*

- Ignacio Estrada

In most educational institutions today, the focus is mainly on graduating students with academic capabilities only. No doubt that we want all the students to develop competence in basic knowledge and skills since these form the foundation for further learning. Further, in this competitive world, we also want our students to develop more sophisticated skills and higher levels of knowledge to compete as global citizens. But the question is whether we are successful in doing so. Organisations today expect teachers to be able to identify learning objectives on the basis of curriculum and accurate assessment information about individual students. Contrary to this the futuristic approach would be a total departure by aligning learning and assessment to the learning outcomes.

Outcome Based Education emerged from the objective movement of the 1950's. Spady was a leading disciple and defined it as, 'Outcome based education' means organizing for results: basing what we want to achieve' (Spady, 1988)

Since the last four decades, a lot of educationists have worked towards this movement. Very often the terms OBE is used synonymously with competence-based education, criterion-referenced learning, mastery learning and authentic assessment. However, there are

There are significant differences between the 'instructional objectives' debate of the 1960s and 70s and the emphasis on 'learning outcomes' today.

### **Characteristics of 'Outcome Based Learning':-**

- Clearly defined learning outcomes
- Design of the Curriculum, learning strategies and learning opportunities tailored to ensure the achievement of the learning outcomes
- An assessment process matched to the learning outcomes at individual level
- Provision for appropriate remediation.

As against the conventional methodologies implemented very often in classroom teaching, the Outcome-based education (OBE) is an educational theory that has its basis revolving around goals (outcomes).

**How is OBE different from the traditional system of education?**

In a traditional system, content and performance expectations are based primarily on what was taught in the past to students in a given span of time. Also students were given grades and rankings compared to each other. The main goal of the education was to disseminate the knowledge and skills which were pre-determined. The process paid little attention to whether or not students learnt any skill or material.

Whereas, in outcome based education the curriculum planners need to work in reverse direction once the outcomes have been decided. They should decide upon the knowledge and skills to be imparted to reach the outcome and then design the curriculum accordingly.

**Definition of Outcome Based Education:**

Outcome based education as defined by Spady (1988) as a —way of designing, developing, delivering and documenting instruction in terms of its intended goals, knowledge and outcomes. Exit outcomes are a critical factor, in designing the curriculum. Spady suggests —You develop the curriculum from the outcomes you want students to demonstrate, rather than writing objectives for the curriculum you already have. Since the outcomes are well specified there is enough clarity of the delivery mode of the content and its assessment, the results therefore become more tangible and easily measurable which forms the basis of an effective assessment and accreditation process.

**Definition of Learning Outcomes:**

Learning outcomes are statements that describe significant and essential learning that learners have achieved, and can reliably demonstrate at the end of a course or program. In other words, learning outcomes identify what the learner will know and be able to do by the end of a course or program.

Learning Outcome statements may be broken into three main components namely:

- i) having an action word which gives the performance to be demonstrated,
- ii) a learning statement which identifies what learning to be demonstrated in the performance and
- iii) a broad statement of the criterion for acceptable performance.

Learning outcomes statements are specified for various course outlines which reflect a movement toward outcomes based learning (OBL) in the entire educational system. Through the creation of outcomes statements, and the evaluation of learner performance in relation to those statements, it is believed that a more accountable educational system will result.

As an Outcomes-based education is thought to provide greater consistency in course offerings across the educational system and accountability as expectations for learning are clearly stated, the frequent assessment processes help the student as well as the teacher identify progress toward attaining the outcomes. In fact, this clarity helps in bringing about more objectivity and precision in any assessment and accreditation process.

### **Learning Principles of OBE:**

There are different definitions for outcome-based education. The most widely used one is the four principles suggested by Spady (1994).

An OBE curriculum means starting with a clear picture of what is important for students to be able to do, then organizing the curriculum, instruction and assessment to make sure this learning ultimately happens. The four basic principles are (Spady, 1994):

- Clarity of focus

This means that everything teachers do must be clearly focused on what they want students to know, understand and be able to do. In other words, teachers should focus on helping students to develop the knowledge, skills and personalities that will enable them to achieve the intended outcomes that have been clearly articulated.

- Designing down

It means that the curriculum design must start with a clear definition of the intended outcomes that students are to achieve by the end of the program. Once this has been done, all instructional decisions are then made to ensure achieve this desired end result.

- High expectations

It means that teachers should establish high, challenging standards of performance in order to encourage students to engage deeply in what they are learning. Helping students to achieve high standards is linked very closely with the idea that successful learning promotes more successful learning.

- Expanded opportunities:

Considering the individual differences and the learner diversity, teachers should provide ample opportunities for all students. Most students can achieve high standards if they are given the right opportunity.

**The OBE Process:**

'Constructive alignment' is the process that we usually follow when we build up an OBE syllabus. It is a term coined by Professor John Biggs in 1999, which refers to the process to create a learning environment that supports the learning activities appropriate to achieving the desired learning outcomes. The word 'constructive' refers to what the learner does to construct meaning through relevant learning activities. The 'alignment' aspect refers to what the teacher does. The key to the alignment is that the components in the teaching system, especially the teaching methods used and the assessment tasks are aligned to the learning activities assumed in the intended outcomes.

**Benefits of OBE:**

**Clarity:**

The emphasis on outcomes to be accomplished gives the knowledge of what needs to be achieved at the end of the course. Curriculum planners need to work backwards once the outcomes have been decided. They should decide upon the knowledge and skills to be imparted to reach the outcome.

**Flexibility:**

Basically Outcome based education being a student – centered learning model the whole emphasis is on student engagement. Hence the teacher has the flexibility of teaching their students using any method and more importantly, with the clarity of the outcomes to be accomplished can structure their strategies around the student's needs. Co-operative and Collaborative methods involving extensive group work can be some of the methods to be implemented. Instructors are meant to be facilitators helping and guiding the students understand the material in any necessary way to facilitate students learning.

**Comparison:**

The predetermined learning outcomes allow institutions to assess the student's achievements leading to increased movement of students. OBE can be compared across different institutions. On an individual level, institutions can look at what outcomes a student has achieved to decide what level the student would be at within a new institution . On an institutional level, institutions can compare themselves, by checking to see what outcomes they have in common, find places where they may need improvement , based on the achievement of outcomes at

other institutions. A potential employer can look at records of the potential employee to determine what outcomes they have achieved. They can then determine if the potential employee has the skills necessary for the job.

Involvement:

OBE being learner centered approach, student involvement remains at the epicenter of all transactions. Students are expected to do their own learning, so that they gain a full understanding of the material thereby allowing them to feel fully responsible for their own individual learning. Infact, this approach leads to better retention of the content internalised and towards student autonomy and ensures that students will be prepared for life after school

**Drawbacks of OBE:**

- Outcomes could be interpreted differently by different instructors
- A holistic approach is lost as only specific outcomes are outlined.
- At times learning could be reduced to something that is specific, measurable and observable.

**Conclusion:** It may be said that OBE is need based and relevant, it motivates to learn, is highly interactive and reflective in nature, and provides feedback instantly thereby leading to objective, verifiable outcomes. The Curriculum plays an important role for the all-round development because it works as the medium for the interaction between teacher and student and the fact remains that the final outcome of any transaction should be the attainment of the set goal. More importantly, what actually matters is what is learned rather than what is taught. Hence it becomes necessary to set objectives in terms of its learning outcomes. Content to be taught, the teaching methods to be adopted and the assessments to be conducted need to be aligned with the intended learning outcomes. After all the quality of teaching is ultimately judged by the quality of learning that takes place. The teacher in this futuristic approach as apposed to being the repository of knowledge, must now be a facilitator of learning.

**References:**

- <http://liad.gbrownc.on.ca/programs/InsAdult/currlo.htm>
- <http://cei.ust.hk/teaching-resources/outcome-based-education/institutional-resources/obe-principles-and-process>.
- Shirley Lesch, *Learning outcomes, learning achieved by the end of a course or program, knowledge – skills – attitudes*, George Brown College,

**GIFTING A LIFE: A QUASI EXPERIMENTAL STUDY OF ATTITUDES AND AWARENESS OF COLLEGE STUDENTS TO ORGAN DONATION**

**Patricia D'Souza, Sophia College for Women**

**Abstract**

*A pre-test and post-test methodology was used to analyse the awareness levels and knowledge about organ donation in an incidental sample of senior College students studying in South Mumbai. The intervention took the form of an Awareness session conducted by a trained medical personnel. A qualitative analysis of the response pattern of both conditions indicates a shift to higher levels of awareness and the clarification of some myths regarding organ donation. Some areas of ambiguity continue. Overall though there is a greater openness to the possibility of organ donation in the future there isn't much change in the willingness to register for organ donation.*

**Introduction:** Organ Donation is the process of giving an organ or a part of an organ for the purpose of transplantation into another person. Nationally, with a population of almost 1.2 billion people, the statistic stands at 0.08 persons as organ donors per million populations (PMP). This is an incredibly small and insignificant number compared to the statistics around the world. A. Darr, G. Randhawa (1999) in their study of awareness and attitudes towards organ donation and transplantation among the Asian population found that nearly half of the respondents in their survey did not know what a donor card was used for, only 6 of the 64 people interviewed had heard of the National Donor Register. This suggests that media campaigns aimed at attracting donors from the Asian population have had limited success thus far. Morgan and Miller (2002) concluded in their study that attitudes toward donation, knowledge about organ donation, altruism, and perceived social norms are significantly associated with both actual behaviour (having signed an organ donor card) and behavioural intent (among non-donors) to sign a card in the future. The reason for the shortage most cited in the medical literature is that lack of knowledge in the general population (Shanteau & Harris, 1990b). Accordingly, considerable effort has been made to increase awareness (and sympathy) of the plight of potential organ recipients (Cantarovich, 2002).

**Methodology:**

**Sample:** 270 Senior College Arts students were contacted using incidental/ convenience sampling. The Pretest-posttest design was used. The study consisted of three parts.

1. The students were approached with permission from the required authority. The pre-test questionnaire was administered to them to assess their awareness and attitudes towards organ donation.
2. An awareness session conducted by the Doctors and Professionals from NGO MOHAN (an acronym for Multi Organ Harvesting Aid Network) Foundation.
3. The post-test questionnaire was administered to assess the change in awareness and attitude to organ donation.

**Tools:** A self-constructed questionnaire assessing various myths and different aspects of organ donation based on previous research was administered.

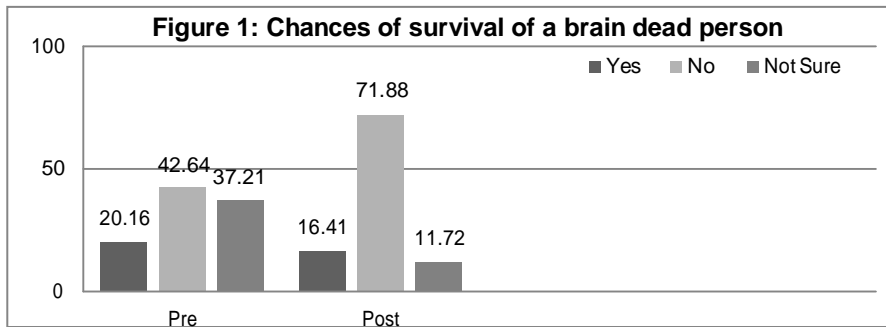
**Results and Discussion:** The responses to the pre-test and post-test questionnaire were qualitatively and quantitatively analysed. All responses were in percentages across both pre and post conditions.

**Table 1: Showing the difference in the response pattern across pretest and posttest conditions for various items of the questionnaire**

Items	Pretest			Posttest		
	Yes	No	Not sure	Yes	No	Not sure
Is organ donation gender specific	5.11	81.22	13.87	3.05	90.08	6.87
Is organ donation age specific	36.84	38.17	25.56	66.66	28.62	4.65
Can Children donate organs	24.81	38.35	36.84	69.40	24.63	5.97
Is organ donation accepted in every caste and religion	24.82	37.23	37.96	33.59	39.69	26.72
Religion does not permit organ donation	25	37.5	56.73	23.64	58.18	36.36
Organ donation requires legal procedures before the process	82.48	3.65	13.87	87.50	5.88	6.62
Organ donation results in disfigurement	15.44	33.82	50.74	35.20	45.60	19.20
Can persons suffering from Hepatitis B / E donate organs	4.96	42.55	52.48	0	75	25
Can persons suffering from Thalassemia donate organs	5.11	35.77	59.12	8.88	62.96	28.15
Are there any chances of survival for a brain dead person	20.16	42.64	37.21	16.41	71.88	11.72

Overall a look at Table 1: indicates a shift in response pattern across the pretest and posttest conditions. Regarding many aspects related to organ donation there is a marked move towards clarity and awareness after the intervening session on organ donation. The relationship between organ donation and age/gender is clarified, the support of organ donation by different religions is also observed while there remains some ambiguity regarding caste and organ donation. The need for legal formalities shows just a slight change in the posttest condition. Regarding disfigurement there is move from unsure to no however overall the response pattern is maximum for No followed closely by Yes responses. Regarding Hepatitis, in the posttest condition, there is a clear endorsement of 75% for no with the rest being unsure. With regards Thalassemia too the No response is strengthened in the post test condition.





As indicated in table 1 and figure 1 in the pre-test condition there is ambiguity about the chances of a brain dead person's survival. However this shows a shift in the post-test condition with almost 72 % being clear that there are no chances of survival for a brain dead person, with 16% still being hopeful and about 12% being unsure.

Condition	Yes	No
Pre	22.06	77.94
Post	54.62	45.38

Table 2 shows a marked increase to almost 55% in awareness of NGO's and other groups working for organ donation.

Condition	Entire eye	Only cornea
Pre	30.08	69.92
Post	22.69	77.31

The response pattern for both conditions reveals that the respondents were aware that only the cornea is transplanted in eye donation the numbers endorsing only cornea show an increase from around 70 to 77% in the post –test condition.

Condition	Yes	No	Not Sure
Pre	62.68	18.31	19.01
Post	80.92	6.87	4.58

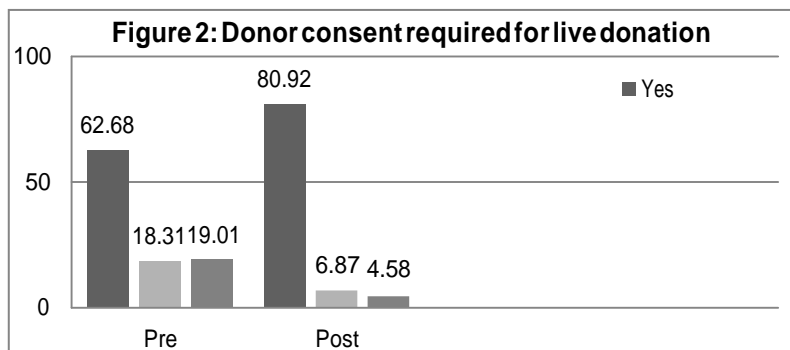
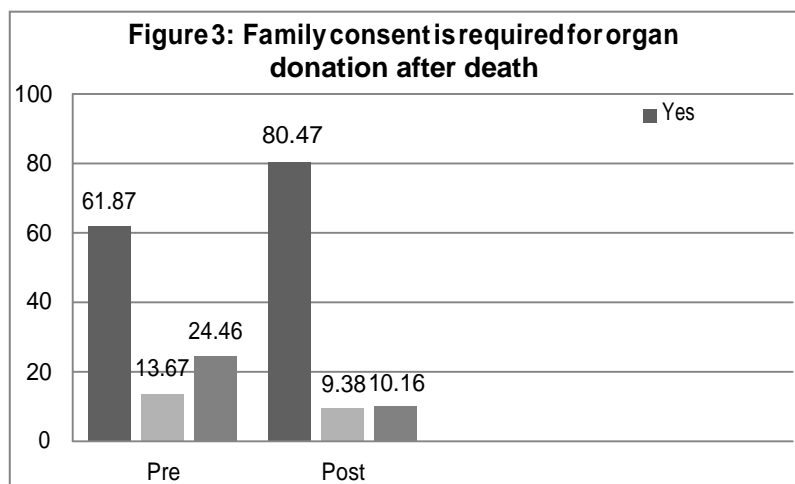


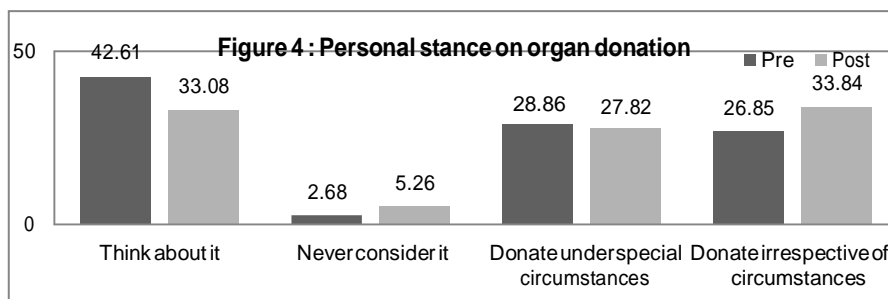
Table 4 and figure 2 clearly indicate that both groups are aware that organ donation during life requires the consent of the donor. This statement shows a stronger trend in the post-test condition with 81% choosing the yes option as compared to around 63% of the pre-test condition.

<b>Table 5 : For organ donation after death the family's consent is mandatory</b>			
<b>Condition</b>	<b>Yes</b>	<b>No</b>	<b>Not Sure</b>
Pre	61.87	13.67	24.46
Post	80.47	9.38	10.16



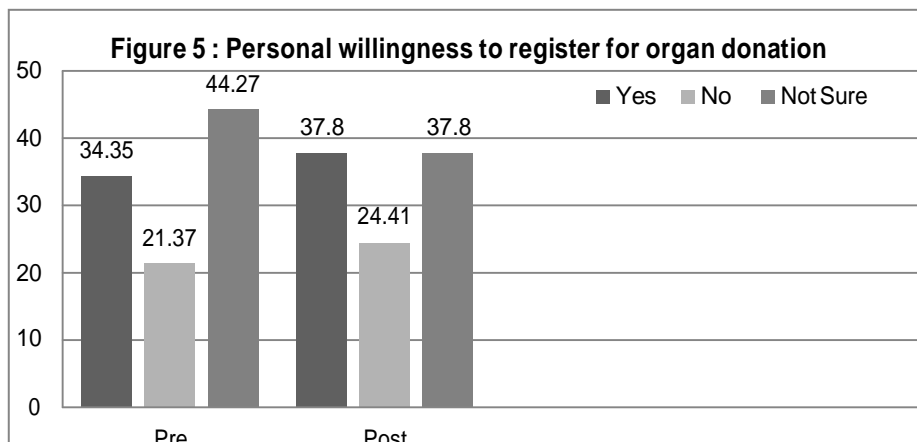
A look at table 5 and figure 3 indicate that in the pre-test condition almost 62% knew that family consent is required for organ donation after death; in the post-test condition this awareness is strengthened to more than 80% with about 10% still being unsure.

<b>Table 6: Personal stance on organ donation</b>		
<b>Condition</b>	<b>Pretest</b>	<b>Posttest</b>
Think about it	42.61	33.08
Never consider it	2.68	5.26
Donate under special circumstances	28.86	27.82
Donate irrespective of circumstances	26.85	33.84



Regarding their personal stance on organ donation Table 6 and figure 4 shows there is a drop in those who will think about it by about 10 % and slight increase in those who will donate irrespective of circumstances. An interesting observation is there is a slight increase in the number from 2.68 to 5.26 in the never consider it category from the pre to the post- test condition. The trend for donating under special conditions remains similar across conditions. Table 7 and figure 5 reveals that though there is a change in the willingness to register for organ donation, there is just a slight shift from unsure to yes in the post- test condition. This indicates that knowledge about organ donation doesn't necessarily translate into willingness to register for organ donation. Also this is still a hypothetical situation, one hopes that having being primed about organ donation, having accurate information about it will encourage people to be more willing to consider the possibility of donating should the situation arise. It may be helpful to include a few testimonials of recipients, which could add the emotional appeal thus increasing the motivation to donate organs

Condition	Yes	No	Not Sure
Pre	34.35	21.37	44.27
Post	37.80	24.41	37.80



Overall the data indicates that there exists a fair amount of information about organ donation, especially given the media propaganda. However myths and fears also prevail and session on organ donation which addresses these aspects will go a long run to improving awareness and willingness for organ donation.

**Limitations of the Study:**

- Sample size and composition too limited, so conclusions cannot be generalised
- The post-test data could also be collected after a gap of 6 months to check long term impact of the awareness session
- Some more qualitative responses could be included in the survey to understand the motivation for organ donation

**Conclusion:** A qualitative analysis of the response pattern of both conditions indicates a shift to higher levels of awareness and the clarification of some myths regarding organ donation. Some areas of ambiguity continue. Overall though there is a greater openness to the possibility of organ donation in the future there isn't much change in the willingness to register for organ donation. However the relationship between awareness sessions and patterns of actual organ donation is unclear.

### **References**

- A. Darr, G. Randhewa, *Awareness and attitudes towards organ donation and transplantation among the Asian population, Transplant International. October 1999, Volume 12, Issue 5, pp 365-371.*
- Annadurai K., Mani K., Ramasamy J. *A study on knowledge, attitude and practices about organ donation among college students in Chennai, Tamil Nadu -2012, Progressive Health Science 2013, Vol 3, No2, KAP on organ donation*
- Cantwell M, Clifford C. *English nursing and medical students' attitudes towards organ donation. Journal Advanced Nursing 2000;32: 961.*
- Cohen, E. L. (2007). *My loss is your gain: Examining the role of message frame, perceived*
- Edwin AR, Raja D. *Attitudes of health care professionals towards organ donation. Indian Journal Urology 000; 16: 98-105.*
- Feeley, TH, Peltier, JW, D'Alessandro, AM, Dahl, AJ 2013. "A sequential decision framework for increasing college students' support for organ donation and organ donor registration". *Progress in Transplantation Judgment/Decision Making Analysis. Paper presented at the Subjective Probability, Utility, and Decision Making Conference, Barcelona.*
- H. Bilgel, N. Bilgel, N. Okan, S. Kilicurgay, Y. Ozen, N. Korun, *Public attitudes toward organ donation, Transplant International. 1991, Volume 4, Issue 4, pp 243-245.*
- Oliver, M., Woywodt, A., Ahmed, A. & Saif, I. (2010). *Organ donation, transplantation and*
- P. Agbenorku, M Agbenorku, and G Agamah. *Awareness and Attitudes towards Face and Organ Transplant in Kumasi, Ghana. Ghana Med J. Mar 2013; 47(1): 30-34 Paper 26.*
- Radecki Carmen M.; Jaccard, James *Psychological aspects of organ donation: A critical review and synthesis of individual and next-of-kin donation decisions. Health Psychology, Vol 16(2), Mar 1997, 183-195.*
- S. E. Morgan & J. K. Miller. *Beyond the Organ Donor Card: The Effect of Knowledge, Attitudes, and Values on Willingness to Communicate About Organ Donation to Family Members. Health Communication, Volume 14, Issue 1, 2002, pages 121-134.*
- S.E. Morgan & J. Miller. *Communicating about gifts of life: the effect of knowledge, attitudes, and altruism on behavior and behavioral intentions regarding organ donation, Journal of Applied Communication Research, Volume 30, Issue 2, 2002, pp 163-178.*
- S. Ilango I, M. U. Nandhini, S. Manikandan, P. Sembulingam. *Awareness of Organ Donation among Fresh Students in Medical Field .International journal of medical science and clinical Invention, Volume 1 issue 6 2014 page no.274-283 ISSN: 2348-991X*
- Schaeffner ES, Windisch W, Friedel K, Bruitenfeldt K, Wolfgang CW. *Knowledge and attitude-organ donation among medical students and physicians. Transplantation 2004; 77:17148.*
- Shanteau, J. & Skowronski, J. J. (1990). *The decision to donate organs: An information integration analysis. In J. Shanteau & R. J. Harris (Eds.), Organ donation and transplantation: Psychological and behavioral factors. Washington, DC: American Psychological Association Publications.*
- Shanteau, J. & Skowronski, J. J. (2013, August). *Who Is Opposed to Organ Donation? A*
- Verma SK. *Medical students-Their attitudes to organ donation and transplantation. National Medical Journal India 2000; 13:46-7*

**A STUDY OF PERCEPTION OF STUDENTS REGARDING EDUCATION FOR GLOBAL PEACE IN SCHOOLS**

**Dr. Sheetal S. Chaudhari**, Associate Professor, Pushpanjali College of Education.  
*sheetal\_chaudhari12@yahoo.com*

Global Peace is non-violence, cultural understanding, respect for other cultures, religions, castes, awareness of human rights, social justice, harmony with natural environment. Global Peace aims at peaceful living and healthy future of civilization that depends not only on absence of war but also the ecological balance and preservation of environment. Therefore developing favourable attitudes among the school students for peaceful coexistence includes harmony with environment and an ideal of peace, freedom, happiness among all people of this world. Violence in its many forms has caused a general deterioration of peace at global levels. The world needs the balm of peace to be cured. Paradoxically this period of time has also seen the growth of formal Peace Education. But has it become the central part of all our educational endeavors? Are teachers consciously focusing upon the Global Peace values during curriculum transaction? It is necessary to know through pedagogy and social action how schools are demonstrating that there are alternatives to violence. It is imperative that for effective global citizenship students are nurtured and empowered with the skills of negotiation, problem solving, critical thinking and communication. To break out of the vicious cycle of retaliation, hatred and revenge young citizens will require appropriate knowledge, skills and attitudes for building a culture of peace. So, have our schools modeled a paradigm shift from simply focusing on instruction to education for peace? This study is an attempt to study students' perception regarding how well schools are incorporating knowledge, skills and values related to Global Peace in their curriculum.

**Problem stated:**

**A Study of Perception of Students Regarding Education for Global Peace in Schools.**

**Objectives of the Study:**

1. To compare students' perception regarding status of education for Global Peace in English and Marathi medium schools.
2. To compare students' perception regarding status of education for Global Peace in aided and un-aided schools.

**Method:** Survey method was adopted for this study.

**Sample:**

	<b>English medium</b>	<b>Marathi medium</b>
aided	207	214
unaided	232	197
<b>TOTAL</b>	<b>439</b>	<b>411</b>

**Tools:** A rating scale was designed to determine the perception of students regarding presence of education for Global Peace in schools. It was to be responded by the students. To prepare this tool, statements to describe various components of Global Peace were prepared.

**Statistical measures used in the study:** Mean, SD, t test

**Analysis of the data:**

**Hypothesis 1:** There is no significant difference in the perception of students of English and Marathi medium schools regarding status of education for Global Peace.

**Table 1 Comparison of mean values for status of education for Global Peace as perceived by students when classified on the basis of medium of instruction of schools**

Students of	Mean	SD	N	t value	significance at	
					0.05 level	0.01 level
English medium	58.10	7.28	439	1.5368	NS	NS
Marathi medium	58.95	8.91	411			

As seen in the above table, value of t is not significant at 0.05 level. Therefore, the null hypothesis is accepted. Thus it implies that there is no significant difference in the perception of students of English and Marathi medium schools regarding status of education for Global Peace.

**Hypothesis 2:** There is no significant difference in the perception of students of aided and unaided schools regarding status of education for Global Peace.

**Table 2 Comparison of mean values for status of education for Global Peace as perceived by students when classified on the basis of type of schools**

Students of	Mean	SD	N	t value	significance at	
					0.05 level	0.01 level
Aided schools	59.64	7.42	421	4.0649	S	S
Unaided schools	57.40	8.61	429			

As seen in the above table, value of t is significant at 0.05 level and also at 0.01 level. Therefore, the null hypothesis is rejected. Thus the perception of students of aided schools regarding status of education for Global Peace is significantly higher than the perception of students of unaided schools.

**Hypothesis 3:** There is no significant difference in the perception of

- a) English medium aided schools and Marathi medium aided schools regarding status of education for Global Peace.
- b) English medium unaided schools and Marathi medium unaided schools regarding status of education for Global Peace.
- c) English medium aided and English medium un-aided schools regarding status of education for Global Peace.
- d) Marathi medium aided and Marathi medium un-aided schools regarding status of education for Global Peace.

**Table 3 Comparison of mean values for status of education for Global Peace as perceived by students when classified on basis of medium and type of school**

Students of	Mean	SD	N	t value	significance at	
					0.05 level	0.01 level
English Aided	56.88	7.30	207	8.0738	S	S
Marathi Aided	62.32	6.51	214			
English Unaided	59.19	7.11	232	4.7725	S	S
Marathi Unaided	55.30	9.71	197			
English Aided	56.88	7.30	207	3.3499	S	S
English Unaided	59.19	7.11	232			
Marathi Aided	62.32	6.51	214	8.6675	S	S
Marathi Unaided	55.30	9.71	197			

a) As seen in the above table, value of t is extremely significant at 0.05 level and also at 0.01 level. Therefore, the null hypothesis is rejected. Thus the perception of students of Marathi medium aided schools regarding status of education for Global Peace is significantly higher than the perception of students of English medium aided schools.

b) As seen in the above table, value of t is significant at 0.05 level and also at 0.01 level. Therefore, the null hypothesis is rejected. Thus the perception of students of English medium unaided schools regarding status of education for Global Peace is significantly higher than the perception of students of Marathi medium unaided schools.

c) As seen in the above table, value of t is significant at 0.05 level and also at 0.01 level. Therefore, the null hypothesis is rejected. Thus the perception of students of English medium unaided schools regarding status of education for Global Peace is significantly higher than the perception of students of English medium aided schools.

d) As seen in the above table, value of t is extremely significant at 0.05 level and also at 0.01 level. Therefore, the null hypothesis is rejected. Thus the perception of students of Marathi medium aided schools regarding status of education for Global Peace is significantly higher than the perception of students of Marathi medium unaided schools.

**Findings:**

**Hypothesis 1-** It can be concluded that medium of instruction does not seem to contribute to difference in perception of students regarding status of education for Global Peace in schools selected as samples in the study.

**Hypothesis 2-** It can be concluded that aided or unaided status of schools does seem to contribute to difference in perception of students regarding status of education for Global Peace in schools selected as samples in the study.

**Hypothesis 3-**

a) It can be concluded that medium of instruction of schools does seem to contribute to difference in the perception of students regarding status of education for Global Peace in aided schools selected as samples in the study.

b) It can be concluded that medium of instruction of schools does seem to contribute to difference in the perception of students regarding status of education for Global Peace in unaided schools selected as samples in the study.

c) It can be concluded that aided and unaided status of English medium schools does seem to contribute to difference in the perception of students regarding status of education for Global Peace in schools selected as samples in the study.

d) It can be concluded that aided and unaided status of Marathi medium schools does seem to contribute to difference in the perception of students regarding status of education for Global Peace in schools selected as samples in the study.

**Discussions pertaining to students' perception of the status of education for Global Peace in the schools:** Global Peace in this study refers to non-violence, cultural understanding, respect for other cultures, religions and castes, awareness of human rights, social justice, harmony with natural environment. Where students' perception of Global Peace was concerned, there was no significant difference in the perceptions of students when they were classified on basis of their medium of school. This trend indicates that students of Marathi and English medium schools have the same perception regarding education for Global Peace in their respective schools. Students of aided schools however have a more positive perception of education for Global Peace as transacted by their schools when compared to perception of students of unaided schools. This could be a reflection of academic programmes in schools. Generally where Global Peace is concerned, subjects as History, Civics, Science, Geography and Languages play a vital role in making students aware of diversity, interdependence, need for collaboration among nations, respect for varied cultures and values of universal significance. Where students show low means for perception regarding education for Global Peace, it is a reflection of the nature of academic programmes.

**Implications for the schools-** It is evident that school programmes need to have more holistic approach to themes related to environmental care, cultural solidarity, human rights and social justice. There is need for more multicultural experiences in schools. More formal training of teachers is also needed. Peace Education should be an integral part of teacher training syllabi. Teachers must have sample lesson plans prepared according to knowledge, skills and values related to Global peace. A repository of such plans could be displayed on the web for wider access. All textbooks could include activities at the end of a unit where aspects of Global Peace are promoted. As students grow up to be adults, if such an apathy towards Global Peace remains, then could affect their attitude towards Global Peace. Sometimes students tend to congregate in groups based on religion or region. Such situations are detrimental to Global peace. Schools need to be watchful of such situations. The aims of education as building commitment to democratic values of equality, justice, freedom, concern for others' well being, secularism and respect for human dignity and rights should be focused upon. These to be explicitly discussed with the textbook writers, principals and teachers so that the noble aims do not get diluted during the course of curriculum transaction. For this workshops and orientation programmes need to be devised. A sense of shared goals needs to be established as well as an



acceptance that the products will be justly distributed in order to ultimately build a common identity. Developing strong and empathic interpersonal relationships for appreciating the viewpoint of the other is to be nurtured. For this teachers need to incorporate more participatory methods as co-operative learning, team learning and project work. An unbiased view of the teachers is necessary while discussing political, ethnic or religious issues. Onscreen violence is often replicated by students. Blind imitation of actors is commonly found. Hence media education is the need of the hour, whereby students learn to discern what they see. They need guidance as to what should be imitated and what should not. Films and TV serials that are too aggressive or which promote hatred against a group, race or religion should be censored for content. It is seen that adolescent students widely use social networking sites to share their views and opinions. In such cases, there is great need to teach students to differentiate between a fact and an opinion. Students can be misled by prejudiced minds and this can be harmful to Global Peace. Thus to make students feel responsible for collective good of the world, the attitudes of interdependence need to be focused upon. The threat of violence hangs like a shadow over the young people of this world. Openly addressing and confronting these fears with information and appropriate pedagogy can help young people gain knowledge, skills and values to be peace loving citizens of this world.

**References:**

- Learning the Way of peace: a teachers' guide to Peace Education, (2001) report published by UNESCO, [unesdoc.unesco.org/images/0012/001252/125228eo.pdf](http://unesdoc.unesco.org/images/0012/001252/125228eo.pdf)*
- Conell, Why the need for Peace Education?. [www.peace.ca/?whypeaceeducationbyconell.htm](http://www.peace.ca/?whypeaceeducationbyconell.htm)*
- An Introduction to Peace Education: Education in Universal Human Rights, [www.bahaiacademy.org/index.php?option=com-content](http://www.bahaiacademy.org/index.php?option=com-content)*

**INFORMATION AND COMMUNICATION TECHNOLOGY: STUDENT'S FRIEND,  
TEACHER'S HELPING HAND**

**Dr. Sr. Tanuja Waghmare**, Associate Professor, St. Teresa's Institute of Education,  
Santa Cruz (West)

***Abstract***

*This research aims at finding an effectiveness of 3D animated videos on interest level of students. For this study, students of Std. VIII, studying in SSC board of education were selected as sample. This study was carried out in science subject. Here, the researcher made use of an Experimental method wherein the one group pre-test – post-test design was used to gauge the effectiveness of the treatment given. For this study a closed ended questionnaire with 12 items was prepared by the researcher. The obtained data was analysed using graphical representation. The major findings of the study revealed that the use of 3D animated videos in teaching-learning of Science raises an interest level of students towards that subject. Therefore, the result showed the positive impact of use of ICT in teaching-learning process.*

Today's age is known as the age of Information and Communication Technology. Now days you see any field whether banking or hospitality, politics or medical everywhere technology has printed its own footprints. If we are saying that all fields are availing the benefits of ICT for their own growth and development then why the field of education which provides human resources for all other fields has kept itself aloof from it? Educationists have started thinking in this direction. As a result, we can see the use of ICT and modern technology in education to some extent. And it is appreciable to know that many researches are conducted and many more are in process to find out the best ways of using ICT in teaching, learning and evaluation. Therefore, many schools are opening their doors for this new system and adopting ICT in their education programme. The use of technology was started long back in the field of education. But it was mainly used by the schools for managing the affairs of the school i.e. for management work. But the use of ICT has started now, in teaching, learning and evaluation process which is soul of whole education system. It is good to see that all stakeholders of the education system are welcoming this new but at the same time inevitable change. Therefore, the use of ICT in classrooms is getting the highest speed and pace to spread in schools all over the world. This rapid change can be seen not only in urban areas but also in rural areas. Many schools from rural areas have implemented this change inspite of facing lots of difficulties such as power cut, language, lack of funds, and non availability of human as well as material resources. As we are shifting from traditional pedagogy which was totally teacher centred to modern technology which is child centred, the use of ICT has become unavoidable in the teaching, learning and evaluation process. Use of ICT in education has become beneficial for the teachers of the 21<sup>st</sup> century where there role has changed from knowledge transmitters to knowledge navigators. This is just a beginning. We have to still reach our target which is far away. There are varied ways by using which we can develop students interest level. Learning styles is one of the factors that greatly contribute in student's interest level. Hence, it is teacher's responsibility to cater to the needs of all students with diverse learning styles and

abilities. This can be done by carefully planning teaching-learning activity by selecting appropriate teaching techniques which can be useful to all students in their learning process. One of the principles in the selection and use of teaching strategies can be use of more senses. The more senses that are involved in learning, you get the more and the better learning. The use of audio aids and visual aids alone sometimes fail to keep students interested in learning. This problem can be solved by using audio-visual aids which caters to more senses of students. The abstract ideas or the concepts can be learnt by students easily with the use of 3D videos. And if this videos are animated it adds added benefit in maintaining students interest. Because of this, students get subject clarity. It also helps them in retaining the acquired knowledge and understanding for longer time. Also, it generates curiosity to learn more and helps students to apply subject knowledge in daily life situations. The school curriculum consists of various subjects. Many students look at Science and Mathematics as difficult subjects. This could be because of their abstract nature. Also, many students find Social Science as a boring subject. Hence, teachers handling these subjects face difficulties while teaching these subjects. Developing and sustaining student's curiosity, interest and attention becomes a great challenge for these teachers. Here, use of ICT helps such teachers to a great extent. In the subject like Science students come across many abstract ideas which are very difficult for them to visualise and understand. This problem was figured out by the researcher. In order to find out the solution to this problem, the researcher conducted a small research based on an effect of ICT on interest level of Science students. Here the researcher made use of 3D animated videos for the teaching learning of Science with a pre-assumption that use of this will prove to be very effective and will raise an interest level of the Science students. Statement of the problem: A study of an effect of 3D animated videos on interest level of Science students studying in Std. VIII of S.S.C. board.

**Aim of the study:** To study an effect of 3D animated videos on interest level of Science students studying in Std. VIII of S.S.C. board.

**Objectives of the study:**

- 1) To compare pre-test and post-test scores of male Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.
- 2) To compare pre-test and post-test scores of female Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.
- 3) To compare pre-test scores of male and female Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.
- 4) To compare post-test scores of male and female Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.
- 5) To compare pre-test and post-test scores of Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.

**Methodology of the Study:** The researcher has used Experimental method wherein the one group pre-test – post-test design was used an effect of 3D animated videos on interest level of Science students studying in Std. VIII of S.S.C. board.

**Sample of the Study:** Total 64 students of Std VIII studying in SSC board of education were selected using convenience sampling method. The sample of the study included 32 boys and 32 girls.

**Tools used in the Study:** A closed ended questionnaire on student's interest level was used in the present study. This tool was developed by the researcher. The tool consisted of following items with Yes/No response:

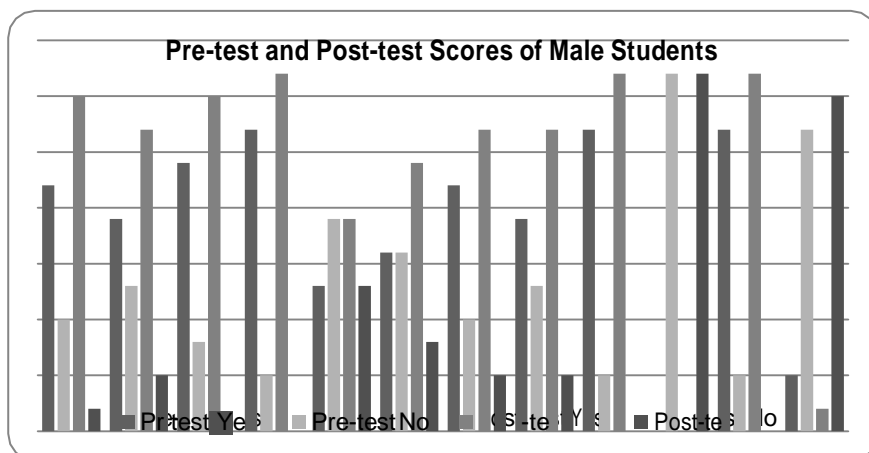
1. Do you think using 3D animated videos help you to learn or understand things more easily?
2. Do 3D animated videos help you to concentrate more?
3. If in your class 3D animated videos don't work, would you miss it?
4. Do you look forward to going to the ICT Room for 3D animated video lessons?
5. Is use of 3D animated videos economic?
6. Do you feel confident for exams after learning with 3D animated videos?
7. Is working with 3D animated videos really a fun?
8. Do you think 3D animated videos help in greater retention of the subject matter?
9. Is use of 3D animated videos save your time?
10. Do you think there is no need of a teacher in the presence of 3D animated videos?
11. Is working with 3D animated videos really serve the purpose of teaching learning process?
12. Is handling of 3D animated videos difficult?

**Procedure:** The researcher first found out about an abstract and the most difficult concepts from the Science textbook. Then the questionnaire was prepared to check student's interest level. After this, relevant 3D animated videos were selected as part of the treatment. Then the researcher gave pre-test to the students. After this selected abstract topics were taught using 3D animated videos. Finally, the researcher gave the students same test as post test. The researcher at every stage of data collection maintained the confidentiality of the data.

**Techniques of Data Analysis:** The descriptive analysis used for the present study included graphical representation.

**Data Analysis:**

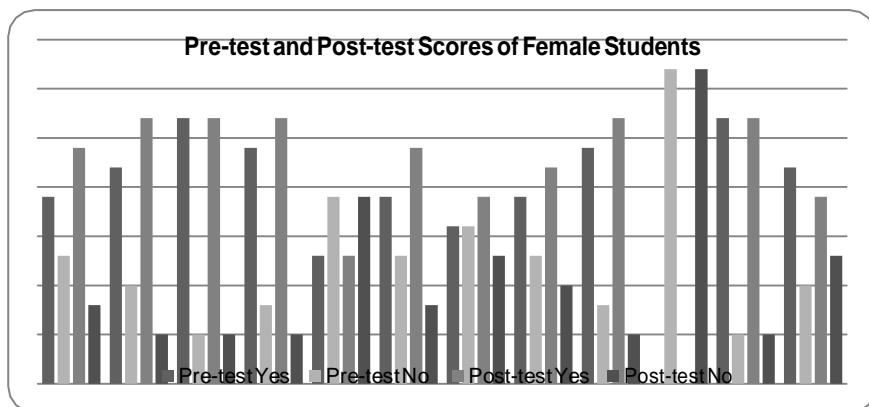
**Objective 1: To compare pre-test and post-test scores of male Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.**



**Figure 1: Pre-Test And Post-Test Scores Of Male Students**

**Interpretation:** The above graphical representation of the data shows that the post-test scores of the male students are greater than their pre-test scores.

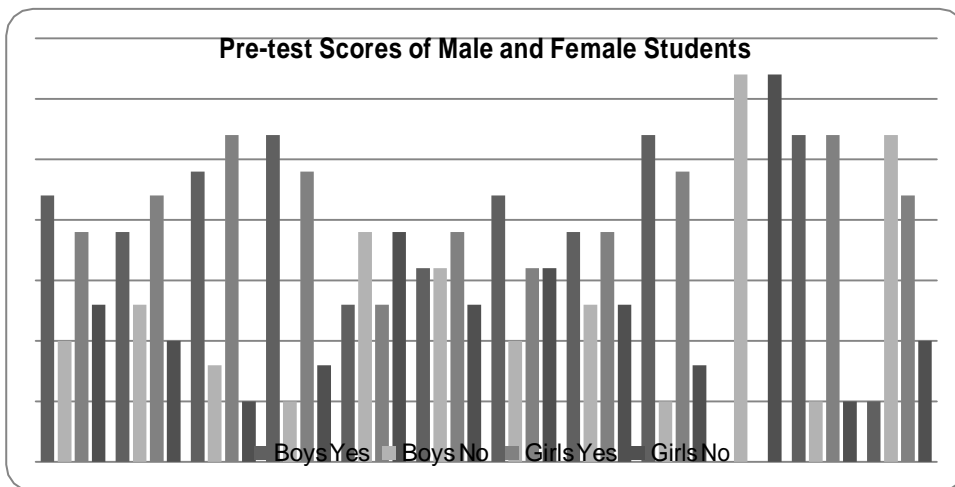
**Objective 2:** To compare pre-test and post-test scores of female Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.



**Figure 2: Pre-Test And Post-Test Scores Of Female Students**

**Interpretation:** The above graphical representation of the data shows that the post-test scores of the female students are greater than their pre-test scores.

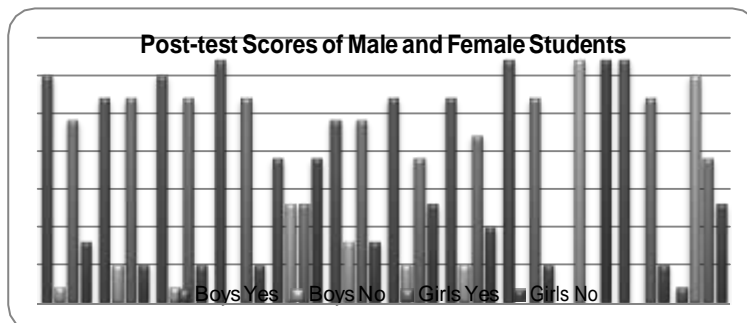
**Objective 3:** To compare pre-test scores of male and female Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.



**Figure 3: Pre-Test Scores Of Male And Female Students**

**Interpretation:** The above graphical representation of the data shows that the pre-test scores of the male and female students are nearly equal.

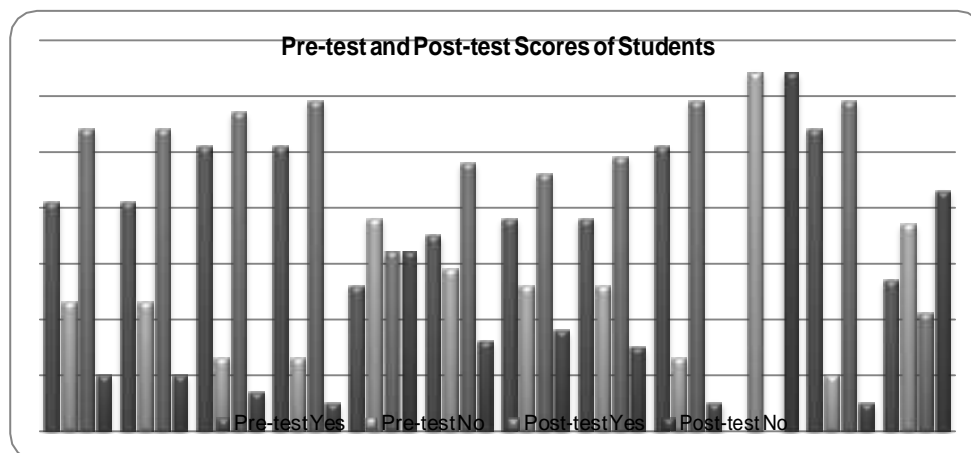
**Objective 4:** To compare post-test scores of male and female Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.



**Figure 4: Post-Test Scores Of Male And Female Students**

**Interpretation:** The above graphical representation of the data shows that the post-test scores of the male students are greater than female students.

**Objective 5:** To compare pre-test and post-test scores of Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.



**Figure 5: Pre-Test And Post-Test Scores Of Students**

**Interpretation:** The above graphical representation of the data shows that the post-test scores of the students are greater than their pre-test scores.

**Major findings of the study:**

- 1) There exists a significant difference in the pre-test and the post-test scores of male Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.
- 2) There exists a significant difference in the pre-test and the post-test scores of female Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.
- 3) There does not exist a significant difference in the pre-test scores of male and female Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.
- 4) There exists a significant difference in the post-test scores of male and female Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.
- 5) There exists a significant difference in the pre-test and the post-test scores of Science students studying in Std. VIII of S.S.C. board with respect to an effect of 3D animated videos on their interest level.

**Discussion:** Looking at the above findings the researcher found that the use of 3D animated videos is proved to be an effective device for better teaching learning process of Science. This method of using 3D animated videos in teaching learning of Science was able to create an interest in both the subject as well as the use of technology. Both, the boys and the girls were equally benefited by its excellent features and it enabled them enjoy learning Science to a great extent. Sudden improvement was found in student's retention power. Here ICT showed itself a tool to make complex processes easier to understand through simulations. It was also found that male students were fearless of handling 3D animated videos than female students.

Therefore, careful attention must be paid to eliminate the fear factor from girls mind when it comes to handling of 3D animated videos.

**Suggestions for Implementation:** It is not the teacher or the principal or the administrative body which can bring out the success alone. But the cooperative efforts of these entire can start the revolution in field of education in terms of use of ICT in teaching learning process. In order to get success the teachers should not only use but also develop 3D animated videos using their experience and expertise in the subject. They can make use of findings of the researches related to it. Also, the most important thing is that they should use 3D animated videos for teaching learning process of Science and inspire other teachers to do the same. Principals should boost teachers to use 3D animated videos in Science and give due credit to their work. Also he/she should take an active part in organizing seminars, workshops and talks on use of 3D animated videos for Science teachers. Adequate physical facilities and funds should be provided in order to implement the use of 3D animated videos in teaching science. And an essential thing a teacher should be given is the choice to plan and organize her classroom activities.

**Concluding Remarks:** At the end of this research, the researcher would like to share the central idea of this research i.e. though the use of 3D animated videos or any other ICT device has proved itself as a powerful device in raising students interest level in Science but still is not able to replace a teacher completely. Every coin has two sides. Same applies here too. Use of 3D animated videos has a few drawbacks along with the multiple advantages but still we can say that it can definitely bring out the positive outcome if used wisely. Hence the researcher wants to make a comment that, —Use of ICT in Science Education is the need of an hour.‖

**References:**

**Books:**

Best, J.W. & Kahn, J.V.(2003). *Research in education (9<sup>th</sup> Edition)*. New Delhi, India: Prentice-Hall.

**Websites:**

iDaaLearning (May 9, 2013). *Digestion in Human Beings 3D CBSE Class 7 Science* ([www.iDaaLearning.com](http://www.iDaaLearning.com)). Retrieved from [https://www.youtube.com/watch?v=Zr4onA2k\\_LY](https://www.youtube.com/watch?v=Zr4onA2k_LY) on 14<sup>th</sup> March 2015

Aboutkidshealth (Published on Feb 3, 2014). *Exploring the Heart - The Circulatory System!* Retrieved from <https://www.youtube.com/watch?v=-s5iCoCaofc> on 14<sup>th</sup> March 2015

GetSchooledNow CA (Dec 15, 2013). *Human Circulatory System*. Retrieved from <https://www.youtube.com/watch?v=qmNCJxpsr0> on 14<sup>th</sup> March 2015

7activestudio (Feb 24, 2015). *COMBINATION REACTION*. Retrieved from <https://www.youtube.com/watch?v=ND6jB2CNh3c> on 14<sup>th</sup> March 2015



## HURDLES IN INNOVATING TECHNOLOGY IN EDUCATION

**Jinklod Babu Sayabu, MA (ENGLISH) B.Ed., Student P.G.C.T.E., E.F.L. University  
Hyderabad**

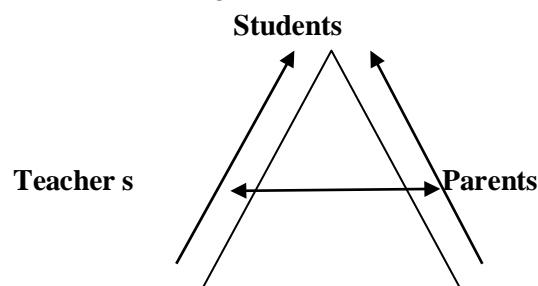
### **Abstract**

*The present paper aims to provide a detailed account of the hurdles and the solutions soberly in innovating technology in Indian education system. As per the change in time it becomes very necessary to do changes in education also. Now a days, the new innovations in technology are become the inseparable part of education system worldwide. It is making teaching learning process effective. The new concepts and imaginary things to which students can't understand but with the help of technology teacher can make it easy to understand. In India it becomes very necessary to use the technology in education system to make it more easy and effective. But in India there are several hurdles in innovating the technology that are the problem of varied language undeveloped rural villages, lack of internet connectivity, poverty, tribal areas and lack of infrastructure electricity lack of digital literacy in teachers. Having aware about all the hurdles it becomes very necessary to overcome and find out solutions for innovating technology in India.*

**Keywords:** Technology, Hurdles

**Introduction:** Today's world is the world of information technology and science. So, technology is becoming the necessity of each and every field of our life. That's why Technology can be a useful and multitasking tool for transforming teaching learning experiences to meet the needs of students. Our educational institutes from K G to P G should be incubators of exploration and innovation. To provide authentic learning experiences, educators need to do the utilization of technology as a powerful tool in their practice.

The technology innovation and its awareness is not only a limited term for educational institutes but also it occupies every element related to the student. Furthermore, parents and teachers including the educational institutions should commit to working together to use technology to improve Indian education, to help the students for reaching the goals teachers and parents should work together.



Teachers and parents can come together to find out the solutions. On hurdles of innovating technology to some extent but there are various hurdles in innovating technology in education system.

**Lack of ubiquitous connectivity:** Persistent access to mobile devices having connectivity high speed internet in and of the home and educational institute is an important thing but

in India the internet connections are not provided to the schools. India is a country of villages and when we look at the terrific situation of people surviving in villages. They are unable to fulfill their basic necessities then it will be very cynical for us to think about innovate the technology. So the lack of ubiquitous connectivity is main hurdle in innovating technology in education system.

**Unaffordable learning devices:** India is a developing country. Most of Indians are suffering from poverty. So that it becomes very critical for the people to purchase unaffordable learning devices for their children. The government of India makes compulsory for listening the program ‘Man ki Baat’ by honorable prime minister of India to each and every school across the country but on the ground basis there was lack of devices like radio, Television, computer having internet then how can we think about the innovation of technology in education. It is a major hurdle in innovating technology in education.

**Unavailability of Digital learning content of high quality:** Technology needs the most important thing that is digital learning content of high quality to implement the technology in education system. The use of technology in education is increasing day by day in private educational institutes in cities but due to unavailability of digital learning content of high quality in various subjects its becoming the an obstacle to innovate technology in education system.

**Lack of digital literacy in teachers:** Indian teacher training courses are traditional so that there is lacking of digital literacy in teachers. For the utilization of technology there should be competent teacher so that to update the knowledge and skills related to technology is very necessary but due to lack of pre service and in serviced professional learning experiences powered by technology to increase their literacy and improve teaching learning process, teachers are not getting updated and it is becoming the barrier in innovating technology in education.

**Lack of Government policies to innovate technology in education:** The reason of all the hurdles is lack of government policies to innovate technology in education system. As compared to the other developed countries Indian government doesn't spends money on the development of education. Every year the same policies and same old plans of educations due to this backward mentality of government. New innovations are not happening in this educations system. Government is very passive about education so, now it became the business of few so called education emperors. In India the private sector is working better than the government. You can see the4 bade condition of government schools and highly facilitated and modern private convent schools. When we examine these two we will realize the harsh reality of passive government policies. This passiveness is becoming the hurdle in innovating technology in education system.

**Poverty in the society:** The students belonging to backward class, having no income sources, they survive on their labor and having poverty since many generations, they can't afford the school in which elite children. The innovation of technology costs a lot so the school which is

facilitated by technology is a mirage for the students in tribal ‘Aadiwasi’ areas of India. The poverty is the main hurdle in innovating technology in India.

**Language barrier:** India is a multilingual country. In which every state has variety of languages so, while innovating technology in education these languages which are local, that are not available in education these languages which are local, that are not available in computer and technology so multilingualism is also a hurdle in innovating technology.

**Conclusion:** To conclude it briefly the Indian education system is the one of world’s dominant education system since many years. But in the process of modernization and digitization it is facing several hurdles like infrastructure internet connectivity, back ward and undeveloped ‘Aadiwasi’ areas and lack of digital literacy in teachers and so on. Looking at these hurdles is very necessary to find out the solutions by making new policies on government level, providing infrastructure to educational institutions to overcome all the hurdles in innovating technology in education.

**References:**

*Calestous Juma, Innovation and Its Enemies: Why People Resist New Technologies, 2016, Oxford University Press.*

## EDUCATION FOR GLOBAL PEACE AND SUSTAINABLE DEVELOPMENT

**Shital Yogesh Potdar**, Raja Lakhamagouda Science Institute (Autonomous & CPE),  
Belagavi-590001, Karnataka

### **Abstract**

*This article explores need of education for global peace and sustainable development. Peace is a beauty of life and it is a state which is free from any kind of conflict and violence. At the start of the Twenty-First Century there are several crucial issues facing people in all societies throughout the world. There are numerous factors that affect Global peace which involves religious differences, communal ware, poverty and suffering, corruption, non availability of resources, natural disasters, terrorism and much more. So global peace and sustainable development is the need of current situation. Many organizations viz UNESCO and MGIEP are playing vital role in building peace and sustainable development at all levels by education. Education is only means to all round development. Peace education is all about teaching every single human being to become peacemaker and education for sustainable development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. The goal of which is to achieve balance between environment sustainability, economic sustainability and sociopolitical sustainability. Even though there are many hurdles in achieving global peace and sustainable development, but it can be achieved by positive contribution and systematic planning. As the peace has always been among humanity's highest value, it needs to be increase as direct proportion to the growth of society in various aspects.*

**Key words:** global peace, sustainable development

**Introduction:** The world has witnessed lots of changes in the 20th Century. Humanity is facing a terrible challenge of its own existence. At the turn of the 21st Century, the world was immediately gripped by the conflicts, violence and war on Terrorism. In reflection, the 20th Century was a period marked by tremendous technological and economic progress, but it was also the most violent century in human history. In the last half of the twentieth century, two key themes emerged from the collective concerns and of the world's peoples: global peace and sustainable development. It is important to emphasize more prominently the human, economic, and societal aspects of both peace and sustainability, and to seek to provide practical ways in which these could form an integral part of the education process at all levels. In addition to the economic, social and environmental dimensions of the sustainable development goals, a political dimension should not be neglected. Political institutions shape economic and social institutions. There is also a need to consider the advocacy and promotion of peace and sustainability in all three phases of education, namely, the formal, the informal, and the non-formal. Education for peace is not only about teaching about peace, it is about helping oneself and others to become a peace maker (1). One should develop wisdom and to take actions for the building of a truly peaceful world. Education for Sustainable Development (ESD) entails a reorienting of education to guide and motivate people to become responsible citizens of the planet .Mahatma Gandhi said, -There is no way to peace, and peace is the way. If every single individual follow his path, we can achieve global peace very soon. People are expected to increase their awareness and enhance their ability as an educator to work for global peace. An important imperative for the 21st Century learning is how to generate innovative, relevant

practices in education, a remix of multiple literacy which fuse with the tools of technology—and the skills of critical thinking—to stimulate authentic, relevant learning opportunities for all learners, anywhere, anytime.

**Implementation methodologies:** Global peace is an ideal state of freedom, peace, and happiness among and within all nations and people. This ideal of world non-violence provides a basis for peoples and nations to willingly cooperate, either voluntarily or by virtue of a system of governance that prevents warfare. While different cultures, religions, philosophies, and organizations may have differing concepts about how such an ideal state might come about. Global peace could be established through the religious or secular organizations that address to human rights, technology, engineering, or diplomacy used as an end to all forms of fighting. Global peace is also related with the agriculture. The availability and use of land, water, and energy, in particular, are tightly interconnected. They all impact on agriculture and food production. Achieving food security while minimizing the environmental impact will require increasing agricultural productivity, particularly in developing countries. At the same time, reductions in food wastes could make a remarkable contribution to food, indirectly to global peace. A transformation of the energy system will be necessary to achieve near universal access to energy in an environmentally sustainable manner. Current emissions trends of greenhouse gases will likely lead to further increases in global temperatures, with potentially catastrophic consequences. Since 1945, the United Nations and the permanent members of its Security Council working on the methods to achieve global peace. Global Education First Initiative (GEFI) launched in 2012. This initiative put forward three priorities: (i) put every child in school; (ii) improve the quality of learning; and (iii) foster global citizenship. (2). Global Peace Development (GPD) is the Global Peace Foundation's community-based development program that is committed to fostering family self-reliance in the communities in which it works. The whole human life is in a state of confusion because modern civilization is based on violence. The present day cycle is known as cycle of violence where poverty, violence & conflicts are cumulatively growing and the present social order is known as violent social order. Violence arises due to conflicts. And conflicts arise when people are competing for the same resources, when they are unhappy with how they are governed and when people's beliefs clash. So to avoid conflicts we want to love our enemies. So Be good to people. Love them and let them know you love them. Global peace also is a lack of conflict and freedom from fear of violence between heterogeneous social groups. The challenge of resolving conflicts and building peace needs to be met from within a holistic framework of peace education. GPD also combines solar technology with clean water solutions, income generation and public-private partnerships to improve the overall quality of life in measurable ways. The introduction of solar energy has a significant impact on the quality of life in impoverished communities. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. There are three quite distinct ideas that should be developed: people, economy, and society and the three major categories that should be should be stained: nature,

life support systems, and community—as well as intermediate categories for each, such as Earth, environment, and culture (3). Still another mode of defining sustainable development is through the values that represent or support sustainable development. Principles of Sustainable Development are living within the environmental limit, achieving sustainable economy, promoting good governance, insuring strong and healthy society. The Education for Sustainable Development (ESD) is an outline to new and ambitious worldwide effort to reduce poverty and hunger, improve health, and protect the planet and much more. It addresses the interrelationships among the environment, the economy, and society. It moves from teaching about sustainable development to education to achieve sustainable development. There is a need to achieve sustainability near marine areas because the oceans cover about 70 % of our planet and marine ecosystem services play a vital role in sustaining human wellbeing. The International Union for the Conservation of Nature (IUCN) Guidelines for Marine Protected Areas (MPAs) emphasizes the need to gain the public's support through education. The guidelines suggest that educational efforts are important as they can result in the reduction of MPA enforcement costs .It is found that education programs were less expensive than enforcement, and also resulted in a wider community impact(4). Sustainable development can be achieved by obtaining some goals such as: No Poverty, No Hunger, Good Health, Quality Education, Gender Equality (Achieve gender equality and empower all women and girls), Clean Water and Sanitation, Clean Energy, Good Jobs and Economic Growth, Inequalities (Reduce inequality within and among countries), Responsible Consumption (Education raises the odds that people will use energy and water more efficiently and recycle household waste), Protecting the Planet, Sustainable cities and communities.(5)

**Conclusion:** As the leading UN agency mandated on education, UNESCO aims to ensure that all learners acquire the knowledge, skills, and values needed to promote a sustainable and peaceful society. So Education is key for both global peace and sustainable development. Education for global peace and sustainable development is equally relevant and critical for both developed and developing countries. Peace and peace education are themes that are consistent with the overall social and transformative goals of adult education, theory and practice. We have a lifelong interest in education for social change and to the education and transformation of all learners. We believe that the foundation of peace is education and the foundation of the world is peace. Therefore our goal is to mainstream peace education in educational systems worldwide. There is no universal model of education for global peace and sustainable development. While there is an overall agreement on the concept, there are differences according to local contexts, priorities and approaches. Each country has to define its own priorities and actions. The goals, focuses and actual processes must, therefore, be locally defined to meet local environmental, social and economic challenges in culturally appropriate ways. Real progress will be unattainable unless all children receive a quality education. So it is important to get education which gives clear knowledge about the things which will help us to achieve global peace and sustainable development. In short, global peace is everyone's concern. Every person has a special gift to contribute to its achievement so that

the world will survive. Professionals have special gifts to contribute, too. From accountants to zoologists, we can each be challenged to determine how best to use our knowledge and skill to promote a more peaceful world. The Venerable P.A. Payutto, winner of the UNESCO Prize for Peace Education, said: ‘The real solution of human problems can be achieved through relying on the full resources of wisdom, by minds filled with love, friendliness and compassion towards all beings that is limitless, unbounded, without distinction or discrimination of any kind’. So every single person should have desire of learning to know, learning to do, learning to live together. We need to change how we think and act, and that is where education has a critical role to play. No doubt education is shaped by society, but education also shapes society in profound ways.

**References:**

*Concept paper II by MGIEP*

*Current Issues in Comparative Education (CICE) Volume 19, Issue 1, Fall 2016*

*April 2005 issue of Environment: Science and Policy for Sustainable Development, Volume 47, Number 3, pages 8–21. © Robert W. Kates, Thomas M. Parris, and Anthony A. Leiserowitz, 2005. For more information about Environment, see <http://www.heldref.org/env.php>*

*978-3-319-26734-0\_8(Mark C. Mifsud and Marielle Verret)*

*The-Sustainable-Development-Goals-Report-2016-Global*

## AWARENESS OF PEACE EDUCATION AMONG STUDENT TEACHERS OF PUNE CITY

**Dr. Namrata Anand Kamble**, MIT Art Design Technology University, Loni Pune  
Contact number 8605017901

### *Abstract*

***'Peace is possible for life at all stages and it is up to man to choose his destiny or to suffer from the horrors of war. Today mankind is at the cross-road where he has to choose with courage, determination and imagination'***

*The need for the study was felt because In spite of the tremendous growth in the twentieth century, peace education has not really taken hold in school systems around the world. It is longer solely concerned with interstate rivalry but also studies ways to resolve intra-state violence and the chaos that comes from identity and religious based conflicts. The problem has originated because there is a threat of terrorism which has originated from the end of twentieth century. This study will be conducted to assess the awareness of peace education among student teachers in Pune city. The methodology used for the study is Descriptive survey research (Mono method). The sample includes 800 student teachers selected from eight different teacher education colleges selected by stratified random sampling technique. The tools which will be used for the study are 5 point rating scale to assess the awareness of peace education among student teachers. The statistical tools used will be percentage and pie charts to represent it. The findings of research showed that there is positive attitude among student teachers towards peace education. Peace education is acceptable by teachers and hence can be incorporated in teacher education curriculum. Teachers should go a step further to teach students about the oppression and discrimination so that students learn about their roles as solid agent and participate in the generation of more equitable society. There are many student teachers who feel that peace education should be incorporated in the curriculum. Very few of them still few that India is a secular country in its true sense and religious biasness is still given importance in India.*

**Introduction:** Peace education brings together multiple traditions of Pedagogy, theories of Education and international initiation for advancement of human development through Learning. It is fundamentally dynamic, interdisciplinary and multicultural and grows out of the work of educators such as John Dewey, Maria Montessori, Paulo Frere and Many others. ([www.un.org/cyber/schoolbus/peace/frame.htm](http://www.un.org/cyber/schoolbus/peace/frame.htm)) Building on practices and practices that have evolved over time, responding to different historical circumstances, peace education aims to cultivate the knowledge skills and a attitude needed to achieve and sustain a global cultural of peace. Understanding and transforming violence is central. —.... **There are no simple answers to how education can contribute towards disarmament and development. But increasing awareness through education seems to be a way towards the kind of mobilisation that is necessary....!** (Magnus Haavelsrud–Norwegian Peace Educator) A European peace educator has defined peace education as:¶ The initiation of learning processes aiming at the actualization and rational resolution of conflicts regarding man as subject of action.¶(vor Staehr , 1974: 296) According to this definition , peace education is concerned with peaceless situations (Mushakoji, 1974: 3).These include



struggles for power and resources , ethnic conflicts in local communities , child abuse, and wars . Students in peace education classes study institutions that create violence as well as the values that give credibility to those structures. An American peace educator Betty Reardon , defines peace education as —learning intended to prepare the learners to contribute toward the achievement of peace (Reardon, 1982: 38). She goes on to state that peace education —might be education for authentic security (Reardon , 1982 : 40) where a need for security motivates humans to form communities and nations.

**Need of the Study:**

- In 21<sup>st</sup> Century there has been an atmosphere of intolerance therefore peace education has become of utmost importance.
- Humanity faces challenges of unprecedented proportions such as continued development of weapons of mass destruction, conflicts between states and ethnic groups, the spread of racism, community violence, the huge widening gap between rich and poor, massive violation of human rights and degradation of the environment. In order to tackle these complex and interwoven
- Teachers come with a huge responsibility of shaping the future of the country that is the children. So imparting peace education becomes an integral part of education. This will prepare students to become good citizens with skills to promote peace and human dignity at all levels of interactions.

**Statement of Problem:** To assess the level of awareness regarding peace education among students teachers of Pune.

**Operational Definitions:** In the present research the researcher will check the awareness about Peace education with respect to tolerance, conflict resolution, non-violence, human rights and various other aspects of peace education.

**Objective Of the study:** To assess the level of awareness regarding peace education among students teachers of Pune.

**Research Questions:** What is the level of awareness about peace education among the student – teachers of Pune city

**Assumptions:**

- There is an awareness of peace education among the students. (*Mohammad Sayel Al Zyoud , Eleanor J. Brown, W. John Morgan, 2013*)
- There was a positive change in the norms of the student behaviour from one of disobedient, disrespectful and disruptive behaviour to one conducive to solving problems and minimizing conflicts. (*Rosemary V. Barnett , Alison Adler, Janice Easton, and Keri P, July 2001*)

**Scope, Limitations and Delimitations:**

**Scope of the study:**

- The study focuses on Teacher Education Institutions in Pune City.
- The study is related to only English medium Teacher Education Institutions of the Pune City.

**Limitations:**

- The tool developed for the study is researcher made
- The responses obtained are solely dependent on the respondents.

**Delimitations:**

- The study is delimited to only 8 teacher education colleges of Pune City.
- The study is delimited to only Student- Teacher i.e. students studying in teacher education colleges.

**Tools of Research:**

- Attitude scale is used by the researcher to gather the information

**Population and Sampling Procedures:**

**Population:**

- Student – Teacher from teacher education colleges of the Pune city.

**Sampling Technique**

Sampling technique used is Stratified Random Sampling technique

- Student Teachers from 8 Teacher educations colleges i.e. 800 students.

➤ **1.11 Research Methodology:**

- Descriptive survey method.
- Mono Method Research.

**Objective wise Methodology:**

<b>Objectives</b>	<b>Method</b>	<b>Tool</b>	<b>Sampling</b>	<b>Analysis</b>
<b>To assess the level of awareness regarding peace education among student teachers of Pune.</b>	<b>Survey</b>	<b>Attitude Survey Score</b>	<b>Stratified Random Sampling</b>	<b>Pie Chart</b>

**Major Findings of the study:**

- It was observed that the overall attitude of student teachers was varying with the different questions. It shows positive attitude of student teachers towards peace education.
- Peace education is acceptable by teachers and hence can be incorporated in teacher education curriculum.
- Teachers should go a step further to teach students about the oppression and discrimination so that students learn about their roles as solid agent and participate in the generation of more equitable society.
- There are many student teachers who feel that peace education should be incorporated in the curriculum.

- It is also observed that many student teachers are not aware about concepts like racism.
- Few of them also agree that massive education on public issues related to peace should be given
- They also feel that gender discrimination and racial discrimination still exist and they are a part of violence.
- They also agree that if this kind of education is given to students it will help them to overcome violence.
- Very few of them still feel that India is a secular country in its true sense.
- Religious biasness is still given importance in India.

**Recommendations:**

Based on the findings the researcher recommends that the role of peace education is important in schools. They are as follows:

1. Professional development programs should help teachers understand the complex characteristics of different groups of children in the Indian society and the ways in which race, ethnicity, language and social class interact to influence student behavior.
2. Teachers should use multiple culturally sensitive techniques to access complex cognitive and social skills.
3. Teachers should honestly examine their attitudes and ensure all students have an equal opportunity to achieve the best of their ability.
4. Teachers should create or make salient super ordinate cross cutting group membership in order to improve intergroup relations.
5. Teacher should inculcate values shared virtually by all cultural group (e.g Justice , equality , freedom , peace , charity etc)

**Contributions of the Study**

1. The present research study was conducted in the Teacher education colleges of Pune city. This research has contributed to understand the awareness of student teachers towards peace education and it was found that they are aware of this concept of peace education and showed a more tolerant behaviour towards each other.
2. This study will help in deep and critical thinking, imagination, and commitment to another tomorrow. It is another aspect of the continuous human journey towards justice and pushes us towards the fulfilment of the promises of democracy. It gives us new questions to ask and directions to follow to uncover human possibilities in the new millennium.

**Suggestions for further research**

1. The findings of the study justify the importance of implementing peace education into the instructional program.

2. The teachers should be aware of the diversity of student, their level of tolerance and treat every child without any prejudices.
3. Peace education should be given to pre-service and in-service teachers.
4. The children should be inspired to express their views and problems unhesitatingly and teachers should be careful in dealing with children of diverse behaviours and tolerance.
5. Love and affection are the means to soothe the aching hearts of the students irrespective of their cultural background.
6. Such a type of environment should be created in school and other educational institutions that going to schools or colleges should be a pleasant experience for every student.
7. Teachers should expose students to the concept of stereo typing and other related biases that have negative effects on racial and ethnic relations.

**Bibliography:**

- Al-Zyoud.M.S, Brown E.J, Morgan W.J,2013 Peace Education in English and Jordanian Schools: A Comparative Study*
- Al-Zyoud.S.M, 2013 Peace education in English and Jordanian schools: A comparative study. Volume 40*
- Behera.S.K,2013 Peace Education in India A proposal*
- Brantmeier2003 ,Peace Pedagogy : Exposing and integrating peace education in teacher Education*
- Duss,Joseph,Bolotin.P,Smith.L,2009 Teaching a Pedagogy of Peace: A study of Peace Educators in United States of Schools in the Aftermath of September 11*
- July 2001 School Business Affairs- An Evaluation of Peace Education Foundation's Conflict Resolution and Peer Mediation Program.*
- Kester.k,2009 Education for peace: Content, Form, and Structure : Mobilizing youth for civic engagement*
- Lazarus.N,2010.Evaluating Peace education in Oslo/Intifada generation an impact study of Seeds of peace1993-2010*
- Najumma.R,2011 Peace Education in the context of Post–Conflict Formal schooling: The effectiveness of the revitalising Education participation and learning in conflict Affected areas-Peace Education program North Uganda*
- Oge.K.E,2012 Vol6 Strategies for Integrating Peace Education into Social Studies Curriculum For Junior Secondary(Basic 7-9 schools ) in Nigeria*
- Page.J,2008 Philosophy of Peace Education*
- Rajagopalan.R,2009 From Agenda to Action: Interpreting and Implementing the NCF Peace Education Guidelines*
- Rosemary V. Barnett Ph. D, Alison Adler, Ed D, Janice Easton, M.S and Keri P. Howard,B.S*
- S.Marina,2013.Peace and Co-existence Education in school settings: A Teacher Training perspective*
- Semra.D,2011 An Overview of Peace Education In Turkey: Definitions, Difficulties and Suggestions-A Qualitative Analysis*
- Solvor.L,2013.Building a culture Of Peace: Peace Education in Kenyan Primary schools*
- Srinivasan.A,2009 A Survey of Civil Society Peace education Programmes in South Asia*
- Stitz.Stomfay,1993 A History of Peace education in the United States of America:*

## INNOVATIVE PRACTICES IN THE CURRICULUM TRANSACTION OF THE B. ED. COLLEGES

**Umakant V. Deshmukh**, *Chembur Sarvankash ShikshanShastra Mahavidyalaya, Chembur,  
Mumbai – 71 Email: umakantvdeshmukh37@gmail.com*

### **Abstract**

*According to the NCTE “the teacher is the most important element in any educational programme. It is the teacher who is mainly responsible for implementation of the educational process at any stage. No amount of investment in improving the physical and educational facilities can improve education unless there are adequate numbers of well qualified teachers who can willingly implement the educational process in such a way that it brings about the desired educational development of the students. It is therefore important that the teacher is well prepared to do his/ her work efficiently and effectively.” So for that, enrichment of educational profession writer tries to search for innovative practices in B. Ed. curriculum transaction.*

**KeyWords:** Innovative practices in B. Ed colleges,

### **Introduction :**

*“Imagination is more powerful than knowledge .” -- Einstien.*

The success of any educational institution – be it school, college or University mainly depends up on its transaction of the course. Due to lack of exchange of global experiences of innovations, most of the educational managers and administrators now try to gain right start of knowledge and motivation to improve and innovate. The need for enrichment of educational profession, the quality of secondary teacher education programme has been emphasized by various Education commissions.

**Statement of The Problem:** The researcher tries to search, \_Innovative practices in the curriculum transaction of the B. Ed. Colleges.‘

**Operational Definitions: Innovative practices:** those practices which is handled by the teacher educators in different way rather than the regular transaction of the B. Ed. Programme.

**Aims of The Study:** The broad aim of the study is to study, to identify innovative practices in curriculum transaction of B. Ed. colleges affiliated to University of Mumbai.

**Objectives of The Study:** The research will be conducted with the following objectives:-

1. To study the difference in innovative practices implemented by teacher educators area wise.
2. To study the difference in innovative practices implemented by teacher educators gender wise.
3. To study the difference in teacher educators implementing innovative practices in the curriculum transaction of the aided and unaided B. Ed. Colleges.
4. To study the difference in teacher educators gender wise implementing innovative practices in the curriculum transaction of the aided B. Ed. Colleges.
5. To study the difference in teacher educators gender wise implementing innovative practices in the curriculum transaction of the unaided B. Ed. Colleges.

**Hypothesis of the Study**

1. There is no significant difference in implementing innovative practices by teacher educator.
2. There is no significant difference in innovative practices implemented by teacher educator gender wise.
3. There is no significant difference in the teacher educators implementing innovative practices in the curriculum transaction of the aided and unaided B. Ed. Colleges.
4. There is no significant difference in teacher educators' gender wise implementing innovative practices in the curriculum transaction of the aided B. Ed. Colleges.
5. There is no significant difference in teacher educators' gender wise implementing innovative practices in the curriculum transaction of the unaided B. Ed. Colleges.

**Design of the Study:**

**Methodology of the study:** The descriptive research method used by the researcher. In this present study, the researcher proposed to study Innovative practices in the curriculum transaction of the B. Ed. Colleges.

**Sample:** By the random sampling technique researcher comprised 250 teacher educators from aided and unaided B. Ed. colleges affiliated to University of Mumbai.

**Tool of the study:** In the present study researcher used questionnaire for teacher educators.

**Scope of the study:** The present study focuses on the innovative practices of the B. Ed. Colleges.

**Delimitation of the study:** The study is delimited to the Aided and Unaided B. Ed. colleges affiliated to the University of Mumbai.

**Analysis And Interpretation:** To test the hypothesis t-test, statistical technique is used.

**Hypothesis 1:** There is no significant difference in implementing innovative practices by teacher educator.

**Table 1: Institution type wise implementation of the innovative practices by male and female**

Gender wise I P Aided						Unaided Gender wise I P				
GENDER	I P	%	NO I P	%	TOTAL	INO. PRA.	%	NO. I. P.	%	Total
MALE	17	62.96	10	37.04	27	29	72.50	11	27.50	40
FEMALE	43	74.14	15	25.86	58	84	67.20	41	32.80	125
TOTAL	60	70.59	25	29.41	85	113	68.48	52	31.52	165

df = N – 2 = 286 ,From Table D, for df 286. Tabulated t = 1.97 at 0.05 level and 2.59 at 0.01 level.

**Interpretation of ‘t’ :** - The obtained value of  $\underline{t}$  for the attitude towards teaching profession scores of teacher educators on the basis of aided and unaided B. Ed college is 2.88 which is greater than table value 1.97. Thus  $\underline{t}$  is significant at 0.05 level. Hence null hypothesis is rejected.

**Findings 1 :** - There is a significant difference in teacher educator’s attitude towards teaching profession scores on the basis of types of institution.

As the mean of Aided teacher training colleges is more than unaided teacher training colleges hence teacher educators of Aided B. Ed colleges having favourable attitude towards teaching profession

**Hypothesis 2:** There is no significant gender difference in teacher educators’ attitude towards teaching profession.

The following table shows the relevant statistics of attitude towards teaching profession scores of male and female teacher educators.

**Table 2: Relevant Statistics Of The Attitude Towards Teaching Profession Of Male And Female Eacher Educators**

Variable	Group	N	Mean	SD	Table Value		$\underline{t}$ value	I.o.s.
					0.05	0.01		
ATTP	Male	63	68.12	13.16	1.97	2.59	2.64	0.05
	Female	225	72.91	11.14				

df = N – 2 = 286 ,From Table D, for df 286, Tabulated t = 1.97 at 0.05 level and 2.59 at 0.01 level.

**Interpretation of ‘t’ :** - The obtained value of  $\underline{t}$  for the attitude towards teaching profession scores of male and female teacher educators is 2.64 which is greater than table value 1.97. Thus  $\underline{t}$  is significant at 0.05 level. Hence null hypothesis is rejected.

**Findings 2:** - There is a significant gender difference in attitude towards teaching profession scores of teacher educators from B.Ed colleges of Mumbai University.

The mean score of female teachers is more than male teachers hence Female Teacher educators’ have more favourable attitude towards teaching profession.

**Hypothesis 3:** There is no significant difference in teacher educators’ attitude towards teaching profession on the basis of years of teaching experience.

(a) Teacher Educators with 0-3 Years of Teaching Experience

(b) Teacher Educators with 3<sup>+</sup> & Above Years of Teaching Experience

The following table shows the relevant statistics of teacher educators' attitude towards teaching profession scores on the basis of Years of teaching experiences.

**Table 3: Relevant Statistics Of The Attitude Towards Teaching Profession On The Basis Of Years Of Experiences.**

Variable	Group	N	Mean	SD	Table Value		t' value	l.o.s.
					0.05	0.01		
ATTP	0 – 3 Years	50	70.58	12.94	1.97	2.59	0.78	0.05
	3 <sup>+</sup> & Above Y	238	72.13	11.50				

df = N – 2 = 286 From Table D, for df 286. Tabulated t = 1.97 at 0.05 level and 2.59 at 0.01 level.

**Interpretation of 't' :** - The obtained value of t' for the attitude towards teaching profession scores of teacher educators on the basis of years of experience is 0.78 which is less than table value 1.97. Thus t' is not significant at 0.05 level. Hence null hypothesis is accepted.

**Findings 3:** -There is no significant difference in teacher educator's attitude towards teaching profession scores on the basis of years of teaching experiences.

**Discussion:** The present study revealed that there is a significant difference in teacher educator's attitude towards teaching profession scores on the basis of types of institution. As the mean of Aided teacher training colleges is more than unaided teacher training colleges hence teacher educators of Aided B. Ed colleges having favourable attitude towards teaching profession. This is similar with the study of **Zeenat Zahoor (2013)**, in her study she found that government school teachers having favourable attitude towards teaching profession than private school teachers (Unaided schools).

The present study revealed that there is a significant gender difference in attitude towards teaching profession scores of teacher educators from B. Ed colleges. This means female teacher educators having more favourable attitude towards teaching profession. This is also similar with the study of **CHAISRISOOK,W.(1982), ÜSTÜNER, M., DEMİRTAŞH., COMERT, M. (2009), Ghosh and Bairagya (2010), and K.S. Kanti (2011)** in their study they found that Female teachers had more favourable attitudes towards teaching profession than male teachers. The result of present study also revealed that there is no significant difference in teacher educator's attitude towards teaching profession scores on the basis of years of teaching experiences. This indicates that years of teaching experiences do not affect the attitude of teacher educators' towards teaching profession. This is very much similar to



findings of **Sylvester, J.M.(2010) and Neetu Dabas (2011)** found that number of years of total teaching experience does not have an influence on the attitude towards teaching profession.

**Conclusion:** Teachers' attitude towards teaching profession has an effect not only on their teaching practice but also on their students. That's why they have a crucial role in making students have high or low attitudes towards any subject or teaching profession. Attitude towards the profession is one component of attachment to the profession. Now days with change in society so many B. Ed colleges are opened and these colleges are compromising with quality of education. Hence the main aim of the study is to measure attitude of teacher educators who are giving training to prospective teachers who are going to shape our society. From the findings of the study it is clearly seen that teacher educators' attitude towards teaching profession are leaning towards negative side in case of types of institution and gender which may affect the future of our society. So as one of the responsible stakeholder of our society we must think seriously to plan some program which gives positive direction to the attitude of all teachers irrespective of their Gender, Types of Institution and Years of Experiences.

### **References**

- Best, J.W. and Kahn, J.V.(2006). Research in Education (9th ed.). New Delhi,: Prentice Hall of India.*  
*Pestonjee, D.M.( 1988). Handbook of Psychological and Social Instruments. New Delhi,: Concept Publishing Company.*  
*Lokesh, K.( 2007). Methodology of Educational Research. Noida, Vikas.*  
*Keller J. (2009). Attitude is Everything. Mumbai: Embassy Books distributors.*  
<http://www.thefreedictionary.com/strategic>  
<http://www.ncert.nic.in>  
<http://www.wits.ac.za/saiia>

## **EDUCATION FOR GLOBAL PEACE AND SUSTAINABLE DEVELOPMENT**

**Mrs. Joyce Kurian**, *Department of Mathematics, Wilson College, Chowpatty, Mumbai 400 007.*

### ***Abstract***

*Education for Sustainable Development(ESD) creates a reorienting of education to guide and motivate people to become responsible citizens. It helps to understand the interrelationships among the environment, the economy and society. Education for International Understanding (EIU) promotes international goodwill through education to establish a lasting world peace and to educate the minds of young people psychologically and intellectually. Education for Sustainable Development (ESD) is a vision, in which everyone has the opportunity to benefit from quality education and learn the values, behavior and lifestyles required for a sustainable future. Education for Sustainable Development and Global Citizenship develop people's skills to take action that improves our quality of life now and for future generations. Global citizenship is an umbrella term for the social, political, environmental, or economic actions of globally - minded individuals and communities on a worldwide scale. ESD gives children and young people the opportunity to develop critical thinking about complex national and international issues. As the world continues to globalize, integrate, and flatten the idea of sustainability is very important to the institutions of higher education. University educators should recognize that their obligation to students stretches beyond the traditional scope of the academic discipline.*

**Introduction:-** Education for Sustainable Development(ESD) creates a reorienting of education to guide and motivate people to become responsible citizens. It helps to understand the interrelationships among the environment, the economy and the society. ESD also identifies what citizens should know, be able to do and value about key sustainability issues including climate change, energy, biodiversity, ecosystems, water, citizenship, transportation, poverty etc. The sustainable development and global citizenship are new and intellectually challenging concepts. So we need a sustainably literate and globally aware population. This paper contributes the concept in promoting sustainable development, peace and global citizenship.

**The Basics in Education:-** An important attention for the 21<sup>st</sup> century learning is how to generate innovative, relevant practices in education, a remix of multiple literacies and the skills of critical thinking. These tools allow individuals to be collaborators and creators of authentic solutions to inculcate in them a strong desire of learning to know, learning to do and learning to live together. By educating an individual, we give him some desirable knowledge, understanding, skills, interests, attitudes and critical thinking. In this way, he develops some understanding about the deeper things in life, complex human relations and the cause and effect of relationship and so on. Also he develops some skills in writing, speaking, calculating, drawing, operating some equipment etc. Hence he develops some interests and attitude towards social work, democratic living, cooperative and collective management and so on. He has to learn all these qualities through the process of education.

**Education for International Understanding:-** Education for International Understanding (EIU) promotes international goodwill through education to establish a lasting world peace and to educate the minds of young people psychologically and intellectually. It helps to cultivate the power of independent thinking in youth. This enables them with a balanced attitude and promotes an urge in them for international goodwill and co-operation. It also promotes in growth an ability to use their knowledge, prosperity and enables them to make the best use of their knowledge for solving the problems which confront them in their lives. Patriotism should develop internationalism and world outlook. In the world of increasing globalization and free trade, countries now rely heavily on others for their diverse needs and requirements through trade and commerce. Hence this aspect of interdependence deserves serious consideration of the educational organization of all nations and their governments. From the very early age, the child should be told that the whole world is one family. All the people are the citizens of the world. This is very essential in the development of international goodwill and brotherhood.

**Education for Sustainable Development and peace:-** The Education for Sustainable Development (ESD) is a vision, in which everyone has the opportunity to benefit from quality education and learn the values, behavior and life styles required for a sustainable future. Education for Sustainable development and Global Citizenship develops people skills to take action that improves our quality of life now and for future generations. ESDGC is about: (1) The links between society, economy and environment and between our own lives and those of people through the world. (2) The needs and rights of both present and future generations. ESDGC's prime emphasis is on the transformation of knowledge, values, attitudes and behavior and development of a range of skills.

The role of education for promoting sustainable development and peace:-

1. People are entitled to healthy and productive life in harmony with nature.
2. Today's development must not weaken the development and environment needs of present and future generations.
3. Nations should cooperate to promote an open international economic system that will lead to economic growth and sustainable development in all countries.
4. Nations should share knowledge and innovative technologies to achieve the goal of sustainability.
5. Nations have the right to exploit their own resources, without causing environmental damages.
6. Nations shall cooperate to conserve, protect and restore the health and integrity of the ecosystem.
7. The polluter should bear the cost of pollution.
8. Nations should recognize and support the identity, culture and interests of indigenous people.
9. Nations should reduce and eliminate unsustainable patterns of production and promote appropriate demographic policies.

10. Nations should recognize and support the identity, culture and interests of indigenous people.

Education for Sustainable Development and Peace helps children to:

- recognize their worth as individuals, knowing that they are unique
- recognize right from wrong and to have the confidence to choose right
- understand that they have rights and responsibilities
- see things from other people's point of view
- understanding the democratic process.

Education provides a foundation for development. It is the ground work on which much of our economic and social wellbeing is built. Education is the key to increase the economic efficiency and social consistency. It enriches peoples understanding of themselves and the world. It empowers people and strengthens nations. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances. An educated person is vital to implementing informed and sustainable development. A nation sustainability plan can be enhanced by the level of education attained by its citizens. Good community based decisions also depend on educated citizens. Education for Sustainable Development for young people is essential for the following reasons:- (1) ESD involves children and young people in their own learning through the use of a wide range of active and participatory learning methods. This will help the learner to develop confidence, self-esteem, skills of critical thinking, co-operation, communication and conflict resolution. (2) The lives of children and young people are increasingly shaped by what happens in other parts of the world. Education for sustainable development, peace and global citizenship gives them the knowledge, understanding, skills and values that they need if they are to participate fully in ensuring their own, and others wellbeing and to make a positive contribution, both locally and globally. (3) Education for peace and global citizenship encourages children and young people to care about the planet and to develop empathy with, and an active concern for those with whom they share it. (4) ESD gives children and young people the opportunity to develop critical thinking about complex national and international issues.

**Higher Education and Sustainable Development and Peace:-** As the world continues to globalize, the idea of sustainability is very important to the institutions of higher education. A university education which does not provide effective tools and forums for students to think through their responsibilities would be a failure. If colleges and universities can produce graduates with the knowledge and the disposition to be global citizens, the world would certainly be a better place. Higher education shall focus on how institutional offices sharing this common vision can develop mutually beneficial partnerships and programming to help to reach their goal. Sustainability, peace and global citizenship have been articulated as necessary

attributes for graduates of many universities around the world. Citizens in a global context have awareness, concerns, rights and responsibilities that transcend into the global community. If the goal is to have students become global citizens, professors must be global citizens too. University academia has a pivotal role to play in educating tomorrow's global citizens and in contributing to the healthy functioning of societies and the world community. University educators should recognize that their obligation to students stretches beyond the traditional scope of the academic discipline.

**Conclusion:-** Peace and security are fundamental to human dignity and development. Education for Sustainable Development plays a key role in promoting values for peace. A global citizenship education for peace would be a highly political education. It has four interrelated components: knowledge, analysis, skills, and action. First, there is the knowledge of world current events, economics and in international relations. Second is the capacity to critically analyze media, religious messages, dogma, superstition, hate literature, extremism, and fundamentalism. Third, it involves political skills, such a persuasion, negotiation, lobbying, campaigning, and demonstrating. Fourth are dispositions for joint action, which these days include networking through communications technology, starting a website or joining international forums of young people working for peace. Creating a world culture of peace requires the involvement of all parties in the society that together shape the world's culture-institutions such as the United Nations system, governments, politicians, scientists, NGO's the media, civil society, and especially teachers and parents. Peace education should involve the entire community. Parents are especially important that they must encourage strong family values that foster a culture of peace.

**References:-**

- Collins, M. (2007): Global Citizenship for Young Children. London: Paul Chapman Publishing.*  
*Delors, J. (1996): Learning the Treasure Within, Report to UNESCO of the international Commission on Education. Paris: UNESCO.*  
*Surendra, L. (2013): Education for Sustainable Development in the Asia-Pacific Region , in Okayama University Press (OUP) on ESD, Okayama, 2013.*  
*4)McKeown, R.(2002); Education for Sustainable Development Toolkit, ESD Toolkit, Version 2, 2002.*

## AUGMENTED REALITY: TOOL FOR THE 21<sup>ST</sup> CENTURY CLASSROOM

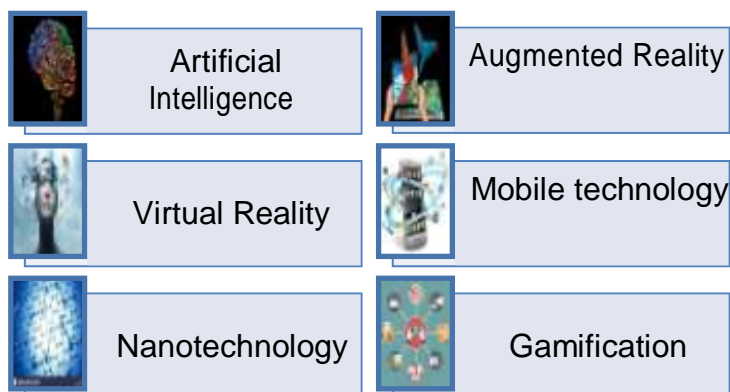
**Dr.Reni Francis**, *Asst.Professor, Pillai College of Education and Research, Chembur*

Education today has transcended the boundaries of the four walled classrooms. It has emerged to be more adaptive to the learner needs thus enabling them in making learning more enjoying and enriching. The new technologies of learning have been intermingled in the classrooms today thus breaking the shackles of rote learning and teacher centric learning. The 21<sup>st</sup> century classrooms emerge as a new platform for new learning technologies. This paper is an attempt to showcase the importance of augmented reality in classroom and thus catering to the various learning domains.

**Introduction:** *"The whole art of teaching is only the art of awakening the natural curiosity of young minds for the purpose of satisfying it afterwards; and curiosity itself can be vivid and wholesome only in proportion as the mind is contended and happy."*

Anatole France Today learning is not about sitting in classrooms, listening to lectures one after the other and writing own notes from the blackboard, it transposes ahead from listening to realising and this can only happen if the student in the class is involved in the process of learning. We very often speak about involving and engaging students but what do we mean by engagement? Engagment in leraning emphasises in three forms: academic, social and personal engagement. Academic engagement focused on involving the student in the teaching- leraning process through quseioing, debates, discussions, brainstorming, projects, interviews etc, Social engagement involves with social gathering, peer group work, social and cultural exchange etc and Personal engagement in the form of being aware of oneself, perception, self concept etc. All these forms of engagement becomes imperative in the growth and development of every student/ individual. Hence as teachers we play a vital role in grooming this unique feature among the students. Our classrooms should echo the engagement among our students and thus the new emerging technologies have paved way to interactive classrooms.

### **Emergence of new technologies in learning:**



**Augmented Reality Classroom:** Teachers need to begin utilizing increased reality in classroom lessons, thus enabling them, to help their classes material with AR highlights. It might ensnare consideration of understudies and additionally propel them to think about. Including additional data like short life story of a man, a few certainties about different sorts of stuff, geo-location of authentic events or visual model of maths idea would give students more extensive comprehension about the subject. By doing homework, getting a more profound comprehension of home-task, understudies may filter pages of homework to get content, sound or video tips from their instructors that may help them in tackling issues. Utilizing Augmented Reality to filter front of book understudies may get a short diagram of a book and choose would they require it or not. AR innovation has a capacity to render in 3D display anything that might be not really envisioned in a classroom, at a PC, in psyches of understudies.

**Including and associating:** Counting Augmented Reality into lessons may help instructors specifically include understudies into the considering procedure by cooperating 3D show. Partaking in such sort of things inspires understudies, catch their consideration for the entire expanded reality classes and causes them comprehend subject further. Connection with AR might be a piece of lesson like a secret, support of primary theme giving additional information to understudies or be the fundamental substance of a lesson.

**Find and Learn:** Guests of galleries by utilizing their mobiles may get to Augmented Reality and find verifiable occasions by investigating different extra substance in association with objects. Augmented Reality gives guests additional data about what they see, or even permits to for all intents and purposes prepare some stuff to themselves or take visit to the past. On the opposite side historical centres generally cannot demonstrate entire accumulation to guests because of space impediment, absence of assets or simply high estimation of items. Utilizing Augmented Reality abilities gives extraordinary chances to galleries to introduce more than it is conceivable in ordinary conditions.

**Items displaying:** Manual components in instruction, for example, the utilization of their hands by and by or illuminating some test, may enable students to better comprehend a lesson. By utilizing applications therapeutic understudies may effortlessly learn human life systems. Use expanded reality in training empower them investigating distinctive parts of body exclusively and find its one of a kind highlights. Augmented Reality enables understudies to associate with 3D display. Whatever, pivoting, altering it by setting straightforwardness, evolving hues, styles and even parts.

**Intelligent books:** Augmented Reality books give further comprehension of complex substance. It additionally enable make to procedure of learning brighter and locks in. Unfortunately be that as it may, perusing basic books didn't rouse kids to contemplate science. Assuming this is the case, utilizing books that incorporates advanced AR substance can make an arrangement. For instance, reexamining pages through gadgets that help AR highlights may offer access to extra substance. Therefore, springing to life 3D models with movements, sound and association activities draws in youngsters consideration.

**Aptitudes preparing:** By and large hypothetical information is not really enough to end up noticeably a decent authority in the extensive variety of callings. Along these lines, today ideas of instructing should move to far more dynamic position. At long last, as more useful learning technique would be incorporated into learning process as less understudies would remain as uninvolved onlookers. Specialized understudies require practice and hand-on involvement to get aptitudes of upkeep and get together appropriate for their calling. Tragically, however regularly aptitudes can't be polished in a classroom. Provisionally, Augmented Reality innovation could make distinctive circumstances and recreations reasonable for down to earth process where understudies may obtain some involvement. The above benefits highlights the importance of Augmented Reality in nurturing the learning domains such as Cognitive domain, Affective and Psychomotor domain.

**Cognitive Domain:** Through Augmented Reality a student could retrieve relevant knowledge from the long term memory and construct meaning from instructional methods of oral, written and graphic communication thus carry out a procedure in a given situation. This will enable them to break a content into smaller constituent parts and relate to one another to understand an overall structure and make judgements based on criteria and standards thus put all the coherent factors together and reorganise to a new structure.

**Affective Domain:** Through Augmented Reality a student can be open to new information or experience and can actively participate and interact with new information or experience thus attaching value to the new information thereby incorporating the new information into existing value system and thus creating new and consistent attitudes, beliefs and behaviours.

**Psychomotor Domain:** Through Augmented Reality a student can observe another's skill or action thus learn and reproduce the same through instruction, accurately execute one's own skill and integrate with multiple skill by performing consistently and the naturally perform it at a higher level.

**Conclusion:** It is not a mystery to any teacher that more propelled and connected with students dependably comprehend subject better and learn speedier. Their consideration and vitality focus on contemplating process as a teacher keeps them connected with and intrigued. So increased reality in training process give colossal advantages to all students.

**References:**

- <https://www.emporia.edu/studentlife/learning-and-assessment/guide/domains.html>
- <http://whatis.techtargt.com/definition/augmented-reality-AR>
- <https://elearningindustry.com/augmented-future-elearning-augmented-reality-elearning>
- <http://www.augment.com/education/>
- <https://thinkmobiles.com/augmented-reality-education/>



## ICT – A BOON FOR TEACHERS IN LANGUAGE ASSESSMENT

**Dr. Rukmini Jamdar**, Assistant professor, Seva Sadan's college of Education, Ulhasnagar.

### **Abstract**

*English language occupies a predominant place in today's world. However, the language is not being given justice in terms of speaking, reading and writing due to innumerable reasons. There are different ways of assessing English language competency among the students. A language teacher has to diagnose the problems faced by English students in different ways like spelling, vocabulary, pronunciation, communication skills, grammar, and in the different skills namely listening, speaking, reading and writing. There are different types of resources available on the internet which are useful sources which help a language teacher and the students to improve the competency in the language. This paper is a survey research, highlighting the different tools of assessment which can be used by the teacher to assess competency in English language.*

**Paper:** English language plays an important role in our day to day life. In order to communicate properly one has to have good command over the language. Moreover the competency in terms of development of skills of learning a language plays an important role in the life of a teacher and student. A person can make or mar the language being spoken, read or written. **Language assessment** or **language testing** is a field of study under the umbrella of applied linguistics. Its main focus is the assessment of first, second or other language in the school, college, or university context; assessment of language use in the workplace; and assessment of language in the immigration, citizenship, and asylum contexts.<sup>[1]</sup> The assessment may include listening, speaking, reading, writing, an integration of two or more of these skills, or other constructs of language ability. Equal weight may be placed on knowledge (understanding how the language works theoretically) and proficiency (ability to use the language practically), or greater weight may be given to one aspect or the other. Timely diagnosis of the problems faced by a student in English would go a long way to improve his communication skills. It is the responsibility of a language teacher to provide remedial teaching on time. For effective remedial she has to assess the areas where the students lack or has to improve in areas where they are poor. ICT plays a vital role by acting as a source through which assessment in language can be done. The importance of ICT for a language teacher and her students are discussed in the following paper. ICT can promote, facilitate and support our current understanding of assessment. We can now easily record our students speaking using computers, or mobile devices like MP3 recorders or mobile phones. More importantly, we can store, retrieve and share these recordings very cheaply and quickly. We can video group work or pair work interactions and then evaluate and provide feedback. We can get students to write blogs or wikis and provide regular comments and feedback on the development of their written work. We can easily ask the student's peers to provide feedback too. Technology does not only help with what we assess; it can even help us produce relevant materials for assessment. Whether it is recording native or non-native speakers for listening comprehension work or finding interesting and relevant texts on the internet, technology can

play a role. Blogger is a free blogging tool from Google. Students can use it to keep diaries, write stories, reflect on classes. Teachers and peers can easily leave comments.. **WordPress** <http://wordpress.com/> Another very popular blogging tool that is also free. Slightly more sophisticated than Blogger it provides all the same elements as Blogger but with perhaps a better look and feel. Versions of WordPress can be downloaded onto your own server, so that they can be customised for a school and plugins added to extend their capabilities. **Wikis** <http://pbworks.com/> A great way of providing a platform for collaboration and sharing. Wikis are websites built by groups of students rather than individuals. They allow for collaborative writing exercises where students can edit and review their work and the work of others. Information about the creation of a wiki allows the teacher to easily see who has contributed and who hasn't. **Tricider** <https://tricider.com/en/t/> Quick and simple discussion board that allows students not only to add their own ideas but also to comment on the ideas of their peers. Good for brainstorming, debates, essay preparation and drafting. **Wallwisher** <http://wallwisher.com/> This website provides a sort of collaborative electronic board where students can add up comments, pictures, video and links around a given theme. Great for brainstorming, preparing essays and projects, and sharing ideas. **Breaking new English** [www.breakingnewsenglish.com/](http://www.breakingnewsenglish.com/) Useful website of reading and listening content that is very topical and related to recent news events. The site includes whole lesson plans built around the content, but the content can easily be adapted to use for assessments. **Listen a minute** <http://listenaminute.com/> Another source of reading and listening content that can be easily adapted for assessments. **Listening material ELLLO English** <http://ello.org/> Huge collection of monologues and dialogues from a whole variety of speakers which can easily be used for assessment purposes. **Audio/speaking Vocaroo** <http://vocaroo.com/> Simple audio tool that can allow for five minute recordings at the click of a button. Recordings can be shared via email, embedded in a blog, wiki or virtual learning environment or even downloaded. [www.teachertrainingvideos.com/vocaroo1/index.html](http://www.teachertrainingvideos.com/vocaroo1/index.html) **Voice Thread** <http://voicethread.com/> Excellent tool that can be used collaboratively. Students can add written or audio comments concerning an image, video or document. **http://mailvu.com/** Simple audio tool that also uses the webcam facilities of a computer. Allows for simple webcam recordings in pairs or groups and can be useful for pair work assessments. [www.teachertrainingvideos.com/mailVu/index.html](http://www.teachertrainingvideos.com/mailVu/index.html) **Voxopop** [www.voxopop.com/](http://www.voxopop.com/) Audio tool works like a discussion board but with recordings. Teachers or students can set up questions and students can add their oral answers, replies or comments. Useful for oral work, discussions, brainstorming, opinions etc. A practice-based exploration of technology enhanced assessment **myBrainShark** [www.brainshark.com/mybrainshark](http://www.brainshark.com/mybrainshark) Versatile tool that allows you to upload videos, pictures, PowerPoint presentations or documents and then add your voice to them and share the recordings via email, or embed them into a blog or Moodle site. [www.teachertrainingvideos.com/brain/index.html](http://www.teachertrainingvideos.com/brain/index.html) **Virtual learning environments Moodle** <https://moodle.org/> Online virtual learning environment that is used in many higher education institutions. Allows for a huge range of assessment possibilities but has generally

been used for writing and feedback. Has chat rooms, forums which can also be used for assessment purposes. Teachers can also create online quizzes and tests that students can use to evaluate their progress and use formatively. Edmodo [www.edmodo.com/](http://www.edmodo.com/) Free online virtual learning environment that teachers can set up on their own by simply submitting their email address. Great for sharing, discussions and brainstorming. Allows for upload of assignments and drafts and quick feedback. Edmodo Quiz making tools Pro-Profes [www.proprofes.com/quiz-school/](http://www.proprofes.com/quiz-school/) A free online quiz maker. It could be used to make formative and periodic assessments. As we have discussed, the term constructive alignment is used when we talk about linking our assessments with the teaching approaches and the learning outcomes of our curriculum (Biggs, 1999). This is a key point about assessment with ICT. It allows us to do assessment in new ways and therefore link much closer to the objectives of the curriculum or course with the assessments we do. For example, if one of the objectives is to help students to brainstorm and prepare better for a report or essay we want them to write, then we can use tools like Wallwisher or Tricider to brainstorm and work collaboratively to develop their ideas. Teachers can easily track which students have made the most valuable contributions to the brainstorming process. These brainstorming activities can be done over time and even at home. The technology offers new affordances and greater flexibility in the types of assessments and tasks we set up. 'For academic staff, the appeal of e-assessment lies in its ability to capture aspects of learning previously considered impossible to assess' (JISC, 2007: 26). Quiz making tools The building blocks of learning the English language (i.e. vocabulary, grammar, syntax) are still an important part of the learning process. ICT has traditionally done this part of assessment very well through the use of multiple choice, true or false, ranking, matching and other types of self-assessment exercises and quizzes. A practice-based exploration of technology enhanced assessment ICT can add value to these types of assessments too. Online quizzes can be provided that students can access at any time, allowing for greater flexibility in the timing and organisation of assessments. Many systems can even automatically mark student input, which has the potential to impact on the timeliness of feedback, provide students with useful knowledge of their progress (at least in terms of grammar, syntax, or comprehension questions) and allow students to repeat the exercises as needed. The success criteria can be set by the tutor to provide the learner with the opportunity to progress to the next level or go to some review resources, depending on how well they did in the quiz. This scaffolding approach can be very powerful for this type of procedural knowledge in ELT. There are a number of free tools online that can easily be used to produce online quizzes and tests. These include Quia and Proprofes, which are both free. Most virtual learning environments also provide quiz building tools. There has been work building more adaptive and intelligent tools where learners can practise discrete skills, but this tends to be other languages, for example, German (Heift, 2009). Virtual learning environments. Moodle allows students to upload individual assignments as files or even to write directly onto a page, which the teacher can access. This allows a simple way for students to submit their work, feedback can be provided and the students can then re-submit. It is also a way of allowing the students to

write in stages. They can upload their introduction, then later the main body, etc. This makes the whole activity more process-based. You can also look back and compare early drafts with the final products. It can be quite time-consuming, but it is very rewarding for the students and by having the content loaded onto Moodle it is much easier to access and provide feedback. Assessment can be carried out in a more reflective way by responding to students, rather than just correcting. Students are encouraged to go over their work again through questions, recommendations and suggestions where improvements need to be made. By having the student work drafts loaded onto Moodle, it is much easier to access and provide feedback on the textual use of English. Students are also encouraged to do peer review in the online text discussion boards **Edmodo** is a free powerful VLE Mouna works in Tunisia with groups of secondary school children learning English. She likes to get them to discuss and share ideas on different topics each week. The teacher sets a discussion topic and each student is obliged to make a minimum of three contributions. The students do this at home. She reviews the discussion and takes notes. In class she often highlights some of the best contributions and explains why she likes them. Each week she chooses the student who has made the best contribution. This is not based on grammar or language but on their ability to communicate an idea effectively. Her focus is to get the students to think less about the grammar and more about what they are saying. She is trying to encourage more fluency in their writing and more focus on the content of what they are trying to say. It is an experimental idea. She has noticed that students write more or less depending on the topic. She is slowly building up a list of the topics that the students seem to like to write about. She is quite happy with her early experiments but wants to find more effective ways of providing feedback on their comments.

Assessment tools that can develop oral skills One of the areas where the affordances of ICT is perhaps most pertinent is in the area of oral skills. It has always been possible to record students using cassette recorders but this was often cumbersome and didn't allow for easy distribution and sharing. There is now a whole range of ICT tools that can make the assessment of students' oral levels much easier. The teacher can use myBrainShark and it has been a really successful tool to work with. Students can produce their own PowerPoint slides, load them up onto myBrainShark and then add their voice to their slides. myBrainShark then packs the PowerPoint presentation with the audio and creates a link to a file that can easily be shared with the teacher. So students can create PowerPoints on a given topic, record and re-record their voice until they are happy with their recording, and then share their work at the click of a button. Students and teachers can listen to the recordings and add notes/comments as feedback **myBrainShark** is particularly useful because there is no need to share big files and it is an online tool. Once the students have uploaded their presentations and added their voice, they simply share the link. The teacher can click on the link and listen to the recordings directly from the myBrainShark server. This tool can also make an excellent contribution to e-Portfolios. This tool is especially good for English for Academic Purposes students and those doing Business English. Many of these students will be expected to give PowerPoint presentations during their course and this is a great way of getting them to practise. Students

are not limited to PowerPoint. They can load up PDF documents, Word files, pictures and even video, and then add their own voice narration. Students can also share their recordings with other students and in this way get peer feedback. Making simple audio recordings **Vocaroo** is a very simple tool that allows students to record their voice for up to five minutes and then send the resulting recording as an email. It is perhaps one of the easiest audio recording tools on the internet and works literally at the click of just one button. The students don't even need to open an email client to send the recordings. They simply record, play back the recording and then write in the email address of the person they want to send the recording to. The receiver can then click on the link and listen to the recording. The recordings can also be downloaded onto the students' computer or embedded into a blog by copying the code that is provided and then pasting it into a blog, virtual learning environment, or website. This tool is great for portfolios and for getting the students to build up a collection of short recordings over a period of a module that can show their development and progress. The tool is used to get the students to do regular periodic recordings based on activities done in class. The class time can be used to practise certain speaking activities but the students actually do the recordings at home and then send them to the tutor. Students evaluate their recordings and then at the end of the course, choose the recording they are most pleased with and submit this for formal evaluation. Here are some example of the topics

1. Gave personal information. 2. Talked about how they had met. 3. Talked about the friend's personality. 4. Talked about what they had in common and their interests. 5. Talked about when they last met

**Blogs:** Students are encouraged to read each other's blogs and leave comments. They are also encouraged to share their blogs using their contacts so that they can develop the widest possible audience. The teacher reads their blogs but does not leave comments. The blogs are assessed at the end, both for the content and for the language. Students seem to get very motivated about their blogs and put a lot of attention into making them clear, easy to read and well designed.

**Conclusion:** As discussed above there are numerous number of resources available on internet which makes assessment in English language competency both easy and interesting. These resources can be modified as per the purpose of assessment and the level of students in the classroom.

**References:**

<https://en.wikipedia.org/wiki/Blog>

[eresources.com](http://eresources.com)

[crl.du.ac.in/sub.database/SUBS.E-RESOURCE](http://crl.du.ac.in/sub.database/SUBS.E-RESOURCE)

[www.riemysore.ac.in/ict/unit\\_9\\_ict\\_in\\_assessment.html](http://www.riemysore.ac.in/ict/unit_9_ict_in_assessment.html)

[conference.pixel-online.net/ICT4LL](http://conference.pixel-online.net/ICT4LL)

[https://en.wikipedia.org/wiki/Language\\_assessment](https://en.wikipedia.org/wiki/Language_assessment)

**A STUDY TO ASSESS THE EXISTING STATUS IN THE TEACHER EDUCATION COLLEGES REGARDING THE MULTIPLE INTELLIGENCES THEORY BASED CLASSROOM PRACTICES FOLLOWED BY THE TEACHER EDUCATORS IN PUNE CITY**

**Dr. Lalita Vartak** , *lvartak@rediffmail.com*, Principal, Adarsh Comprehensive College of Education, Kothurd, Pune, India

**Ms. Priya Singh**, *priya.singh@mitsoer.edu.in*, Assistant Professor, School of Education & Research, MIT ADT University, Pune – 412201, India

**Abstract**

*—We are not all the same; we do not all have the same kinds of minds; education works most effectively for most individuals if these differences ... are taken into account rather than denied or ignored.¶*

*“Reflections on Multiple Intelligences”*

*(Gardner, 1995)*

*The current study set out to find out the existing status of use of multiple intelligences theory based classroom practices followed by teacher educators. With regard to the above mentioned aim, 33 teacher educators participated in the research. Further, in this study, the researchers made use of the following measuring instruments: 1) Researchers made questionnaire on multiple intelligences to assess the present usage for teacher educators and 2) Self reflection questionnaire to know usage and awareness of reflective practices by teacher educators. Survey method was used and data was collected from 7 teacher education colleges in Pune City. Questionnaire included open and closed ended questions. Closed end questions were analyzed using percentage and Chi Square test. Grounded theory was used for interpretation of responses for open end questions. Major findings of the study were Verbal intelligence, Logical – Mathematical Intelligence & Interpersonal Intelligence are the intelligence were predominantly focused by most of the teacher educators whereas Musical Intelligence, Naturalistic intelligence, bodily-kinesthetic, visual and Intrapersonal intelligence were the least catered intelligence. Researchers found that there is a difference in the practices of the teacher educators regarding the intelligences when they are teaching in the classroom is accepted. Final theory obtained after performing grounded theory was: The Teacher educators use methods of lesson planning mainly catering to verbal / logical mathematical/Interpersonal intelligence and were willing to learn more about application of multiple intelligences in their classrooms. The teacher educators are aware of their qualities, strengths, weaknesses, opportunities and threats as a teacher, but lack knowledge of reflective strategies.*

**Keywords:** Multiple Intelligences Theory, Classroom practices, Teacher Educators

**Introduction:**

*“Intelligence is the ability to solve problems or to create products that are valued within one or more cultural settings.”*

- Dr. Howard Gardner

*(Frames of Mind, 1983)*

Today, the seed of a dramatic transformation in education is being planted. Leading the way are thousands of teachers who are rethinking every part of their jobs -- their relationship with students, colleagues, and the community; the tools and techniques they employ; the form and content of curriculum; what standards to set and how to assess whether they are being met;

their preparation as teachers and their ongoing professional development; and the very structure of the schools in which they work. In short, teachers are reinventing themselves and their occupation to better serve schools and students. But in order for teachers to reinvent themselves the training they get during their pre-service teacher training needs to be improvised. It is observed that teacher trainees follow the same approach which is used by teacher educators. The National Curriculum Framework of 2005 talks about —need of teacher education programmes to be reformulated and strengthened so that the teacher can be an: encouraging, supportive and humane facilitator in teaching–learning situations to enable learners (students) to discover their talents, to realize their physical and intellectual potentialities to the fullest, to develop character and desirable social and human values to function as responsible citizens. NCF 2005 stresses the need of teachers to be reflective practitioner. What is badly needed today is a new approach to education that emphasizes more intrinsically engaging methods of learning. Education would then be an intrinsically motivating experience for school students. One such approach is use of multiple intelligences theory in classroom. This in turn emphasizes the need of changes in teacher education programmes and knows whether teacher educators use multiple intelligences approach in teaching.

**Multiple Intelligences Theory:** The theory of multiple intelligences, developed by psychologist Howard Gardner in the late 1970's and early 1980's, posits that individuals possess eight or more relatively autonomous intelligences. Individuals draw on these intelligences, individually and corporately, to create products and solve problems that are relevant to the societies in which they live.

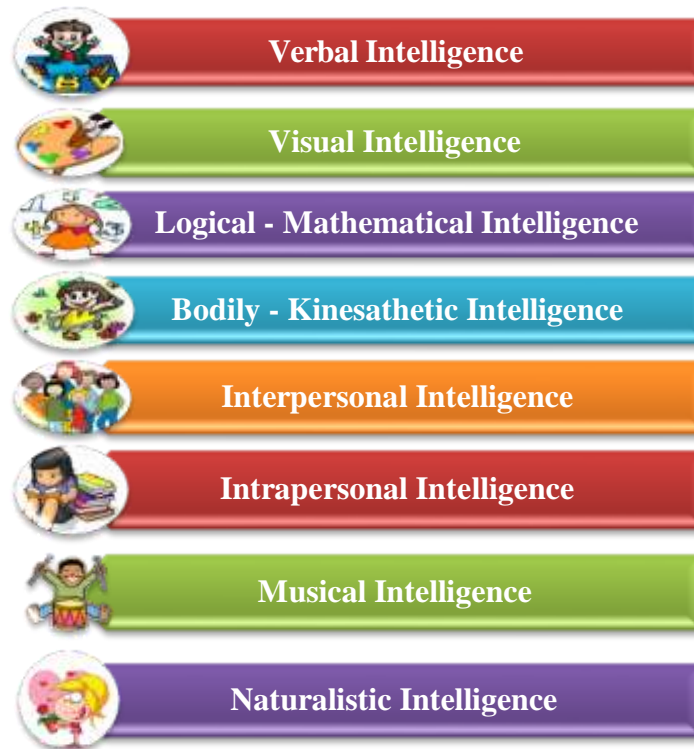
**Dr. Howard Gardner defines intelligence as:**

- ✓ The ability to solve problems that one encounters in real life
- ✓ The ability to generate new problems to solve
- ✓ The ability to offer a product or service that is valued within one's culture

According to Gardner intelligence is a bio psychological potential that all individuals possess by virtue of being human. After twenty five years of reflection on the theory, Gardner accentuates two primary claims:

- ✓ All individuals possess the full range of intelligences—the intelligences are what define human beings, cognitively speaking; Means all individuals have all eight intelligences in them, but the levels in which it is present it varies.
- ✓ No two individuals, not even identical twins, and exhibit precisely the same profile of intellectual strengths and weaknesses. All individuals are different with respect to the intelligence profile.

Gardner proposed and defined eight intelligences. Figure given below shows eight multiple intelligences proposed by Dr. Howard Gardner:



**Figure 1: Multiple Intelligences proposed by Dr. Howard Gardner**

*According to Gardner's analysis, only two intelligences—linguistic and logical mathematical—have been valued and tested for in modern secular schools; it is useful to think of that language-logic combination as —academic or —scholarly intelligence.* (Williams, 2002)

1. **Verbal – Linguistic Intelligence ('Word Smart')**: Individuals with verbal intelligence use words effectively. These learners have highly developed auditory skills and often think in words. They like reading, playing word games, making up poetry or stories.
2. **Logical – Mathematical Intelligence ('Number Smart')**: Individuals with this intelligence like reasoning, calculating. They tend to think conceptually, abstractly and can see and explore patterns and relationships.
3. **Musical Intelligence ('Music Smart')**: Individuals with this intelligences show sensitivity to rhythm and sound. They love music, but they are also sensitive to sounds in their environments. They love to play music in the background while studying.
4. **Bodily – Kinesthetic intelligence ('Body Smart')**: Individuals with this intelligence use their body effectively and have keen sense of body awarene4ss. They like movement, making things, touching. They communicate well through body language and can be taught through physical activity, hands-on learning, acting out, role playing.
5. **Visual / Spatial Intelligence ('Picture Smart')**: These individuals think in terms of physical space are aware of their environments. They like to draw, do jigsaw puzzles, read



maps, day dream. These individuals can be taught through drawings, verbal and physical imagery.

- 6. Interpersonal Intelligence ('People Smart'):** Individuals possessing interpersonal intelligence are very good at understanding and interacting with others. These students learn through interaction. They have many friends, empathy for others, street smarts. They love to listen and solve others problems.
- 7. Intrapersonal Intelligence ('Self Smart'):** These individuals are good at understanding one's own interests, goals. These learners don't like to be in groups and tend to shy away from others. They're in tune with their inner feelings; they have wisdom, intuition and motivation, as well as a strong will, confidence and opinions.
- 8. Naturalist Intelligence ('Nature Smart):** These individuals are good at understanding patterns in and connecting it to nature. These learners like animals, plants and natural phenomenon.

**Review of the related literature:**

Researchers found few researches similar to the study.

- A study titled *Teaching Strategies Based on Multiple Intelligences Theory among Science and Mathematics Secondary School Teachers* was carried out by Tajularipin, Abdul & Suzieleez Syrene (2010). The study found that teaching strategies based on multiple intelligences suggest teaching science and mathematics in multiple ways. Teachers' profiles of multiple intelligences assist them to obtain a better understanding of their potential intelligences and interests in enhancing their teaching strategies.
- A study titled *An examination of multiple intelligence domains and learning styles of pre-service mathematics teachers: Their reflections on mathematics education* was conducted by I Özgen, Tataro\_lu, and Alkan (2010). The study aimed at identifying pre-service mathematics teachers' multiple intelligence domains and learning style profiles, and tried to establish relationships between them. The same analyses also revealed that the pre-service teachers had *-logical-mathematical* and *-visual-spatial* as their dominant intelligence domains.
- A study titled *A Mexican Study of Multiple Intelligences for Pre-Service Teachers of English as a Foreign Language* was taken by Carlin, Salazar & Cortés (2013). The authors suggested that it is important to diagnose and promote these intelligences in trainees in a systematic way in order to equip them with knowledge and experience of multiple intelligences in order to use them in their future teacher practice.

**Need of the study:-** The traditional classroom tends to treat students as a homogeneous group, with the teacher presenting the same exercises to all students at the same time, and expecting the same answers to be produced within similar time limits. Students are expected to absorb the knowledge presented by the teacher with a strong emphasis on the use of language and logical-mathematical analysis. Nowadays the teachers are well aware of the fact that every classroom is full of students who are different from each other in many different ways. Each student comes from a different social, economic and cultural background, each one has

different areas of interest, different ways of expressing themselves, different strengths and weaknesses, and now the teacher is being asked to be aware of the fact that each student also has his own individual intelligence profile, as all these factors can affect the student's learning process. If prospective teachers are to succeed at this task, schools of education must design programs that transform the kinds of settings in which novices learn to teach and later become teachers. Teacher educators must practice use of novice methodologies like multiple intelligences approach.

Various researches showing advantages of multiple intelligences based teaching learning.

Some of them are:

- ✓ Providing students with multiple ways to access content improves learning (Hattie, 2011).
- ✓ Providing students with multiple ways to demonstrate knowledge and skills increases engagement and learning, and provides teachers with more accurate understanding of students' knowledge and skills (Darling-Hammond, 2010).
- ✓ Instruction should be informed as much as possible by detailed knowledge about students' specific strengths, needs, and areas for growth (Tomlinson, 2014).

There is little scope available in the B.Ed. syllabus for pre service teachers to experience multiple intelligences based teaching – learning as students since lecture method is used as the method of instructions most of the times. Moreover the guidance given to them also cater mostly verbal intelligence as practiced by the teacher educators. The various types of lesson prescribed in the syllabus also follow Harbartian patterns of planning and conducting lessons. No specific endeavors have been made to give systematic training in using multiple intelligences in classroom.

This raised the following questions in the mind of the researcher:

- In What way is multiple intelligences theory practised in the present teacher education model?
- What are the classroom teaching – learning practices related to multiple intelligences practiced by the teacher educators?

In an attempt to answer all the above questions, the researchers took up the present research.

**Statement of the problem:-** To assess the existing status in the teacher education colleges regarding the multiple intelligences theory based classroom practices followed by the teacher educators, in Pune city.

**Definition of Key Terms and Phrases:**

**Conceptual Definitions:**

- **Multiple Intelligences Theory:** According to this theory, "Humans are able to know the world through language, logical-mathematical analysis, spatial representation, musical thinking, the use of the body to solve problems or to make things, an understanding of other individuals, and an understanding of ourselves. Where individuals differ is in the strength of these intelligences - the so-called profile of intelligences -and in the ways in which such intelligences are invoked and combined to carry out different tasks, solve

diverse problems, and progress in various domains." (Gardner, 1991). The seven intelligences proposed by Gardner are linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal and intrapersonal. (Gardner, 1983)

- **Teacher Education:** Training to become a teacher, usually at an institution of higher education (Collins English Dictionary). Any of the formal programs that have been established for the preparation of teachers at the elementary- and secondary-school levels.(Encyclopedia Britannica)
- **Intelligence:** The ability to learn, understand and think in a logical way about things. (Oxford Dictionary, 2016)

**Operational Definitions:**

- **Classroom Practices:** The classroom activities used by the teacher educators in the teacher education colleges affiliated to Savitribai Phule Pune University which is based on the multiple intelligences theory.
- **Teacher Education Colleges:-** All the Teacher Education colleges in Pune City which are affiliated to SPPU.
- **Teacher Educators:-** The lecturers who work in teacher education colleges and provide formal instruction to pre service teachers.

**Objectives of the Research:**

1. To assess the existing status in the teacher education colleges regarding the multiple intelligences theory based classroom practices followed by the teacher educators.

**Method of Study:** Survey – Cross – Sectional survey design

**Population:** All the teacher educators teaching Bachelors of Education (B.Ed.) course in teacher education colleges in Pune City affiliated to Savitribai Phule Pune University.

**Sampling Method:** Purposive Sampling

**Sample Size:** 33 Teacher educators teaching B.Ed. course in teacher education colleges affiliated to Savitribai Phule Pune University in Pune City.

**Scope**

- The research is concerned with colleges affiliated to Savitribai Phule Pune University, Pune.
- All eight intelligences namely: Verbal, Visual, Logical – Mathematical, Bodily Kinesthetic, Interpersonal, Intrapersonal, Musical and naturalistic are considered for the survey.

**Delimitations**

- The study was delimited to teacher educators teaching in teacher education colleges affiliated to Savitribai Phule Pune University within Pune City.
- The study was delimited to English medium teacher education colleges in Pune City

**Limitations**

- The motivation levels, fatigue, mood, past experience of the teacher educators and pre service teachers which may affect their responses were beyond the control of the researcher.

**Tools for Data Collection:** Questionnaire to assess use of Multiple Intelligences & lesson Planning: Details in Table 1 given below:

Sr.No.	Item number	Type
1	Total 45 items	43 Close ended and 2 Open ended
2	41, 42 & 43	Options: Yes & No
3	1 to 40	Options: Always, Sometime & Never
4	1 to 40 items were divided into set of 5 statements related to multiple intelligences.	

□ **Questionnaire to assess use of Reflective Practices:** Details in Table 2 given below:

Sr.No.	Item number	Type
1	Total 14 items	10 Close ended and 3 Open ended
2	Close ended	Options: Yes & No

**Data Analysis of Questionnaire on multiple intelligences and lesson planning**

□ The quantitative data obtained from the close ended items were analyzed for all the 8 intelligences. Chi square was used to find if the difference between the preference give to various intelligence was by chance or not.

**Computation of Chi Square from Contingency Table 3**

Preference	Type of Intelligence	<i>fo</i>	<i>fe</i>	<i>fo - fe</i>	$(fo - fe)^2$	$(fo - fe)^2 / fe$
<b>Always</b>	Verbal	82	67.13	14.87	221.12	3.294
	Visual	68	67.13	0.87	0.76	0.011
	logical Mathematical	94	67.13	26.87	722.00	10.755
	Bodily-Kinesthetic	56	67.13	-11.13	123.88	1.845
	Intrapersonal	72	67.13	4.87	23.72	0.353
	Interpersonal	90	67.13	22.87	523.04	7.791
	Musical	22	67.13	-45.13	2036.72	30.340
	Naturalistic	53	67.13	-14.13	199.66	2.974
<b>Rarely</b>	Verbal	80	83.13	-3.13	9.80	0.118
	Visual	93	83.13	9.87	97.42	1.172
	logical Mathematical	62	83.13	-21.13	446.48	5.371
	Bodily-Kinesthetic	99	83.13	15.87	251.86	3.030
	Intrapersonal	83	83.13	-0.13	0.02	0.000
	Interpersonal	65	83.13	-18.13	328.70	3.954
	Musical	94	83.13	10.87	118.16	1.421
	Naturalistic	89	83.13	5.87	34.46	0.414
<b>Never</b>	Verbal	3	14.75	-11.75	138.06	9.360
	Visual	4	14.75	-10.75	115.56	7.835

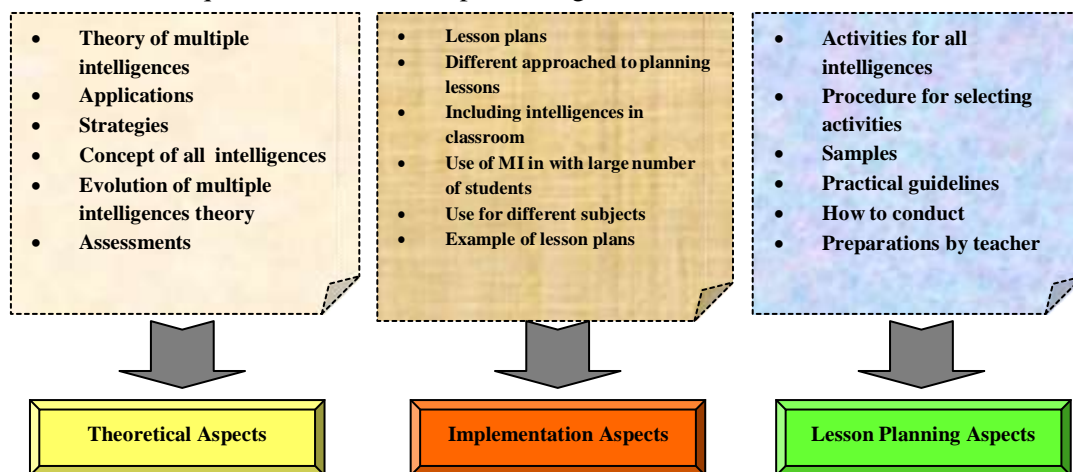
	<b>logical Mathematical</b>	<b>9</b>	<b>14.75</b>	<b>-5.75</b>	<b>33.06</b>	<b>2.242</b>
	<b>Bodily-Kinesthetic</b>	<b>10</b>	<b>14.75</b>	<b>-4.75</b>	<b>22.56</b>	<b>1.530</b>
	<b>Intrapersonal</b>	<b>10</b>	<b>14.75</b>	<b>-4.75</b>	<b>22.56</b>	<b>1.530</b>
	<b>Interpersonal</b>	<b>10</b>	<b>14.75</b>	<b>-4.75</b>	<b>22.56</b>	<b>1.530</b>
	<b>Musical</b>	<b>49</b>	<b>14.75</b>	<b>34.25</b>	<b>1173.06</b>	<b>79.530</b>
	<b>Naturalistic</b>	<b>23</b>	<b>14.75</b>	<b>8.25</b>	<b>68.06</b>	<b>4.614</b>
					$\chi^2$	<b>181.01</b>

**Testing of Hypothesis**

- **Null hypothesis was stated for the study:** *There no significant difference in the classroom practices of the teacher educators based on multiple intelligences theory when they are teaching in classroom.*
- **Research Hypothesis was stated for the study:** *There is a difference in the classroom practices of the teacher educators based on multiple intelligences theory when they are teaching in the classroom.*

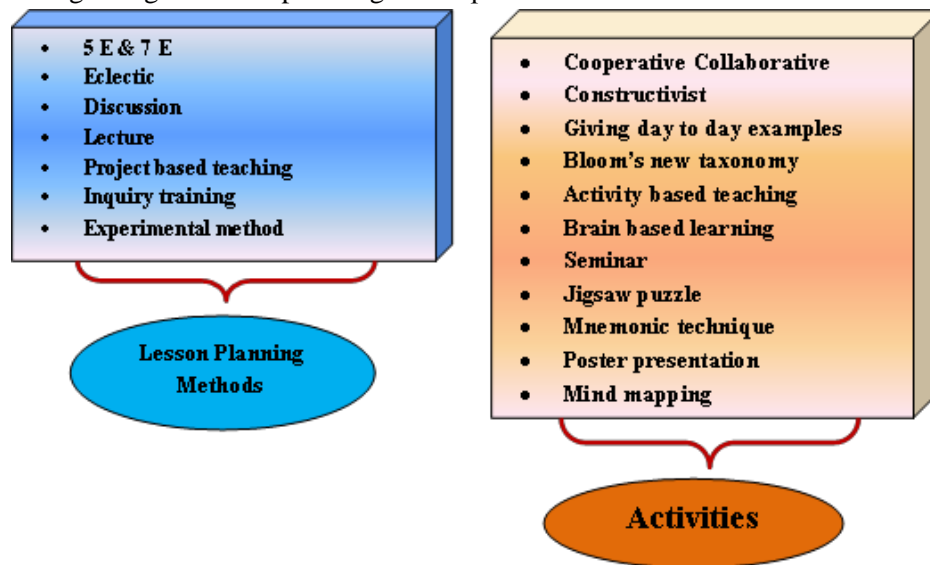
The computed value of  $\chi^2$ , 181.01 was quite larger than the critical value 29.141 which is taken as quite significant at 0.01 level. Hence, the null hypothesis i.e. there no significant difference in the practices of the teacher educators with respect to multiple intelligences when they are teaching in classroom is rejected and research hypothesis i.e. there is a difference in the practices of the teacher educators regarding the intelligences when they are teaching in the classroom is accepted.

**Qualitative Data Analysis:** Figures below shows the axial coding of the qualitative data obtained from the questionnaire on multiple intelligences.



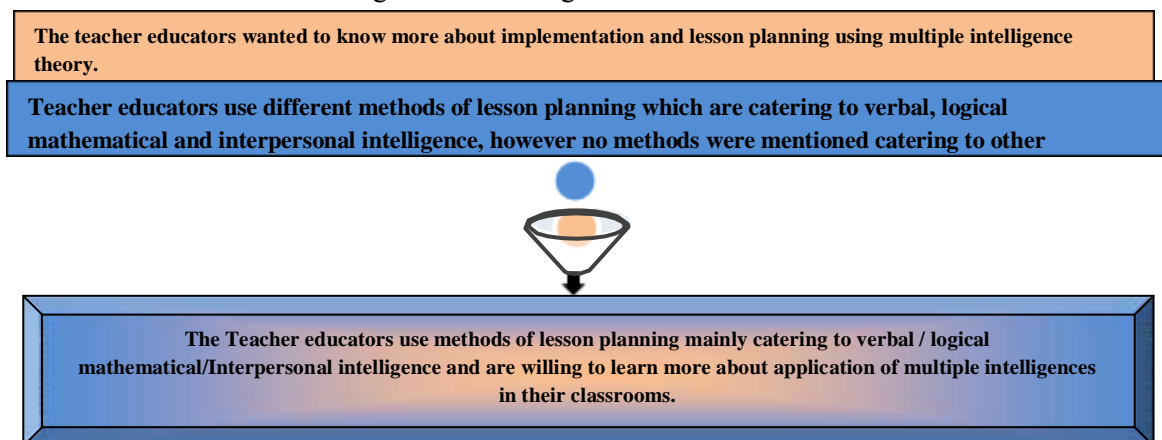
**Figure 2: Responses of teacher educators regarding the various aspects of multiple intelligences**

**Discussion:** The respondents have given what they would like to learn about multiple intelligences theory. The above Figure 2 shows the responses analyzed and categorized into three main categories: ‘\_Theoretical Aspects’, ‘\_Implementation Aspects’ and ‘\_Lesson planning Aspects’. Using Axial Coding the theme that arose from the responses was that ‘\_The teacher educators wanted to know more about the multiple intelligences theory and practical guidelines regarding its lesson planning and implementation’.



**Figure 3: Responses of teacher educators regarding Lesson Planning**

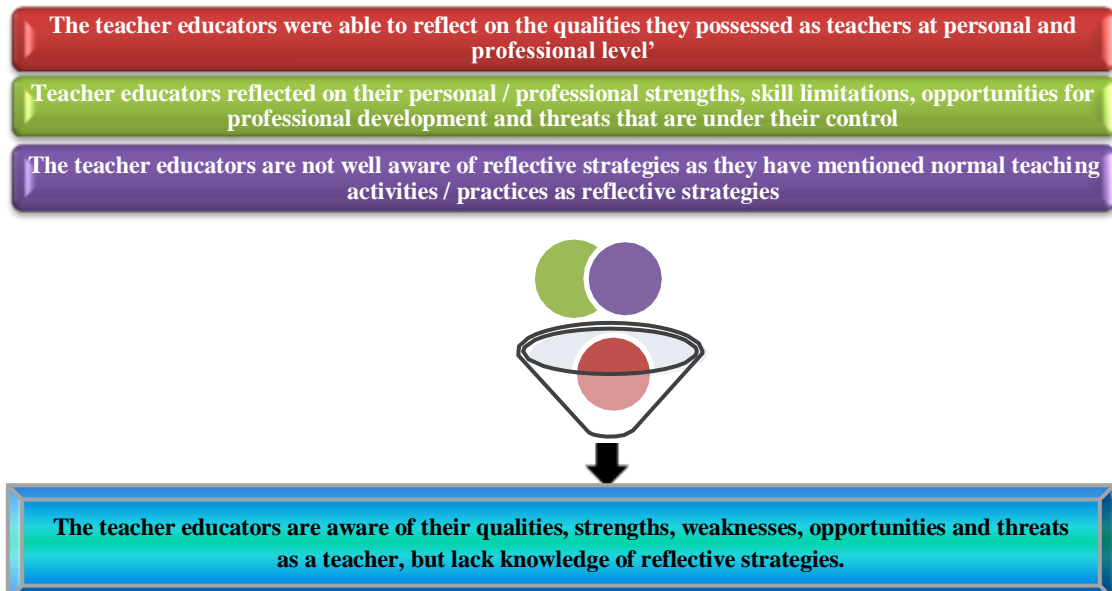
**Discussion:** The above Figure 3 shows that the respondents provided a number of lesson planning methods that they use for teaching. These strategies have been categorized into ‘\_Lesson Planning Methods’ and ‘\_Activities’. The figure above shows that the theme (using Axial coding) that the –Teacher educators use different methods of lesson planning which are catering primarily to verbal, logical mathematical and interpersonal intelligence, however no methods were mentioned catering to other intelligences’.



**Figure 4: Axial Coding’ and ‘Selective Coding’ of the qualitative data**

After analyzing the responses using the ‘axial coding’ the data was put into ‘themes’. Figure 4 shows the ‘themes’ generated and the ‘final theory’ reached by the researcher using the ‘selective coding’ phase in Grounded theory. The final theory indicates **The Teacher educators use methods of lesson planning mainly catering to verbal / logical mathematical/Interpersonal intelligence and are willing to learn more about application of multiple intelligences in their classrooms.** Their responses showed that they are bit confused between the methods, approaches and activities used in their classroom and none of them mentioned use of multiple intelligences approach to lesson planning. This confusion may be because of lack of practical use and only theoretical knowledge.

**Qualitative data Analysis using questionnaire on reflective practices:** After doing the axial coding of the responses of the teacher educators on reflective practices a theory was obtained which is shown in figure 5 given below.



**Figure 5: Axial Coding’ and ‘Selective Coding’ of the qualitative data**

After analyzing the responses using the ‘axial coding’ the data was put into ‘themes’. Figure 4.15 shows the ‘themes’ generated and the ‘final theory’ reached by the researcher using the ‘selective coding’ phase in Grounded theory. The final theory indicates the teacher educators are aware of their qualities, strengths, weaknesses, opportunities and threats as a teacher, but lack knowledge of reflective strategies.

**Major Findings for the survey: The Teacher Educators**

- ✓ Use verbal, Logical – Mathematical & Interpersonal intelligence activities in their day to day teaching. Rarely use Musical, Naturalistic, Intrapersonal, Bodily Kinesthetic and visual Intelligence.

- ✓ Use less of Herbartian steps of lesson, but are confused between lesson planning method and activities
- ✓ Never used multiple intelligences approach to teaching, but are keen on learning theoretical, implementation and planning aspects related to multiple intelligences.
- ✓ Always plan lesson before teaching and mentioned use of reflective practices, but could not list the reflective strategies. However are willing to learn more about reflective practices.
- ✓ Were able to list their qualities as a teacher and did SWOT analysis, but of personal then as a teacher.

**Conclusions:**

- ✓ Teacher educators are aware about the Multiple Intelligences, but mostly prefer using Verbal Intelligence and sometimes cater to Logical – Mathematical and Interpersonal Intelligence while conducting their sessions.
- ✓ Teacher Educators are unaware of reflective practices.

**References:**

- Agency of Healthcare Research and Quality. (2014). *Essentials of the Research Plan*. Retrieved August 26, 2014 from <http://www.ahrq.gov/funding/process/grant-app-basics/esstplan.html>
- Armstrong, T. (2010). *Multiple intelligences*. Retrieved January 4, 2014 from [http://www.thomasarmstrong.com/multiple\\_intelligences.htm](http://www.thomasarmstrong.com/multiple_intelligences.htm)
- Chaudhary (2012). *A comparative study of the effectiveness of multiple intelligences based teaching and non – multiple intelligences based teaching of some units of History for standard VI*. Unpublished PhD Thesis, SNDT Women's University, Mumbai
- Creswell, J. W. (2009). *Research Design Qualitative, Quantitative and Mixed Methods Approaches* (3rd ed.). Nebraska: Sage Publications
- Creswell, J.W. (2015). *Educational Research Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4<sup>th</sup> ed.). Pearson publishing
- Creswell, J.W. (2014). *Research Design Qualitative, Quantitative and Mixed Methods Approaches* (4<sup>th</sup> ed.). Retrieved November 19, 2015, from <https://books.google.co.in/books?hl=en&lr=&id=EbogAQAAQBAJ&oi=fnd&pg=PRI&dq=qualitative+research+creswell+2013&ots=caeSnQRyxb&sig=Lvdc4FhhLgzKznqtueexpWirE#v=onepage&q&f=false>
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Gardner, H. (2008). *Five minds for the future*. Boston, Massachusetts: Harvard Business Press.
- Hammond, N. (2007). *How can multiple intelligence theory be used to foster teacher development, support, and informed curriculum supplementation?* Unpublished thesis, Retrieved from <http://neilhammond.blogspot.in/2012/01/how-can-multiple-intelligence-theory-be.html#!/2012/01/how-can-multiple-intelligence-theory-be.html>
- Gardner. (2010). *Multiple intelligences*. Retrieved August 26, 2014 from <http://www.howardgardner.com/MI/mi.html>
- Gardner's Theory of Multiple Intelligences (n.d.). Retrieved July 7, 2015 from [http://www.niu.edu/facdev/resources/guide/learning/howard\\_gardner\\_theory\\_multiple\\_intelligences.pdf](http://www.niu.edu/facdev/resources/guide/learning/howard_gardner_theory_multiple_intelligences.pdf)
- Joyce, B., & Weil, M. (2009). *Models of teaching*, (8<sup>th</sup> Edition). New Delhi: PHI Learning Private Limited.
- Lane, C. *Multiple intelligences* (n.d.). Retrieved January 8, 2015 from <http://www.tecweb.org/styles/gardner.html>
- Mangal, S.K. (2010). *Statistics in Psychology and Education*. India: PHI learning private limited.



- National Curriculum Framework.* (2005). Retrieved from <http://www.educationforallindia.com>
- Petty, G. (2002, February 1). *25 ways for Teaching Without Talking: Presenting Students with New Material in Theory Lessons.* Retrieved January 2014 from <https://www.dkit.ie/system/files/25waysforTWT.pdf>
- Rasundram (2012). *Analytical study of the use of teaching learning activities in Geography based on multiple intelligences approach*. Unpublished M.Ed Thesis, SNDT Womens University, Mumbai
- Robin J.F., & Brian M. P.(2002). *How to differentiate learning.* USA : Corwin, A Sage company
- Roy, S.S. (2016). *Cooperative learning strategies for effective teaching to pre service teachers.* Unpublished PhD thesis, Savitribai Phule Pune University formerly the University of Pune.
- Singh, J.P. (2009). *Implementing multiple intelligences in the classroom.* *Journal Teacher Support: NCTE*, 1(2), 48-54.
- Tapkir (2007). *A study of the effectiveness of multiple intelligences approach in teaching – learning for the topic in Science in 5th Std.* Unpublished Thesis, SNDT Womens University, Mumbai
- Teacher education models* (n.d.). Retrieved June 2013 from <https://www.teachingenglish.org.uk/blogs/dario-banegas/theory-practice-language-teacher-education-part-3>
- Teddlie, C., & Yu, F. (2001). *Mixed Methods Sampling L A Typology with Examples.* *Journal of Mixed Method Research* 1 (7). Retrieved May 14, 2015 from <http://www.sagepub.com/bjohnsonstudy/articles/teddlie.pdf>
- Vartak (2007). *A comparative study of the effectiveness of multiple intelligences based teaching and non – multiple intelligences based teaching of some units of Environmental Education for standard XI.* Published PhD Thesis, SNDT Womens University, Mumbai
- Williams,R.B. (2002). *Multiple intelligences for differentiating learning: Thousand Oaks, CA: Corwin*
- Woolfolk,A., Misra,G., & Jha, A.K. (2012). *Fundamentals of Educational Psychology* (11 th ed.).Pearson:India.
- Xie, J. C. & Lin, R.L. (2009). *Research on multiple intelligences teaching and assessment.* *Asian journal of management and humanity sciences*, 4(2-3),106 – 124.Retrieved from [http://www.asia.edu.tw/ajmhs/vol\\_4\\_2and3/3.pdf](http://www.asia.edu.tw/ajmhs/vol_4_2and3/3.pdf)

## STRESS MANAGEMENT: MANIFESTATION OF INNER AND GLOBAL PEACE

Dr. Helen Jadhav, Pushpanjali College of Education, helennjadhav@yahoo.co.in

### **Abstract**

*“Each one has to find his peace from within. And peace to be real must be unaffected by outside circumstances.” — Mahatma Gandhi*

*Peace of mind or inner peace is a state of mental and emotional calmness, having no unnecessary worries, fears or stress. In this state, the mind is quiet, and you experience a sense of happiness and freedom. Peace helps to promote human rights, democratic norms and value. It helps to create the feeling of love, trust, tolerance, and brotherhood among people. Inner peace is the key for global peace. Among the different factors, stress is the factor that triggers the inner peace of a person. Reasons of stress can be plenty depending upon the individual and the problems they are facing. Reducing stress can lead to inner peace. Stress Management encompasses techniques to deal with internal or external stimulus that triggers the fight-or-flight response. Keeping in view the importance of stress management skill as a key of inner and global peace the researcher had keen interest to study Stress Management skill found among adolescents in Vasai region.*

**Introduction:** Peace is a state of harmony, the absence of hostility. Peace is a civil right of every living being. Peace is the mother of civilization and war is the demon of destruction. History of civilization and development has witnessed that no community can progress if there is no peace. Literature, art, philosophy, science, industry and culture flourish only in the time of peace. A person can produce splendid work in times of peace. World political leaders and social reformers have reaffirmed peace and development and the promotion and protection of all human rights. Peace helps to promote human rights, democratic norms and value. It helps to create the feeling of love, trust, tolerance, and brotherhood among people. Development process can't go ahead without peace and harmony. Indeed it is necessary to build the culture of peace all over the world.

**Inner peace is the key for global peace:** The question of real, lasting world peace concerns human beings, so basic human feelings are also at its roots. The agitations of the mind, caused by various factors, produce repercussions in the external atmosphere, and generate social conflict. Through inner peace, genuine world peace can be achieved. In this the importance of individual responsibility is quite clear; an atmosphere of peace must first be created within ourselves, then gradually expanded to include our families, our communities, and ultimately the whole planet. *“As human beings we all want to be happy and free from misery. We have learned that the key to happiness is inner peace. The greatest obstacles to inner peace are disturbing emotions such as anger, attachment, fear and suspicion, while love and compassion and a sense of universal responsibility are the sources of peace and happiness.” – Dalai Lama* Inner peace (or peace of mind) refers to a state of being mentally and spiritually at peace, with enough knowledge and understanding to keep oneself strong in the face of discord or stress.

Being 'at peace' is considered by many to be healthy and the opposite of being stressed or anxious.

**Stress triggers a cascade of Inner and global peace:** One cannot have global peace with individuals who are boiling from the inside ready to explode. If such individuals are at the helm of affairs then not only the person explodes, but the countries and communities explode. Inner peace eventually leads to external peace. Peace of mind, serenity, and calmness are descriptions of a disposition free from the effects of stress. Hence there is dire need for a person to manage his or her stress and experience inner peace which is key step to build global peace. Stress wreaks havoc on person's emotional equilibrium, as well as his physical health. It narrows his ability to think clearly, function effectively, and enjoy life. Several stress-eliciting factors have been associated with high levels of anger and high societal levels of crime and violence. Scientists have found biological evidence that stress and aggression feed off of each other, contributing to a -cycle of violence that can be tragic. Consequently this demands rigorous drilling in Stress Management Skill.

**Stress Management and Peace:** Stress Management can be defined as interventions designed to reduce the impact of stressors in the life. Stress Management encompasses wide spectrum of techniques and psychotherapies intended to equip a person with effective coping mechanisms for dealing with psychological stress, with stress defined as a person's physiological response to an internal or external stimulus that triggers the fight-or-flight response. Stress Management anticipates crises and helps one to deal with the same when they emerge. Healthy Stress Management includes being patient, thinking about things objectively, and finding solutions, relaxing and taking time to one's self. Reducing stress can lead to inner peace. Bad Stress Management includes temper tantrums, being destructive, being impatient, lashing out at people and avoiding responsibilities. Teaching adolescent good Stress Management right from the start proves beneficial in social situations, school situations and family situations. Keeping in view the importance of stress management skill as a key of inner and global peace the researcher had keen interest to study Stress Management skill found among adolescents in vasai region. Also to compare the Stress Management Skills found among secondary school students when classified based on gender and medium of instruction. Suggest strategies to develop Stress Management Skills.

**Objectives of the study:**

The study is undertaken with the aim to study the Stress Management skill found among secondary students.

The following are the specific objectives:

1. To compare the Stress Management skill found among secondary school students when classified based on medium of instruction.

2. To compare the Stress Management skill found among secondary school students when classified based on gender.

**Hypotheses of the study:**

The objectives stated above helped the researcher to formulate the major hypothesis of study. These are presented here in the form of null hypothesis:

1: There is no significant difference in the Stress Management Skill found among secondary school students when classified based on medium of instruction.

2: There is no significant difference in the Stress Management Skill found among secondary school students when classified based on gender.

**Methodology of the study:** Researcher used Survey Method for the study.

**Tool:** Researcher had prepared five point rating scales to get the relevant information about stress management skill found among secondary school students.

**Sample of the Study:** In case of the present study, the population is students studying in privately managed, English and Marathi medium schools affiliated to Maharashtra State Board of Education from Virar to Vasai belt. In all there were 20 schools selected for the study; of which 10 were English mediums schools and 10 were Marathi medium schools and final sample consisted of 860 students out of which 421 were from English and 439 were from Marathi medium schools.

**Analysis of data:** The basic statistical measures calculated for the study were Mean (M), Median (Med), range and standard deviation ( $\sigma$ ). These measures were calculated for the whole sample as well as for sub groups of students based on gender and medium of instruction.

**Basic Statistics for Stress Management Skill found based on gender and medium of instruction**

Skill	Gender	N	Mean	Median	SD
SMS	Marathi medium Boys	220	30.32	31	5.27
	Marathi medium Girls	219	29.54	29	5.28
	English medium Boys	207	31.63	32	4.78
	English medium Girls	214	31.03	31	5.085

It can be seen from the above table that the difference in mean and median scores of Stress Management Skill of English medium boys, English medium girls, Marathi medium boys and Marathi medium girls do not differ much. The standard deviation scores of Stress Management Skill for all the four cases do not differ much too.

**Comparison of mean scores for SMS Found among different groups of students**

	Groups	N	Mean	t	Significant at	
					0.01 level	0.05 level
<b>a</b>	Marathi medium boys	220	30.31	2.693	S	S
	English medium boys	207	31.63			
<b>b</b>	Marathi medium boys	220	30.31	1.537	NS	NS
	Marathi medium girls	219	29.54			
<b>c</b>	English medium boys	207	31.63	1.246	NS	NS
	English medium girls	214	31.03			
<b>d</b>	English medium girls	214	31.03	2.986	S	S
	Marathi medium girls	219	29.54			

- a. It can be seen from the above table that, when mean scores are compared, value of t is higher than the critical value of t at both the levels related to Stress Management Skill between boys of both the medium. Hence it is to be regarded as quite significant and there by the null hypothesis stands rejected. Consequently it can be concluded that there exists significant difference between Stress Management Skill found among boys of both the mediums. The Stress Management Skill found among English medium boys is significantly better than Marathi medium boys 0.05 level.
- b. It can be seen from the above table that, when mean scores are compared, value of t is lower than the critical value of t at both the levels related to Stress Management Skill between Marathi medium boys and Marathi medium girls. Hence it is to be regarded as not significant and there by the null hypothesis is accepted. Consequently it can be concluded that there is no significant difference between Stress Management Skill found among Marathi medium boys and Marathi medium girls. In other words gender of Marathi medium students does not seem to contribute to the Stress Management Skill selected as samples in the study.
- c. It can be seen from the above table that, when mean scores are compared, value of t is lower than the critical value of t at both the levels related to Stress Management Skill between English medium boys and English medium girls. Hence it is to be regarded as not significant and there by the null hypothesis is accepted. Consequently it can be concluded that there is no significant difference between Stress Management Skill found among English medium boys and English medium girls. In other words gender of

English medium students does not seem to contribute to the Stress Management Skill selected as samples in the study.

- d. It can be seen from the above table that, when mean scores are compared, value of  $t$  is much higher than the critical value of  $t$  at both the levels related to Stress Management Skill between girls of both the medium. Hence it is to be regarded as quite significant and there by the null hypothesis stands rejected. Consequently it can be concluded that there exist significant difference between Stress Management Skill found among girls of both the mediums. In other words medium of girls seem to contribute to the Stress Management Skill. The Stress Management Skill found among English medium girls is significantly better than Marathi medium girls.

The computed value of Stress Management Skill shows that a significant difference exists between the different groups of secondary school students namely English medium boys, Marathi medium boys, English medium girls and Marathi medium girls.

**Discussions and Suggestions:** Stress Management Skill refers to an ability to recognize the sources of stress in our lives, its effects on us and acting in a way that will help to control our levels of stress. The study indicates that on the whole gender of students does not seem to contribute to the Stress Management Skill. Stress Management Skill found among English medium students is significantly better than Marathi medium students. But when boys were compared medium wise it was found that Stress Management Skill found among English medium boys and girls is significantly better than Marathi medium boys and girls. As revealed by the teachers of Marathi medium the researcher found that Marathi medium students have less academic stress as compared to English medium students but majority of the Marathi medium students come from families, who have hand-to-mouth existence, addicted, illiterate parents making the home environment insecure, wherein the students have to bare household responsibilities at a younger age, due to which students of Marathi medium experience stress. On the other hand, English medium students come from well-educated and financially better off families as compared to Marathi medium students. So the students are not cumbered with any other extra responsibilities than studying. Teachers from these schools have opined that self-expectations of the students to perform better coupled with parental expectations are the major causes of academic stress among English medium students. Going by the above findings we can say that Stress Management Skill have to be particularly developed among adolescent students and they have to be provided with coping strategies by parents at home and by the school in terms of professional help from a counsellor or a teacher. Many adolescents feel that their coping strategies in dealing with stress are ineffective ,this was due to the fact that most adolescents are not taught stress management and effective coping strategies and therefore rely on trial and error. Therefore, it is important to provide adolescents instruction in specific coping and stress management techniques to promote their well-being and avoid. The school setting needs to provide counseling services because adolescents spend the majority of their time, aside from with their family, in school, interacting with teachers, counselors and other

students. Teaching life skills and effective coping strategies during adolescence gives students tools to be more equipped to manage stress and life events that occur later in life which will lead to inner peace.

**References:**

*Dr. Julia Melgosa, (2010), Less Stress, Editorial Safeliz*

*Dr. K. S. Joseph (2008), Equip Yourself with Life Skills, Better Yourself Book, Mumbai.*

*Dr. Craig Hassed (2007), Stress Management Programme, Better Yourself Book, Mumbai.*

*J. P. Vaswani (2003), Freedom from Stress- New Dawn, Better Yourself Book, Mumbai.*

**Articles from Journals and Publications:**

*A. Prameela, Skill for stress Management , Edutracks, Feb 2013.*

*Chopra Vanita and Dutta Indrajeet : Relevance of Peace Education in Teacher education Programme, Edutracks, Sept 2012.*

*Optimising Positive Strengths Through Life Skills, proceedings of the 4th International Conference on Life skills Education (2012), RGNIYD and Excel India Publishers.*

*2nd international Conference on Life Skills Education, Book of abstract (2010). RGNIYD and Excel India Publishers.*

**Websites**

*Stress is more stressful for teens than adults article accessed at*

*2011 <http://www.indianexpress.com/news/stress-is-more-stressful-for-teens-than-adults/807254/#sthash.gVMrliWB.dpuf>*

*Helping Adolescents Learn to Manage Stress, from <http://www.psychologytoday.com/blog/surviving-your-childs-adolescence/200906/helping-adolescents-learn-manage-stress>*

*Stress Management, accessed from [http://peacemedicineinstitute.com/?page\\_id=47](http://peacemedicineinstitute.com/?page_id=47)*

*Stress Management, from <http://www.scribd.com/doc/62606796/Stress-Management>*

**A STUDY OF MOTIVATION OF STUDENT-TEACHERS IN RELATION TO THEIR SELF-EFFICACY ON THE BASIS OF THE TYPE OF MANAGEMENT OF THE COLLEGE**

**Dr. Cerena Aurin D'Cunha**, *Asst. Professor, St. Teresa's Institute of Education, Santacruz (W).*

Teachers play a vital role in their students' life they are the epicenter of any educational system. It is to a great extent, the teachers who decide the shape of student's life. The role teacher has to play today is very diverse and she needs to understand her contribution towards making a good individual of every student. Thus it is the responsibility of a teacher to develop her students into respectable citizens of the future world. In order to manage this, the teacher herself has to be motivated and have good level of performance, so as to put in optimum efforts in the development of her students. Each individual teacher is different from others and every teacher's performance may also differ from each other, but the question is, what are the factors responsible for the difference in individual performance? This study has concentrated on motivation which is expected to be a vital determinant of teacher performance. Motivation is the driving force by which humans achieve their goals. Motivation is said to be intrinsic or extrinsic. The researcher has studied motivation using the Vroom's expectancy theory of motivation.

**Vroom's Expectancy Theory of Motivation:** It assumes that behavior results from conscious choices among alternatives whose purpose it is to maximize pleasure and minimize pain. Together with Edward Lawler and Lyman Porter, Victor Vroom suggested that the relationship between people's behavior at work and their goals was not as simple as was first imagined by other scientists. Vroom realized that an employee's performance is based on individual's factors such as personality, skills, knowledge, experience and abilities. The theory suggests that although individuals may have different sets of goals, they can be motivated if they believe that:

- There is a positive correlation between efforts and performance,
- Favorable performance will result in a desirable reward,
- The reward will satisfy an important need,
- The desire to satisfy the need is strong enough to make the effort worthwhile.

The theory is based upon the following beliefs:

1. **Expectancy** is the belief that increased effort will lead to increased performance. Theory states that, individuals make decisions, which they believe will lead to reward or reduce the likelihood of pain.
2. **Instrumentality** is the belief that if you perform well, a valued outcome will be received. Employees will put in more effort if they believe that performing well; will lead to a desired outcome.



**3. Valence** is the importance that the individual places upon the expected outcome. It measures how much an individual wants the consequences of completing the task.

Vroom suggests that an employee's beliefs about Expectancy, Instrumentality and Valence interact psychologically to create a motivational force such that the employee acts in ways that bring pleasure and avoid pain. The motivational force for a behavior, action or task is a function of Expectancy, Instrumentality and Valence and is a product of these three perceptions.

$$MF = \text{Expectancy} \times \text{Instrumentality} \times \text{Valence}$$

Because the motivational force is the product of the three perceptions, if any one of their values is zero, the whole equation becomes zero. The theory predicts that the individual will choose to perform that activity having the strongest positive and the weakest negative force.

**Concept of Self-Efficacy:** Self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. Such beliefs produce these diverse effects through four major processes. They include cognitive, motivational, affective and selection processes.

**Affective Processes:** Processes regulating emotional states and elicitation of emotional reactions.

**Cognitive Processes:** Thinking processes involved in the acquisition, organization and use of information.

**Motivation:** Activation to action. Level of motivation is reflected in choice of courses of action, and in the intensity and persistence of effort.

**Self-Regulation:** Exercise of influence over one's own motivation, thought processes, emotional states and patterns of behavior.

A strong sense of efficacy enhances human accomplishment and personal well-being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. They set themselves challenging goals and maintain strong commitment to them. They approach threatening situations with assurance that they can exercise control over them. Such an efficacious outlook produces personal accomplishments, reduces stress and lowers vulnerability to depression.

#### **Statement of the Problem**

‘A Study of Motivation of Student-Teachers in Relation to their Self-Efficacy on the basis of the type of management of college’

#### **Objectives of the Study**

1. To ascertain the difference in the following variables on the basis of type of management of college (private-aided and private-unaided)
  - a. Self-efficacy
  - b. Total Motivation

2. To compare the relationship of self-efficacy with total motivation measured in terms of (a) Expectancy, (b) Instrumentality and (c) Valence on the basis of type of management of college.
  - i. Private-aided
  - ii. Private-unaided.

**Design of the Study:** The present study is a descriptive research of correlational and causal-comparative type. It compares Motivation and Self-Efficacy on the basis of the type of management of the college of student-teachers. Therefore the study is of causal-comparative type. The study also finds the relationship of Self-Efficacy and motivation. Thus it is termed as a correlational study.

**Sample: Its Size and Nature:** Since the researcher wanted to study the relationship of Self-Efficacy of student-teachers with Motivation on the basis of their college types viz. aided/unaided and gender, the researcher made use of three-stage sampling technique in order get a high degree of representation and accuracy of results. The final sample size was 520 student-teachers. The sample consisted of 225 and 295 student-teachers from private-aided and private-unaided colleges. There were 46 male and 474 female teachers in the sample.

**Tools Used in the Present Study :**

- 1) Motivation Scale (Dias 2010)
- 2) Self-Efficacy Scale (Woolfolk & Hoy, 1990)

**Scope and Delimitations of the Study :** The present study focuses on assessing separately the Self-Efficacy and motivation of student-teachers of B.Ed. colleges of Mumbai University in relation to the type of institution i.e. aided or unaided. The study also seeks to relate the Self-Efficacy of the student-teachers of B.Ed. colleges of Mumbai University to their motivation. The study only uses Vroom's Theory of Motivation and no other motivation theories. Self-efficacy is studied only in the case of student-teachers and not in case of teachers, principals, students, etc.

**Findings of the Study:**

1. The first null hypothesis states that there is no significant difference on the basis of type of management of college in (1) Self Efficacy and (2) Total Motivation measured in terms of (a) Expectancy, (b) Instrumentality and (c) Valence.

This null hypothesis was tested using the t-test.

**Table 1: Relevant Statistics Of Tm And Se On The Basis Of Type Of Management Of College.**

Variable	Group	N	Mean	SED	t	l.o.s	100 <sup>2</sup> estimate
TM	Private-Aided	225	441.08	27.41	0.874	N.S.*	-
	Private-Unaided	295	417.12				
E	Private-Aided	225	127.03	8.413	6.372	0.01	7.076

	Private-Unaided	295	73.39				
<b>I</b>	Private-Aided	225	92.85	2.674	6.813	0.01	8.032
	Private-Unaided	295	74.63				
<b>V</b>	Private-Aided	225	72.93	1.027	1.130	NS*	-
	Private-Unaided	295	74.09				
<b>SE</b>	Private-Aided	225	62	0.433	3.171	0.01	1.712
	Private-Unaided	295	60.63				

\*NS means the value of r is not significant

- a. The obtained t-ratio for differences on the basis of type of management in total motivation of student-teachers is 0.874 which is not significant at 0.05 level for 518 degrees of freedom. Hence the null hypothesis was accepted.
- b. The obtained t-ratios for differences on the basis of type of management in expectancy and instrumentality of student-teachers are 6.372 and 6.813 which are significant at 0.01 level for 518 degrees of freedom. Hence the null hypothesis was rejected. The  $\omega^2$  estimate obtained are 0.0707 and 0.0803 respectively. Thus, the effect size of type of management on expectancy and instrumentality is medium.
- c. The obtained t-ratio for differences on the basis of type of management in valence of student-teachers is 1.130 which is not significant at 0.05 level for 518 degrees of freedom. Hence the null hypothesis was accepted.
- d. The t-ratio for differences on the basis of type of management in self-efficacy of student-teachers is 3.171 which is significant at 0.01 level. Hence the null hypothesis was rejected. The  $\omega^2$  estimate obtained is 0.0171. Thus, the effect size of type of management on self-efficacy is small.

2) The second null hypothesis states that there is no significant relationship of self-efficacy with total motivation measured in terms of (a) Expectancy, (b) Instrumentality and (c) Valence on the basis of type of management of college.

- i. Private-aided
- ii. Private-unaided.

This null hypothesis was tested using the Pearson's coefficient of correlation.

**Table 2: Relevant Statistics Of Relationship Between Tm And Se**

Variable	Group	df	r	l.o.s	100 r <sup>2</sup>
<b>TM &amp; SE</b>	Private-aided	223	0.5869	0.01	34.45%
	Private-unaided	293	0.3027	0.01	9.16%
	Total Sample	518	0.4467	0.01	19.95%
<b>E &amp; SE</b>	Private-aided	223	- 0.0744	NS	-
	Private-unaided	293	0.1328	0.05	1.76%

	Total Sample	518	0.4565	0.01	20.83%
<b>I &amp; SE</b>	Private-aided	223	-0.0863	NS	-
	Private-unaided	293	0.1431	0.05	2.05%
	Total Sample	518	0.0158	NS	-
<b>V &amp; SE</b>	Private-aided	223	0.3648	0.01	13.30%
	Private-unaided	293	0.0789	NS	-
	Total Sample	518	0.2159	0.01	4.66%

- a. There is a significant relationship between self-efficacy and total motivation in case of private-aided colleges. 34.45% variance in total motivation is associated with self-efficacy of student-teachers of private-aided colleges. There is no significant relationship between self-efficacy and expectancy and instrumentality in case of student-teachers of private-aided colleges. There is a significant relationship between self-efficacy and valence in case of student-teachers of private-aided colleges.
- b. There is a significant relationship between self-efficacy and total motivation in case of private-unaided colleges. 9.16% variance in total motivation is associated with self-efficacy of student-teachers of private-unaided colleges. There is a significant relationship between self-efficacy and expectancy and instrumentality of student-teachers of private-unaided colleges. 1.76% and 2.05% variance in expectancy and instrumentality respectively is associated with self-efficacy in case of student-teachers of private-unaided colleges.
- c. There is a significant relationship between self-efficacy and total motivation in case of total sample of student-teachers. 19.95% variance in total motivation is associated with self-efficacy of total sample of student-teachers. There is a significant relationship between self-efficacy and expectancy and valence of total sample of student-teachers. 20.83% variance in expectancy is associated with self-efficacy and 46.61% variance in valence is associated with self-efficacy. There is no significant relationship between self-efficacy and instrumentality of total sample of student-teachers.

**Discussion**

- 1) The findings show that there is no significant difference on the basis of the type of management of college in the total motivation of student-teachers. This might be because the management either of private-aided or private-unaided colleges may not significantly interfere with the teaching-learning activities of student-teachers. Also, the management of the colleges may not be overtly contributing to the total motivation of student-teachers as it is not in direct contact with the student-teachers. The findings show that there is a significant difference on the basis of the type of management of college in the expectancy and instrumentality of student-teachers. This may be because private-aided colleges get government aid to organize workshops, seminars, trainings etc which improve the level of confidence and belief in their performance. They also might be organizing certificate courses etc which ensure the student-teachers of reward. Also, private-aided colleges give more salary and thus attract better teachers, their fees are relatively low, they conduct all the teacher education related activities with sincerity and hence student-teachers have high

expectancy. There is no significant difference in the valence of student-teachers on the basis of type of management. This might be because valence is the emotional orientations held by the individual with respect to the outcomes of their performance and thus, student's expectations for their grades/marks obtained due to their performance is dependent on evaluation by teachers and other examiners.

- 2) The findings show that the relationship between total motivation and self-efficacy of student-teachers of private-aided colleges, private-unaided colleges and total sample of student-teachers is significant. This may be because the student-teachers from both the types of management of colleges must be motivating themselves to successfully execute a particular task, which also improves their belief in their abilities. The findings also show that the relationship between expectancy and self-efficacy of student-teachers is significant for private-unaided colleges and total sample of student-teachers, but not significant for private-aided college student-teachers. This may be because the student-teachers from private-aided colleges may not feel that their expectations and levels of confidence about doing a particular task are dependent on their abilities to perform a task. Whereas student-teachers from private-unaided colleges and total sample of student-teachers might believe it. Also, the relationship between valence and self-efficacy is significant for private-aided colleges and total sample of student-teachers, whereas it is not significant for private-unaided colleges. This might be because the student-teachers from private-aided colleges and total sample of student-teachers may feel that they would get new interesting assignments, recognition etc if they believe in their abilities to perform a specific task. Also, greater their belief in their abilities, they would have greater satisfaction from validating their own skills and abilities and also have satisfaction by positively influencing and helping others due to good performance.

### **Bibliography**

- Baron R.A. 'Psychology'. (5<sup>th</sup> Ed.), New Delhi: Printice Hall of India Pvt Ltd. 2001.
- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York: Longman.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H.Freeman.
- Garret, H.E: *Statistics in Psychology and Education*, New York : Longman, Green and Co. 1958
- Deci, E.L. & Ryan, R. M. (1987). *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Plenum Press
- Koul L., 'Methodology Of Educational Research' (2<sup>nd</sup> Ed), New Delhi : Vikas Publishing House Pvt.Ltd.1988.
- Expectancy theory. (2012). In Wikipedia, *The Free Encyclopedia*. Retrieved October 22, 2012, from [http://en.wikipedia.org/wiki/Expectancy\\_theory](http://en.wikipedia.org/wiki/Expectancy_theory)
- Motivate Your Team by Linking Effort with Outcome. (2011). In *Expectancy Theory*. Retrieved August 24, 2012, from <http://www.slideshare.net/Shanileo/expectancy-theory-10342195>

## ALTERING THE LANDSCAPE OF EDUCATION 3.0 THROUGH MASSIVE OPEN ONLINE COURSES

**Dr Agnes D'Costa**, Associate Professor, Pushpanjali College of Education, Vasai

### **Abstract**

*Massive Open Online Courses (MOOCs) have ushered in a revolution in the field of education. Since knowledge is distributed over a network of connections, it is necessary to support learning that builds the ability to construct and traverse across such networks. MOOCs help to promote connected and collaborative learning. This paper elucidates the author's experiences in creating and using MOOCs to augment traditional classroom experiences. The experiment was conducted on First Year B.Ed students. Two MOOCs were designed and deployed using the platform Eliademy. Specially created e-content spanning different media, links to web resources, integration of online discussion and submission of tasks were integral aspects of the courses. Students' opinion was solicited and analysed. It was found that MOOCs support classroom learning. Participants view the web as the curriculum and identify their own learning resources. Open access to information promotes critical thinking. Sharing of views and access to multiple views helps to gain comprehensive understanding of the content. The MOOC learner is provided with an active choice, has strong sense of ownership of process and becomes a co-creator of resources. MOOCs thus have great potential to shape the landscape of Education 3.0.*

**Introduction:** The advent of the web has revolutionised access to information and has impacted personal learning opportunities outside the realm of formal education. Web 1.0 and Web 2.0 have changed the landscape of education leading us from the pre-web traditional three Rs (reading, writing, arithmetic) to the three Cs (communicating, connecting and collaborating). The 21<sup>st</sup> century has brought us to Education 3.0 which emphasizes the role of learners as connectors, creators and constructivists. Many platforms offer myriad of opportunities for Communicating, Connecting, Collaborating and Creating. Towards the end of last decade, with the first Massive Open Online Course (MOOC) being launched in 2008, there emerged a new avenue to promote Education 3.0. The New York Times dubbed 2012 as the year of MOOCs as top MOOC providers such as Udacity, Coursera and edX got support from well financed providers. Universities began creating MOOCs in partnership with external providers. Many nonprofit organizations like the Bill and Melinda Gates Foundation, Khan Academy and Universities like Harvard, MIT and Stanford along with investors like Google entered into MOOC creation. In India, SWAYAM (Study web of active and young Minds) has launched several courses that will benefit learners as well as faculty. The UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016<sup>1</sup> promotes use of MOOCs in case of non availability of teaching staff. Credit mobility permits that credits accrued through such courses be considered for degrees.

**MOOCs and Education 3.0:** This research paper attempts to look at how the landscape of Education 3.0 is influenced by MOOCs. Before elucidating the actual research, it is necessary to present a conceptual background of important concepts being investigated.

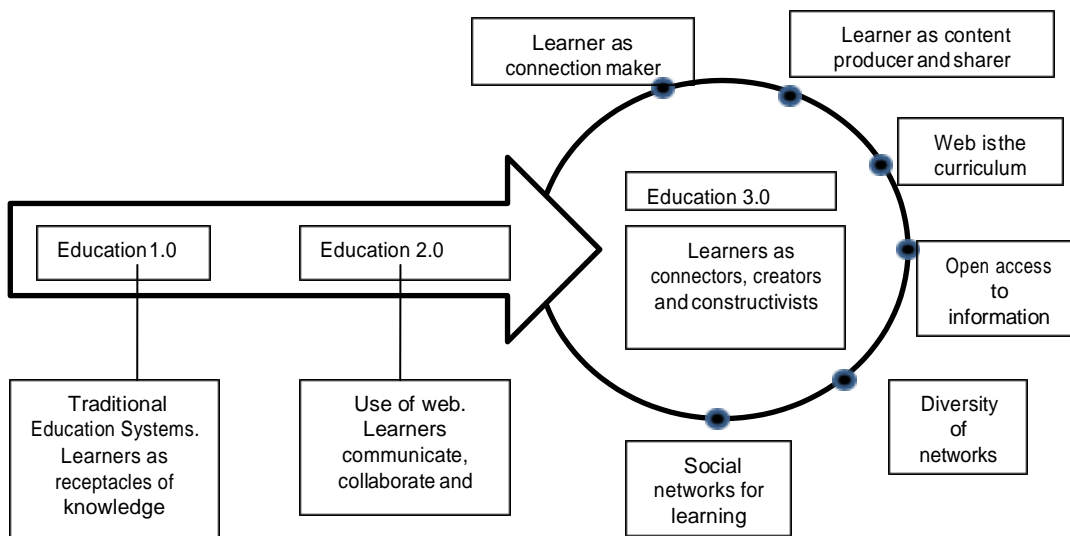
**Massive Open Online Courses (MOOCs)** are freely accessible and open licensed short courses delivered to cohorts of learners through online mode. MOOCs are classified in two types.<sup>2</sup>

(i) x- MOOCs or the traditional MOOCs that use behavioristic approach following ‘drill and grill’ instructional methods.

(ii) c-MOOCs or connectivist MOOCs which believe that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks. Such MOOCs promote connected, collaborative learning.

The MOOCs deployed for this research are of the connectivist type.

**Education 3.0:** According to Jeff Borden<sup>3</sup>, Education 3.0 entails a confluence of neuroscience, cognitive psychology and educational technology. This uses web based digital and mobile technology including apps. Education 3.0 encourages customisation and personalisation such that education content meets the specific educational needs of individual learners. The flow towards Education 3.0 along with its characteristics is depicted in the graphic below.



As depicted by the diagram above, Education 3.0 is contextually relevant. Co-constructivism is given importance as diversity of networks helps to connect learners. Learners are viewed as co workers or entrepreneurs in the learning process. Learning environments are ubiquitous and learners are encouraged to learn through their own online and offline experiences. Authentic, relevant and engaging learning experiences are encouraged. ‘Flow’ which is a state of student engagement is a key feature of Education 3.0. Critical and reflective thinking is inbuilt. High road transfer of learning is encouraged. Technology provides transformative ways for the learner to learn extending learning beyond the classroom. Education 1.0 was the age of authority characterized by reading, receiving and responding. Education 2.0 was the age of

engagement involving communicating and collaborating. Education 3.0 is the age of connecting and co creating with emphasis on self directed learning. In this research, the researcher has tried to look at how such self directed learning can be infused through MOOCs. The title of the research is ‘\_Investigating the potential of MOOCs in Education 3.0’. The objective of the research is to study the extent to which MOOCs support the features of Education 3.0.

### **Research Questions**

Research questions offer a base for investigating an issue or a problem. In the case of this research the main research questions which guided the study are:

- i. How do MOOCs reflect the features of Education 3.0?
- ii. How can MOOCs be used to alter the landscape of Teacher Education?

**Methodology:** Once the research questions were identified, the researcher created the first MOOC and deployed the same for a group of students. Experiences garnered during this MOOC were used to identify potential obstacles in deploying of MOOCs. The next MOOC was created and deployed five months later for the same batch of students. The methodology of study is described briefly below.

- **Type of Research:** The research is basically a phenomenological study. The goal of qualitative phenomenological research is to describe a ‘\_lived experience’ of a phenomenon.<sup>4</sup> A phenomenological study is designed to describe and interpret an experience by determining the meaning of the experience as perceived by the people who have participated in it.
- **Sample:** The sample consisted of 28 students of First Year B.Ed from one selected college. Fifty students were invited to participate in the course. 40 enrolled and 28 completed the course with adequate participation. The analysis of the experiences and views of only these participants is taken into account.
- **Tools:** In phenomenological studies, tools have to be designed so that the participants lived experience is analysed. In this study, a rating scale, an observation schedule and unstructured interview were the tools used. The rating scale was administered online to find their views regarding use of MOOCs. Oral interviews were conducted to find the obstacles faced. Spontaneous sharing of experiences was also taken into account. The online presence was analysed through user statistics data available for each learner. Thus triangulation of data was implemented.

**Findings:** The researcher has focused on the qualitative aspects of the phenomenon being studied. Some findings of the study are listed below:

1. 26 participants(96.5%) found the MOOC experience extremely interesting while 2 participants(3.5%) found it to be an interesting experience. None of the participants termed it as uninteresting. 71.4% said that MOOCs helped them to learn in a self



directed manner. 75% reported that they used web resources beyond what was the MOOC contained. 78.5 % said that they applied what they learned in practical situation.

2. As part of the MOOC on ‘\_Understanding Learners with Special Needs’, participants were expected to interview teachers and find out how they handle such learners in an inclusive classroom. All participants shared the experiences of teachers they interviewed. Thus the participants got insights into practices adopted by 28 teachers who came from varied backgrounds. The participants expressed that reading through these narratives was very enriching.
3. Participants had to respond to discussions on the forum. Discussion forums allowed participants to bounce ideas around and discuss learning together and one-on-one interaction and easy back-and-forth questioning. 16 out of 28 (57%) participants were very active expressing their views on at least three other posts.
4. Analytics obtained from the MOOC site provider showed that the number of views ranged from 3 to 72. This means some learners covered the entire content in 3 views. The maximum views were 72. The average number of views to cover the course was around 16. Analytics also showed that some content was viewed to a lesser extent than other content.
5. Spontaneous sharing about the MOOC experience revealed that instead of text that tended to ‘\_explain content’, students preferred to learn through reading online books, viewing videos and presentations.

**Discussion:** Phenomenology is based on the assumption that shared experience has an essence to it. These essences are the core meanings mutually understood through a phenomenon commonly experienced. Simple units of direct experiences can help to understand the complexity of a phenomenon. The discussion that follows is the researcher’s attempt to see how MOOCs support Education 3.0.

- **Learners as connectors:** Learning is all about making connections. It involves embedding new knowledge in a pre-existing structure. It involves modifying our previous cognitive structures. The online discussion of the participants had instances where the learners’ connections were evident. This MOOC was undertaken when the participants were in a four week internship in schools. Learning through various web material, discussion with the mentor and reflection on the sharing of inservice teachers helped participants to identify differently abled students in schools. They tried to connect what they had learned in theory (through the MOOC) to what they were observing during internship. Participants adopted some practices suggested by the teachers they had interviewed. Thus the theory-practicum connect was very evident.
- **Learners as creators and constructivists:** Education 3.0 emphasizes the role of the learner as a producer and sharer. Participants in the study showed evidence of being

creators by devising/ identifying and implementing different strategies to handle differently abled learners. They shared these strategies with peer participants. The constructivist role of the learner was evident as participants used their learning to design strategies that promoted differentiated learning. Such strategies were implemented during the lessons delivered during internship period. Another interesting aspect was that content learned through the MOOC was used for positive class management.

- **Web as curriculum:** Learning is not bound by space and time. The internet is an integral thread of the fabric of learning. Learning is facilitated by varied online activities. Peer to peer and peer to mentor interactions can be carried out in an asynchronous mode. Participants did not just rely on the resources provided by the researcher-mentor. They went beyond these resources and identified resources that suited their own individual styles. Discussion, debate, dissent and dialogue were seen to augment what the learner learned.
- **'Flow' as a state of student engagement:** Flow in learning<sup>5</sup> is when the learner is completely involved, experiences a sense of inner satisfaction and is so engrossed in the learning that he or she does not notice time passing. Many participants expressed this feeling while engaging in the learning activities incorporated in the MOOC. This occurs when the instructional challenge is high and skills are also high. If there is low challenge and low skills, apathy towards learning sets in. High challenge and low skills may cause anxiety. Low challenge and high skills leads to boredom. Flow represents a situation of high challenge and high skills. If higher education relies on face to face lectures alone, then students may not have adequate challenge in learning. Hence MOOCs need to be designed with suitably high level of challenge and learners need to be supported with skills that will facilitate self directed learning, problem solving and procuring of right resources. A state of flow in learning is indicative of immersion in learning.

**Conclusion:** The journey from Education 1.0 to Education 2.0 to Education 3.0 is a transition from the transmitting web to the social web to the semantic web. It is not technology that has changed but it is the way technology is being used that has changed. Gilly Salmon<sup>6</sup> opines Education 3.0 will be characterized by rich, cross-institutional, cross-cultural educational opportunities within which the learners themselves play a key role as creators of knowledge artefacts that are shared and where social networking and social benefits outside the immediate scope of activity play a strong role. The distinction between artefacts, people and process becomes blurred and many boundaries start to break down.<sup>6</sup> In such a situation knowledge will be contextual knowledge which will be application and reapplication of what is learned. The educational culture calls for a major change where learners are given challenging learning tasks, encouraged to employ varied learning strategies so that they explore new terrains and contribute to the knowledge corpus with their experiences. Such learning is possible through

MOOCs. Higher Education must therefore look upon MOOCs as capacity building educational experiences offering a platform for student entrepreneurship.

**References:**

- UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016.*  
*The Gazette of India, published 20 July, 2016*
- Lugton, M. (2012). *xMOOCs and cMOOCs. In Reflections.* Retrieved from <http://reflectionsandcontemplations.wordpress.com/2012/08/23/what-is-a-mooc-what-are-the-different-types-of-mooc-xmoocs-and-cmoocs/>
- Dr. Jeff Borden. **Education 3.0: Embracing Technology to 'Jump the Curve'**. Wired Magazine. Retrieved August 2017.
- Waters Janet (2017) **Phenomenological Research Guidelines.** Retrieved from <https://www.capilanou.ca/psychology/student-resources/research-guidelines/Phenomenological-Research-Guidelines/> in August 2017
- Schmidt J.A. (2010) **Flow in Education.** Retrieved from [http://www.niu.edu/eteams/pdf\\_s/CHALLENGE\\_FlowEducation.pdf](http://www.niu.edu/eteams/pdf_s/CHALLENGE_FlowEducation.pdf)
- Salmon Gilly (2016) **Higher Education 1.0 to 3.0 and Beyond.**

## मराठी बालभारती इयत्ता सातवीच्या पाठ्यापुस्तकाच्या गुणवैशिष्ट्यांचा अभ्यास

; 'जनकल विभितंबजमतपेजपबे पद डंतंजीप टंसईंतजप'जकण टप्पी जमगजइववाद्द

डॉ. बी.जी. खाते, (सहयोगी प्राध्यापक)

शासकीय अध्यापक महाविद्यालय, मुंबई-1.

डवइरू. 9833987546 ;ईतंतुनीकम65 / हउंपसणवउद्द

### पतावना-

मानवसमाजनिर्मित संकेतबद्ध ध्वनिस्वरचनेची संपषण पद्धती म्हणजे भाषा होय. भाषा आणि मानवीजीवन यांचा अन्वयसंबंध आहे. भाषेकडे माणस एक दुसऱ्याच्या जवळ येतात. त्यांच्यात सुसंवाद पत्थापित होतात. भाषेकडे मुख्यतः आपल्या मनातील भाव-भावना, विचार, कल्पना पकटन करता येतात. माणसाचा एकंदर दैनंदिन व संपूर्ण जीवनव्यवहार सुकर आणि सुलभ होण्यासाठी भाषा ही महत्त्वाची भूमिका बजावत असत. भाषेचे मानवी जीवनात अनन्यसाधारण महत्त्व आहे. शालेय विद्यार्थी जीवनात हे महत्त्व अधोखित करण्यासारखे असते, याचा विचार करून भाषा विषयाचा अभ्यासक्रमात महत्त्वाचे स्थान देण्यात आले आहे.

महाराष्ट्र राज्याची स्थापना 1 मे 1960 रोजी झाली. भाषावार पत्रचनेनुसार महाराष्ट्र हे मराठी भाषकांचे राज्य झाले. मराठी ही राज्यकारभाराची भाषा ठरली. मराठी भाषा, साहित्य, कला आणि संस्कृती यांच्या संरक्षणासाठी जाणीवपूर्वक व योजनाबद्ध महत्त्वाच्या संस्थांची निर्मिती करण्यात आली. भाषा संचालनालय, भाषा सल्लागार मंडळ, साहित्य संस्कृती मंडळ, मराठी विश्वकोश मंडळ, या संस्थांद्वारे मराठी भाषा संरक्षणासाठी महाराष्ट्र शासन स्तरावरून पयलं केलं गेलं. त्याचबरोबर महाराष्ट्र राज्य पाठ्यापुस्तक निर्मिती व अभ्यासक्रम संशोधन मंडळ, पणजे यांच्याकडूनही महत्त्वाचे पयलं केलं गेलं व केलं जातं आहेत, त्याचाच एक अत्यंत महत्त्वाचा भाग म्हणजे शालेय स्तरावरील विविध इयत्तांसाठी निमाणे करण्यात आलेली पत्रम भाषा मराठीची पाठ्यापुस्तके होय.

महाराष्ट्र राज्य पाठ्यापुस्तक निर्मिती व अभ्यासक्रम संशोधन मंडळ, पणजे यांनी मराठी बालभारती इयत्ता सातवी हे पत्रम भाषा मराठीचे पाठ्यापुस्तक निमाणे केलं व शासन निर्णय क्रमांक अभ्यास-2116/(प.क्र. 43/16) एसडी-4 दिनांक 25/4/2016 अन्वये स्थापन करण्यात आलेल्या समन्वय समितीच्या दि. 3/3/2017 रोजीच्या बैठकीमध्ये हे पाठ्यापुस्तक निर्धारित करण्यास मान्यता देण्यात आली. 2017 मध्ये प्रस्तुत पाठ्यापुस्तकाच्या प्रभावकारिताची पती विनामूल्य शालेय विद्यार्थ्यांसाठी वितरीत करण्यात आल्या. मराठी भाषेचा अभ्यासक व शिक्षक-प्रशिक्षक या नात्याने प्रस्तुत पाठ्यापुस्तकाचा विश्लेषणात्मक अभ्यास करून पाठ्यापुस्तकाच्या गुणवैशिष्ट्यांचा शोध घेण्यात आला आहे.

\* संशोधन समस्याविधान :

‘मराठी बालभारती इयत्ता सातवीच्या पाठ्यापुस्तकाचा विश्लेषणात्मक अभ्यास करून पाठ्यापुस्तकाच्या गुणवैशिष्ट्यांचा शोध घेणे.

**\* संशोधनाची उद्दिष्ट :**

- 1) मराठी बालभारती इयत्ता सातवीच्या पाठ्यापुस्तकातील पाठवंचे (वेच्यांचे) आशय विश्लेषण करणे.
- 2) मराठी बालभारती इयत्ता सातवीच्या पाठ्यापुस्तकातील नवनिर्मितीच्या आनंदासाठी देण्यात आलेल्या कृतींचे विश्लेषण करणे.
- 3) मराठी बालभारती इयत्ता सातवीच्या पाठ्यापुस्तकाच्या गुणवैशिष्ट्यांचा शोध घेणे.

**\* संशोधनाची व्याप्ती व मर्यादा :**

- 1) प्राप्त अभ्यासक्रम महाराष्ट्र राज्य पाठ्यापुस्तक निमिती व अभ्यासक्रम संशोधन मंडळ, पुणे पत्रिका 2017 ‘मराठी बालभारती इयत्ता सातवी’ ह्या पाठ्यापुस्तका पुरताच मर्यादित आहे.
- 2) प्राप्त अभ्यास पाठ्यापुस्तकाचे आशय विश्लेषण व नवनिर्मितीच्या आनंदासाठी दिलेल्या कृतींचे विश्लेषण आणि पाठ्यापुस्तकाच्या गुणवैशिष्ट्यांपुरताच मर्यादित आहे.
- 3) प्राप्त अभ्यासाला संशोधक अभ्यासकाच्या मर्यादा आहेत.

प्राप्त अभ्यास पत्रम भाषा मराठीच्या विद्यार्थी, शिक्षक, शाळा व अध्यापक विद्यालय व महाविद्यालय यांना उपयुक्त ठरेल.

**□ संशोधन पद्धती :**

प्राप्त संशोधनात ‘मराठी बालभारती इयत्ता सातवी’ पाठ्यापुस्तकाचा ‘आशय विश्लेषण पद्धतीन’ जमगज इववा दसलेपेढ अभ्यास केला आहे. सदर पाठ्यापुस्तक पलेख (दस्तावेज) साधन म्हणून वापरले आहे. निरीक्षण, वाचन व अध्ययन करून माहितीचे विश्लेषण पुढीलप्रमाणे केले आहे.

5

**□ पाठ्यापुस्तकाची ठळक गुणवैशिष्ट्या (संशोधनाचे निष्कर्ष) :**

प्राप्त पाठ्यापुस्तकाचा विश्लेषणात्मक अभ्यास केल्यानंतर पाठ्यापुस्तकाची ठळक निष्कर्षात्मक पुढील गुणवैशिष्ट्या आढळून आली.

- 1) पाठ्यापुस्तकाचे **मुखपृष्ठ बोलके आकर्षक व पत्रिकात्मक** आहे. महाराष्ट्राचे राज्य फुलपाखरू ‘लू मंरमान’ हे विद्यार्थ्यांचे पत्रिके असून मराठी भाषा पत्रकारुपी फुलांतून साहित्य व भाषेच्या मकरंदाचा स्वच्छंदी

आस्वाद घेताना दाखवलं आहे. हे फुलपाखरु चिखलावर बसूनही चिखलातून क्षार घेताना शौंकपध्दार दाखवल आहे.

- 2) पाठ्यापुस्तकाच्या अभ्यासातून विद्याथ्यांमध्ये विविध भाषाविषयक क्षमता विकसित व्हावात अशी अपेक्षा व्यक्त केली आहे. त्यासाठी पाठ्यापुस्तकात आरंभ श्रवण, भाषण-संभाषण, वाचन, लेखन, अध्ययनकौशल्य आणि भाषाभ्यास अशी सहा क्षेत्रे व प्रत्येक क्षेत्राशी निगडित किमान सहा व कमाल बारा अशा एकूण 44 क्षमतांची अपेक्षित यादी देण्यात आली आहे. पाठ्यापुस्तकाच्या अभ्यासातून विद्याथ्यांच्या ठिकाणी या क्षमता विकसित करण्याची क्षमता ह्या पाठ्यापुस्तकात आढळून येते.
- 3) पाठ्यापुस्तकात एकूण 21 पाठे व कविता स्वरूपातील वेद्यांचा समावेश असून हे वेद्ये इयत्ता सातवीच्या विद्याथ्यांकर विविध संस्कार करण्याची क्षमता असणार आहेत. त्यामध्ये महाराष्ट्राची शेरवी, मराठी भाषेचे महत्त्व, अन्नाचे महत्त्व, भुतदया, निसर्ग-पशुपक्षी निरीक्षण व पत्र, निसर्गवर्णन, पाण्याचे महत्त्व छंदी जपूक, कल्पकतेचा विकास, विनोदी कृती, निर्भय आनंदप्राप्ती, आयु्यचिंतन, जीवनाचे महत्त्व, स्वकर्तृत्व, समाजहित, काव्यपंक्ति, राष्ट्रपत्र, आदर्शपरणा, मानवतावाद अशा विविध भाषा आशयांचा व मूल्यांचा समावेश असलेला आढळून येतो.
- 4) पाठ्यापुस्तकात ललित लेख, वैचारिक पाठे, कथा, काल्पनिक कथा, काल्पनिक विज्ञानकथा, एककिका, चरित्रपर पाठे, पत्रासवर्णन, निसर्गवर्णन, गीते, निसर्गकाव्य, राष्ट्रभक्तीपर काव्य, चिंतनपर काव्य आधुनिक काव्य, प्राचीन काव्य-अभंग अशा मराठी साहित्यातील विविध वाङ्मय प्रकारांचा परिचय करून देण्यात आला आहे.
- 5) ह्या पाठ्यापुस्तकाचे महत्त्वाचे वैशिष्ट्य म्हणजे विद्याथ्यांच्या अभिरुचीचा व वयोगटाचा विचार करून त्यांच्या नवनिर्मितीच्या आनंदप्राप्तीसाठी मराठी भाषा विकासाला अनुरूप शैली कृती देण्यात आल्या आहेत. कृतिपन्नता हे या पुस्तकाचे वैशिष्ट्य आहे.
- 6) कृतींचा प्रभाव देऊन मराठी भाषा वैभवाची नवनिर्मिती करण्यासाठी व विद्याथ्यांच्या रचनेला प्रभाव देण्यासाठी या कृती उपयुक्त ठरण्याच्या आहेत. ज्ञानरचनावादी दृष्टीकोनाला महत्त्व देणारे हे पाठ्यापुस्तक आहे.
- 7) नवनिर्मितीच्या आनंदासाठी देण्यात आलेल्या वैविध्यपूर्ण कृतींची शैली लक्षवेधक, अथवाही, व बोलकी आहेत. शैली घेऊन, कल्पना करुन... अशी शैली विद्याथ्यांची उत्सुकता वाढविणारी व कायप्रत करणारी आढळून येतात.
- 8) नावीन्यपूर्ण कृतियुक्त स्वाध्याय हे या पुस्तकाचे महत्त्वपूर्ण वैशिष्ट्य आहे. स्वाध्याय आशयाभिरुची वाढविणारे आहेत. विद्याथ्यांच्या अध्ययन कौशल्याचा विकास करण्यासाठी ते उपयुक्त आहेत. आशयाचे विशिष्ट दृष्टी अध्ययन करण्यास भाग पाडणारे आहेत. ज्ञानरचनावादाला प्रोत्साहन देणाऱ्या पत्र आहेत. स्वाध्यायात मुक्त पत्रांचा प्रभाव देण्यात आल्याचे आढळून येते.
- 9) विद्याथ्यांच्या आकारिक मूल्यमापनासाठी उपयुक्त असलेल्या स्वाध्याय व कृतींचा समावेश या पाठ्यापुस्तकात दिसून येतो. पुस्तकासह परीक्षा सारख्या आकारिक मूल्यमापनाच्या साधनांचा वापर करण्यासाठी ह्या स्वाध्याय व कृती महत्त्वपूर्ण उपयुक्त ठरतील.

- 10) ह्या पाठ्यापुस्तकात भाषाभ्यासासाठी स्वतंत्र 'आपण समजून घेऊया'..... अशा शीर्षकांतर्गत मराठी व्याकरणाचा भाग देण्यात आला आहे. परिसरातील बोली भाषेकडून प्रमाण भाषेकडे जाण्यासाठी बोलीभाषा नमुन (अहिराणी व कुपारी) इतर भाषांतील मराठीत आलेले शब्द, शब्द कोरी, शुद्धलेखन नियमांचा लेखनात वापर अशा बाबींचा यथोचित समावेश करून त्याद्वारे भाषाभ्यास क्षमतांचा विकास करण्यात येईल असा ठरवणार हे पाठ्यापुस्तक असल्याचे आढळून आले.
- 11) व्यवहार उपयागी मराठी भाषेचे नमुने, मराठी भाषा विकासाला पध्दत्य, बोली भाषांना पध्दत्य व महत्त्व देणार हे पाठ्यापुस्तक आहे.
- 12) हे पाठ्यापुस्तक माहिती तंत्रज्ञानाचा पुस्तकार करणा आहे. पहिल्या पक्षावर 'व्य आर कोड' देण्यात आला आहे. स्मार्टफोनचा वापर करून पाठ्यापुस्तकाच्या अध्ययन-अध्यापनासाठी उपयुक्त लिंकस त्त्तद्ध मिळतील याच मार्गदर्शन आहे. पुस्तकात विविध स्तकतस्थळे देण्यात आली आहेत. विद्यार्थ्यांनी भाषिक माहिती मिळविण्यासाठी, त्यांची शोधक कृती विकसित करण्यासाठी अनेक कृती देण्यात आल्या आहेत. बोलीभाषांची अंतरजालाच्या सहाय्यानमाहिती मिळविण्यासाठी मार्गदर्शन केले आहे. (पृ. 14)
- 13) शिक्षकांसाठी या शीर्षकांतर्गत अध्ययन-अध्यापनासाठी सचक मार्गदर्शन करण्यात आले आहे. त्यातून अध्ययन-अध्यापन पद्धती व भाषा कशल्य विकसननाची तावे, क्लृप्त्या, तंत्र इत्यादींचा मार्गदर्शन होण्यास मदत होईल, यांत शंका नाही.
- 14) मुक्त प्रश्नांचा विशेष वापर करण्यात आला आहे. स्वाध्याय प्रश्न, नवनिर्मितीच्या कृतींचा प्रश्न, उपक्रम, यांसाठी तुम्हाला काय वाटत? तुम्हाला काय आवडत? तुम्ही काय कराल? जरा विचार करूया.... अशा विविध शीर्षकांतर्गत मुक्त प्रश्नांचा वापर करून वैचारिक विकासाला पध्दत्य देणारे हे पाठ्यापुस्तक असल्याचे आढळून आले.
- 15) प्रस्तुत पाठ्यापुस्तकातील पाठंची, स्वाध्यायांची, कृतींची उपक्रमांची, शिक्षकांसाठीची, चित्रे, आकृत्या, शीर्षक..... अशा सव आशयांची सभद्ध मंडणी दिसून येत. मुखपृष्ठापासून मलपृष्ठापर्यंत संपूर्ण पाठ्यापुस्तक आकर्षक, आशयानुकूल रंगसंगतीसह चित्रमयता असणार आढळून आले. मजकूर मंडणी, अक्षराचा आकार विद्यार्थ्यांच्या वयातचा व मानसशास्त्रीय बाबींचा विचार करून करण्यात आला असल्याचे आढळून आले.
- 16) हे पाठ्यापुस्तक शिक्षकांच्या अध्यापनापेक्षा विद्यार्थ्यांच्या अध्ययनाला अधिक पध्दत्य देणार असल्याचे आढळून आले.

इयत्ता सातवी मराठी बालभारतीच्या पाठ्याक्रमाची उद्दिष्टे साध्य होण्यासाठीच एक उत्तम साधन म्हणून हे पाठ्यापुस्तक उपयुक्त ठराव अस आढळून आले.

**कोष्टक क्र. 1 : पाठ्यापुस्तकातील पाठ व कवितांचे आशय विश्लेषण**

<b>v-Ø-</b>	<b>ikB@dforik] ys[kd@doh</b>	<b>ok³e; izdkj</b>	<b>ikB o dforikaph e;/oril dYiuk</b>
01-	<b>t; t; egkjk"V ek&gt;k&amp; jktk c&lt;</b>	xhr	1-1& egkjk"Vkph Fkksjoh l akfxryh vkg %xhr%
02-	<b>Lolu fod.kkjk ek.il&amp; v'kksd dksroky</b>	yfyr ys[k o dFkk	2-2& Lofgrkckjksjcp lektkP;k mi ;ksxh iM.kkjh o mnkRr gsnw vl.kkjh Loluh igkohr] vlk l as "k-
03-	<b>rksl.kh&amp; nRrk=; fojdj</b>	dFkk	3-9& olar o ehjk ;k Alrksl.kh dkexkjkP;k egyptaP;k eukrhy f'k{k.kkfo" k ; hph rho vks<-
04-	<b>Jko.kek l %dfork½&amp; ckydoh</b>	fulxZdfork	4-15 Jko.k efgU;krhy fulxZI "Vhp foykshkuh ; o l inj o.kZu dsy v
05-	<b>HkkalMikkaP;k nqfu;sr</b>	laoknkRed ikB vkRedFku ij ikB	5-19 HkkalMikkaP;k Lo#ikrhy chnykapk izokl ^HkkalMikkaP;k nqfu;sr* ;k ikB vkRefuosnu i) rhu laokn#ikr lkafxyryh vkg-
06-	<b>Fkksjkaph vksG[k&amp; Mll- [kku[kksts</b>	pfj=ij O;fDrifjp;	6-26 egku Økafrdkjd o "ksrdU;kafo" k ; h dGdG vl.kkjk ,d vkarj Ñf"krK Mk- [kku[kksts ; kapk ifjp;-



07-	ek>h ejkBh %dfork½ & e`.kkfyuh dkfuVdj tks'kh	vk/kqfud dfork	7-30 ejkBh Hkk"ksfo"K;hps iē] ejkBh Hkk"ksrhy *kCnkapi egUo] cksyhaps e o ejkBh Hkk"ksph Fkksjoh-
08-	xpd va/kkjh& v'kksd ekudj	dFkk %dkYifud fouksnh dFkk½	8-33 ctkjkyk fu?kkyS; k ofMykaP; k ekxs ykxysY; k eqykyk ?kckjfo.; kIkBh ,dk dkYifud tukojkph Hkhrh nk[kfo.kkU; k iZlaxkoj vk/kkfjr fouksnh o ekfeZd *kSyhrhy dFkk-
09-	ukR ; kckgsjpa ukra& lqHkk"K fdUgksGdj	yfyr ys[k	9-39 ikGysY; k Mkal; k ukokP; k dqe; kP; k LoHkkokrhy LokfeHkDrh] #ckcnkjī.kk] okx.; k rhy ,sV o R; kpk dqVckykyk ykxysy yGk bR; knh xks"Vh jkspd o os/kd iZlaxkru *kCnc) dS; k vkgsr-
10-	xisew ekgsjyk tkr %xhr½ x-fn- ekMxGdj	xhr	1-45 dksd.k] dksd.kkrhy [kkMh] rsfkhy fulxZIKin;] dksd.kkrhy lk/kh HkksGh ek.kls ; kap lqjs[k o. lū-
11-	kyh csV & iq-y- ns'kikaM	iZokl o. lū	11-49 balMksusf'k; krhy ckyh csV o rsfkhy fulxZI"Vhps u; uJE; o. lū-
12-	lyke& ueLrs! & lq/kkewrīZ	dFkk	12-55 vR; ar xjhc ifjLFkrhr vlwugh ek.kqldh] iZkekf.kdi.kk] d"VKG o'Rrh] nqlU; kaP; k nq%[kkafo"K; hph tk.kho bR; knh xq.k *ks[k egaen o R; k e'R; P; k nkjkr mHkh vlysyh cgh.k >qcsnk ; kaP; k Bk; h dl fnlu ; srk ; kp vR; ar ân; Li"kh o. lū-
13-	vuke ohjk %dfork½& dqIqekxz t	jk"V@HkDrhij dkO;	13-60& ns'kkP; k lhesoj *k=w"kh y<.kkU; k] osGīZlaxh iZk.kkiZ.k d:u j{k.k dj.kkU; k Kkr&vKkr lStudkauk vfHkoknu-
14-	dforsph vksG[k& *kkjnk njkMs	,dkafddk	14-64& lq/khjyk *kkGsr ^dkO; iZfrHkk* ; k fo"K; koj vk/kkfjr ,d iZd f'kf{kdk nsrkr- lq/khjpk gk iZdYi i.kZ dj.; kIkBh R; kP; k ?kjkrhy l dforsnuw l@kk"K.k djrkr- dkO; #ih l@kk"K.kkrhy xaerter-
15-	vis txkos %dfork½	vk/kqfud dkO;	15-70& T; kaph bPNk"KDrh iZcG vlr] R; kauk ladVkrgh ekx lkiMr ladVkapk glwu lkeuk djkok] rlsp vk; ; ke/; dkghrjh pkaxys dk;

	& xq# Bkdwj	rRoKkuij@uSfrd	tkos vIk Iais'k
--	-------------	----------------	-----------------

3

16-	dksGh.k& ek#rh fpreiYyh	fulxZo.ũuij ys[k	dksGh vkiy lkot dl idMrs] vkiY;k ?kjkps nkj can gksÁu vki.k vlqjf{kr gksÁ u;s] ;klkBh rh dks.krh dkGth ?ksr ;kp fpRroskd o.kZu-	* dFku * ppkZ * fujh{k.k o.ũu ys[ku
17-	Fkc vkt gk ik.;kpk %dfor% & lquank Hkkolkj	i;ũoj.k xhr	ekuoh thourhy ik.;kp egUo fo"kn-	* jlxyzg.k * xhr vHku; * ppkZ * ys[ku
18-	onuh doG ?ksrk	fparu ij ikB oSpkfjd ikB	fofo/k lkalNfrd] lkekftd o dksVfcd lekjathkrhy ok;k tk.kkj vUu] xjtwalkBh dl mi; qDr Bjsy\ vUu fuekrk Nf" kdehickcrph Nrrrk ;k ckchaoj fopkj dj; yk yko.kkj ikB vkgs-	* ppkZ * vkReparu * fp=okpu * fujh{k.k
19-	/kkMk & Mii- lat; <ksy.	dkYifud foKku dFkk	jktw ukokP; k [kksM dj i.k ftKklw o'RrhP; k osxoxGs nxM/kkMl xksGk dj.;kph vkoM vl.kkÚ;k eqykoj vk/kkfjr vuks[k; k nxMkph ekfgrh ns.kkjh dFkk-	* dFkkdFku * ukVtkhdj.k * Nan tksikluk
20-	fopkj/ku& eg"khZ /kkMls ds"ko dosZ &ukenkj xksikGÑ".k xks[kys	faparuij ikB	eg"khZ /kkMls ds"ko dosZ o ukenso xksikGÑ".k xks[ky; ;kaps fopkj/ku ns.;kr vky vkgs- ns'kkps ;sD;] ns'kHkDrh o ns'kkphmHkkj.kh ;klkBh vko';d xq.kkph f'kdo.k- Lora: fopkj o eupk lerisyi.kk-	* okpu o ppkZ
21-	larok.kh & lar ujjh lksukj	vHkax	vk"kk<h&dkfrdh okjh d:u ia:jjijyk foBqekÁyhp;k n"ũluky fuR; useku tk.kkÚ;k okjdÚ;kaps o.kZu o lar dkUgksik=k ;kapk ^ek> ekgsj ia:jh* gk vHkax ^larok.kh* e/; ns.;kr vkyk	* fdru * vHkax * jlxyzg.k

	& lar dkUgksik=k		vkgs-	
--	------------------	--	-------	--

□ आशय विश्लेषणाच अर्थविवचन :

(1) मराठी बालभारती इयत्ता सातवीच्या पाठ्यापुस्तकात सांस्कारक्षम अशा 21 पाठ व कवित्तांचा समावेश केला आहे. (2) त्यामध्ये दान गीतं पाच कविता व अभंगवाणी अशी पद्य रचना आहे. गद्य पाठ 13 असून त्यामध्ये ललित लेख- 2, वैचारिक पाठ- 2, कथा- 2, काल्पनिक कथा- 1, काल्पनिक विज्ञानकथा- 1, एकांकिका/संवादात्मक पाठ- 2, चरित्रपर- 1, प्रवास वर्णन- 1, निसर्गवर्णन- 1, अशा मराठीतील वाङ्मय प्रकाराचा समावेश केलेला आहे. (3) पाठ्यापुस्तकातील प्रस्तुत वेच इयत्ता सातवीच्या विद्यार्थ्यांच्या श्रवण, भाषण-संभाषण, वाचन, लेखन, अध्ययन कशल्य व भाषाभाषा या क्षेत्रीय क्षमतांच्या विकासासाठी उपयुक्त ठरणार असून मराठी साहित्यातील विविध साहित्यपकारांचा परिचय करून देण्यास सहाय्यभूत ठरतील असून असा असा असा आढळून आले. (4) पाठ्यांमधील आशय महाराष्ट्राची शौरवी, मराठी भाषेचे महत्त्व, शिक्षणाची अढ व महत्त्व, महाराष्ट्राची परंपरा, सांस्कृती व काळानुरूप हंगार परिवर्तन, कृषिक्षेत्राचे महत्त्व, भूतदया, निसर्ग-पशुपक्षीम, निसर्गनिरीक्षण, निसर्गवर्णने, पाण्याचे महत्त्व, अनाचे महत्त्व, छदाची जपणूक, निर्म आनंद पाप्तीचे मार्ग, आयुष्यचिंतन, जीवनाचे महत्त्व, स्वकतत्व, स्वहितापेक्षा समाजहिताला प्राधान्य, राष्ट्रप्रेम, प्रतिभा शक्ती, शोधकवृतीचा विकास, आदर्शाची प्रेरणा, असा विविधांगी स्वरूपाचा असून इयत्ता सातवीच्या विद्यार्थ्यांमध्ये विविध मूल्यांचे बीजारोपण व मूल्यविकास करण्यास पणक असा असा असा आढळून आले.

**काटक क्र. 2: नवनिर्मितीच्या आनंदासाठी देण्यात आलेल्या पाठ्यापुस्तकातील कृतींचे विश्लेषण**

क्षेत्र / अंग	कृती प्रकार 1	कृती प्रकार 2	कृती प्रकार 3	कृती प्रकार 4	कृती प्रकार 5	कृती प्रकार 6	कृती प्रकार 7
भाषण-स्माषण वैचारिक विकासासाठी कृती	चर्चा करूया 2.5, 15.17, 6.28, 18.88, 6. 28, 11.54, 10.46, 14. 67	तुहला काय घटत? 11.49 15.73	तुहला काय आवहत? 19.90	तुही काय कराल? 6.29, 3.13 2.2, 9.39	जरा विचार करूया 18.86	विचार करा सना 8.37, 14.68, 10.47, 15.73, 11.51, 17. 82,12.58	तुम्हाला अनुभव सना 14.64
अध्ययन कौशल्य व माहिती तंत्रज्ञान शोधक कर्त्याच्या विकासासाठी कृती	माहिती घ्या/ माहिती मिळवा 5.20,8.33, 5.21, 12.55, 5.22	माहितीमिळवूया 5.24, 12.58 10.47, 11.53	शोध करूया 3.14, 11. 52, 6.28, 18.88, 10. 48	माहित आहे का तुहला? 5.24	मी तंत्रज्ञानाशी 15.73	संकलित (परी)	
भाषिक विकासासाठी कृती (भाषणशास्त्र)	खेळूया शुद्धा 2.6, 8.36, 14.67, 3.12, 9.43,15.71, 4.16, 10. 46, 16.79, 5.23, 11. 52, 17.81, 7.31, 12. 58, 19.94	खेळू खेळूया 2.6 4.17 14.67 19.94	आपण समजून घेऊया 2.7, 11.53, 18.89, 4.17, 13.62, 19.95, 8.38, 14.68, 19.98, 9.44, 16. 79, 10.47, 17.	बोलीभाषा नमना 3.14 10.48	शब्दकोश सोपव या 5.25	भाषेचे गंत 8.38	हणी आळखूया 13.62

			84				
वाचन विकासासाठी कृती	माझ वाचन 8.37	वाचा 6.29, 12.59 13.62, 15. 72	सुविचार 19.95	लक्षात ठवा 18.88	स्नार हसय 4.18, 15.72		
लेखन विकासासाठी कृती	लिहित हाऊय्या 3.13, 13. 63, 4.17, 17.81, 9. 44, 19.94, 13.61	कविता करुया 14.69	चला स्नवाद लिहय 14.18	तुम्ह विचार लिहा 19.97			
कल्पकता विकासासाठी कृती	कल्पक हाऊय्या 7.32	ह करुन पाहय्या 13.63	आपण ह करु शक ता18. 87				
<p>(चौकटीतील पहिला अंक पाठक्रमांक व दुसरा अंक पष्ठ क्रमांक दशविता. उदा. 25 म्हणजे पाठ क्रमांक दोन पाठ्यापुस्तक पष्ठ क्रमांक पाव)</p>							

□ अर्थनिर्चन :-

- 1) प्रस्तुत पाठ्यापुस्तकात नवनिर्मितीच्या आनंदास्नाठी मुख्य 32 प्रकारच्या कृतींचा अंतर्भाव करण्यात आला आहे. तर 101 उपकृतींचा स्नमावश करण्यात आला आहे. 32 कृतींना बालकी, अर्थवाही, उत्कंठावर्धक, लक्षवेधी, कृतीला प्रवृत्त करणारी शीर्षक देण्यात आली आहेत.
- 2) प्रस्तुत पाठ्यापुस्तकात देण्यात आलेल्या कृतींमध्ये मराठी भाषा विकासासाठी स्नवाधिक म्हणजे 37 कृती देण्यात आल्या असून मराठी भाषिक विकासासाठी प्रथम प्राधान्य दिल्याचे आढळून आले.

- 3) विद्यार्थी विचारण्या विकासासाठी देण्यात आलेल्या कृतींची संख्या 25 असून त्या प्राधान्य क्रमाने दुसऱ्या स्थानावर असल्याचं आढळून आले.
- 4) विद्यार्थी शाधकवृत्तीच्या व माहिती तंत्रज्ञानाच्या विकासासाठी 17 कृती देण्यात आल्या असून त्या पध्याने तिसऱ्या स्थानावर आहेत.
- 5) क्षेत्रानुसार करण्यात आलेले कृतींचे वर्गीकरण ढोबळमानाने आहे. देण्यात आलेल्या प्रत्येक कृतींमधून विविध क्षेत्रीय क्षमतांचा विकास होऊ शकता. कृतीतून प्राधान्यान हंगारा विकास येथे वर्गीकरणासाठी देण्यात आला आहे.
- 6) ह पाठ्यापुस्तक कृतीला प्राधान्य देणार असून ज्ञानरचनावादी व नवनिर्मितीचा आंद देणार असल्याचं आढळून आलं.

---

**संदर्भ—** □ घोरमाडे, के.यु. आणि घोरमाडे, कला (2008).

शैक्षणिक संशोधनाची मूलतत्वे. नागपूर : विद्या प्रकाशन.

\* कर्दीकर, सुरेश. आणि मगरुळकर, मीना. (2003).

मराठी आशय अध्यापन पद्धती. कोल्हापूर : फडक प्रकाशन.

□ -□ -□ -□

**ROLE OF RESEARCH IN PEDAGOGICAL DISCOURSE: FAMILIAR  
CHALLENGES AND NEW APPROACHES**

**Samya Shinde**, *Assistant Professor, Department of Sociology, L.S.Raheja College of Arts and Commerce.*

***Abstract***

*Academic practitioners experience tug of war between the attractions of teaching and research. Teachers especially in higher education often juggle between their teaching and research responsibilities. Promotion processes require a teacher to put in considerable time to research, publication and presentation that often clashes with their teaching assignments adding to the dilemma to balance between the two equally important processes in teaching-learning outcomes. However rather than considering teaching and learning as mutually exclusive there are similarities between the two endeavours. Expansion of higher education as well as technological advancements has made teaching challenging putting the onus on teachers to improve their pedagogical skills and bringing innovations in teaching methods that can improve learning outcomes. The question of integrating the two pillars of higher education namely teaching and research has been the main focus of higher education since its expansion. The research results in this field show that advocates of the synergy between the two and those who stress on their independence share different understandings. In the recent times one sees a gradual shift in education to not only promote transmission of knowledge but also encourage search and discovery of new knowledge through research. The present paper throws light on the relation between teaching and research and how combining the two can be effective pedagogical tool improving the learning environment. It also discusses the challenges faced by the teacher in attempting to do so and possible suggestions to overcome the same.*

The role of higher education is threefold namely teaching, research and extension activities/community activities. Teaching and research are fundamental academic activities and important aspect in the academic system- two sides of the same coin. Teaching is broadly defined as imparting knowledge encompassing all activities that includes lectures, tutorials, seminars, assessment system and preparation of course material that directly relate to the delivery of undergraduate/postgraduate programme- an active process where learners construct new knowledge. Through teaching the new generation gets acquainted with the field of knowledge. Research can be defined as the creation of a body of knowledge characterised by and measured through publications and research grants. It refers to the process of discovering information, development and dissemination of knowledge crucial for teaching process. Extension includes the social responsibility of higher education achieved through intellectual and social development of society (Rai and Sharma 2016: 1585). Academic practitioners experience tug of war between the attractions of teaching and research. Teachers especially in higher education often juggle between their teaching and research responsibilities. Promotion processes require a teacher to put in considerable time to research, publication and presentation that often clashes with their teaching assignments adding to the dilemma to balance between the two equally important processes in teaching-learning outcomes.

**Correlation between teaching and research:** The two processes of teaching and research are mutually exclusive complementing each other as there are similarities between the two endeavours. Teaching and research help develop insight into the field, refines communication skills and enables one to select and organise content in a meaningful manner. Improvement and advancement in one feeds back into improvement and advancement in the other. Undergraduates bring with them their own fresh perspectives on topics that can be fielded as research questions by the teachers providing new directions for research. The synergy and independence of teaching and research has been the focus of many studies that either bring out the positive correlation; negative correlation or no relationship between the two. Ramsden and Moses (1992) indicated three possible conceptualisations of the relation between teaching and research, one where both processes are *‘completely integrated’*, based on the understanding that one needs to be an active researcher to be a good teacher; second *‘partly integrated’*, based on the premise that teaching and research need to be interrelated, not on an individual level, but on an institutional level; and thirdly *‘independent’*, which is based on the understanding that they are mutually independent. The negative nexus between teaching and research is based on the arguments put forth by the scarcity model; different personality model and divergent reward model. Empirical studies find that in practice a research environment does not always influence quality of teaching. According to Gibbs (1995), *‘the notion that teaching excellence flows directly from research excellence is absurd: they are in direct conflict, compete for academic attention and only one of them is rewarded’*. Greater emphasis on teaching compromises teaching standards. Discussing the negative relationship, Hattie and Marsh (1996) conclude that academicians who are more productive in research invest more time and energy in research activities at the cost of devoting time to teaching and teaching activities, which leads to the negative correlation between teaching and research. Imparting quality education through teaching should be the primary objective of higher education and should be prioritised over research. Some scholars suggest there is strong, symbiotic relation between teaching and research—a positive nexus between teaching and research as put forth by the conventional wisdom model and the generic underlying ability model that claims that *‘teaching contributes to enrichment of research and research contributes to enhanced levels of teaching’* (Tilak). Taylor (2007) observes that the relationship between teaching and research is fundamental in defining the distinctive nature of the university as an institution. Benowski (1991) suggests that teaching should not be separated from research. In his words, —Professors teach best what they know best. They can become better practioners as they are able to bring in the ground realities to their classrooms. Attending seminars, workshops in issues that have relevance in the classroom support their claims in the teaching thus improving the discourse in classrooms. Stephenson (2001), Yair (2008) found that one of the characteristics of extraordinary teachers is their passion for the field which is borne out of research thus helping teachers become well in their classrooms. Brew and Boud (1995) argue that teaching and research are integrated whereby they become two aspects of the same process of learning. Brew (2006) places teaching and research in a wider context that includes students as active



participants in the teaching process and users of research results in the community. Enders (1999) mentions about the interlinkage of teaching and research activities at universities that and form an inseparable whole. Grey (2012) regards teaching and research as inseparable activities at universities, concluding that the -fundamental idea of every university is the quest and dissemination of knowledge; knowledge that stems from research results and is transferred to students in the teaching process| (Grey 2012:41).

**Contribution of research to quality teaching:** Historically, teaching has relied on tacit knowledge and passive socialisation where the instructor's word of knowledge was often accepted unchallenged. In the recent times one is witnessing a gradual shift in the role of higher education to not only promote transmission of knowledge but also encourage search and discovery of new knowledge through research. Quality teaching has become an important issue in higher education plagued with numerous challenges in contemporary times. The student body has expanded and diversified both socially and geographically. The current generation of learners demand new teaching methods with the proliferation of myriad forms of technological advancement that bombard the present generation with information that often needs to be sifted to separate fact from fiction, thus demanding more from the teaching fraternity. Modern technology has modified the nature of interactions between students and their teachers that call for improvement in the quality of discourse in the classrooms. Classrooms are dynamic spaces shaped by the instructor and the instructed. Students, their families as well as funding agencies, both public and private, demand value for their money and desire more efficiency through teaching. The advent of mass higher education has changed the idea of the role of educational institutions emphasising the relation between teaching and research. Today excellence in teaching is required to respond to students' feedback and justify public funding in higher education along with the individual's academic case for promotion thus re-examining and reassessing the role of teaching. Classroom is a dynamic space with the instructor as a superhero. Teachers aim at imparting knowledge in the classroom that will bring out positive student-learning outcome. To be sure whether they are making positive impact on students' learning is a challenge every teacher feels therefore incorporating research paradigm in one's teaching practice will help make teaching effective and make teacher feel psychologically happier as the main role of the teacher is fulfilled.

- Current research paradigms, debates and perspectives can help engage in constructive discussions improving pedagogy.
- It helps the teacher learn, unlearn and relearn new concepts and ideas.
- It brings the teacher learning and teaching close together.
- Research challenges and clarifies one's own beliefs and assumptions about issues sharpening one's existing knowledge which can be incorporated in the classroom effectively.
- It broadens set of learning outcomes.

As an important aspect of quality education research needs to be incorporated in the pedagogical discourse to challenge the epistemology of issues pertaining to scientific, social, economic and political aspects of the society.

**Challenges and Strategies for positive nexus between teaching and research.**

There is expectation that teachers should be actively involved in both teaching and research. At the undergraduate level it becomes very difficult for college teachers to juggle between the two producing positive results. Individual academics experience role conflict. In most educational institutions in India there is lack of any mechanism to promote research. Reasons like stifling bureaucracy; quality of education; insufficient funding and pressure on faculty to do research has resulted in teachers doing research for the sake of it. The major concern for teachers is time management especially at undergraduate level. Under-graduate professors along with teaching responsibilities manage a variety of student centric co-curricular and extracurricular activities that make it difficult to devote considerable time for research, especially qualitative research that requires devoting time for field work outside workplace. Teaching and administrative tasks remain the primary obligation for faculty. This can be managed by devoting specific days in the week when the work pressure is less. Also involving students as research assistants can be helpful as they are able to bring in fresh ideas. Students' engagement strategies can improve learning outcomes. Professors often feel intimidated by the prospect of involving themselves into research and therefore reluctant to do research. This situation can be resolved if research is done on a small scale and within limits keeping the constraints in mind. Choosing manageable sample size, research design and method can help in doing research. If every step in the research process is planned and done systematically it need not feel very cumbersome and time consuming. Moreover teachers should not be forced to do research and should be allowed them to pursue their own interest. Positive integration between teaching and research can be achieved by adopting strategies like integrating research into teaching through curriculum development and development of a culture that supports and values the scholarship of teaching. Finally institutional support goes a long way in ensuring balance between teaching and research. Institutions should help in capacity building through appropriate professional development. Institutions should encourage the trend in pedagogy to increase the value of teaching. A dedicated research cell with external consultants and senior faculty members engaged in research in the institution can provide guidance and inputs to those interested in undertaking research. Workshops on research methodology, Department publications, and lecture series by teaching staff on rotation can help broaden perspectives. The institution should involve themselves in large and small scale projects.

**Conclusion:** That researchers cannot be good teachers is a myth. Valuable research can inform pedagogical practices. Incorporating elements of research complements classroom teaching creating favourable conditions for students to learn knowledge and principles of disciplines. A teacher as a professional has to strike a balance between content and pedagogical knowledge to deliver effectively. The new focus should be on developing positive nexus between research and teaching.

**References:**

- Austin, A. 1996. *Institutional and departmental cultures: The relationship between teaching and research*. In *Faculty teaching and research: Is there a conflict?* ed. J. Braxton, 61–74. San Francisco: Jossey-Bass.
- Benowski, K. 1991. *Restoring the pillars of higher education*. *Quality Progress*, October, pp.37-42
- Boyer, E. 1990. *Scholarship Reconsidered: Priorities of the Professoriate*. The Carnegie Foundation for the Advancement of Teaching, Princeton, NJ.
- Brew, A. 2013 *Understanding the scope of undergraduate research: a framework for curricular and pedagogical decision-making*. *Higher Education*, 66(5), pp 603–618
- Brew, A., Boud, D. 1995. *Teaching and Research: Establishing the Vital Link with Learning*. *Higher Education*, 29(3), 261-273.
- Elton, L. 2001. *Research and teaching: Conditions for a positive link*. *Teaching in Higher Education* 6(1): 43–56.
- Enders, J.1999. *Crisis? What crisis? The academic professions in the „knowledge“ society*. *Higher Education* 38, 71-81.
- Gibbs, G. 2002. *Institutional strategies for linking research and teaching*, *Exchange*, 3, pp. 8-11.
- Grey, H. 2012. *Searching for Utopia. Universities and their histories*. Berkeley and Los Angeles: University of California Press.
- Hattie, J., Marsh, H. W. 1996. *The relationship between teaching and research: a meta-analysis*. *Review of Educational Research*, 66(4), 507-542.
- Henard, F., Laprince Ringuet, S. 2008. *The Path to Quality Teaching in Higher Education*. OECD available at <https://www1.oecd.org/edu/imhe/44150246.pdf>.
- Jenkins, A., Healey, M. 2012. *Research-led or research-based undergraduate curricula*. In Hunt, L. and Chalmers, D. (Eds.) *University teaching in focus: a learning centred approach*, pp.128-14. Camberwell, Victoria, Australia: Acer.
- Jenkins, A., Breen, R., Lindsay, R., Brew, A. 2003. *Reshaping Teaching in Higher Education. Linking Teaching with Research*, Routledge Taylor Francis.
- Kumar, S. 2017. „No research please, we are college teachers“- on the HRD Ministry"s latest bright idea available on [kafila .online/2017/08/09](http://kafila.online/2017/08/09)
- Nehme, M. 2012. *The Nexus Between Teaching and Research: Easier Said Than Done*. *Legal Education Review* 22(2) 241
- Ramsden, P., Moses, I. 1992. *Associations between Research and Teaching in Australian Higher Education*. *Higher Education*, 23(3), 273-295.
- Rai, A.; Sharma, N. 2016. *Teaching versus research in higher education institutes: Revisiting the issue*. *Current Science*, Vol. 111, No. 10, 25 pp 1585-1586.
- Simons, M., J. Elen. 2007. *The „research–teaching nexus“ and „education through research“: An exploration of ambivalences*. *Studies in Higher Education* 32 (5): 617–31.
- Singh, M. 2013. *The Research Teaching Nexus: An Innovation for Strengthening Research in India* (March 25, 2013). Available at SSRN: <https://ssrn.com/abstract=2238954> or <http://dx.doi.org/10.2139/ssrn.2238954>.
- Stephenson, F. 2001. *Extraordinary teachers: The Essence of Excellent Teaching*. Kansas City: Andrews McMeel Publishing.

**A STUDY OF RELATIONSHIP BETWEEN ATTITUDE TOWARDS TEACHING PROFESSION AND TEACHER EMPOWERMENT OF TEACHER EDUCATORS'**

**Dr. Jayesh Raghunath Jadhav, Asst. Prof. Chembur Sarvankash Shikshanshastra  
Mahavidyalaya, Chembur, Mumbai**

***Abstract***

*Research studies prove that the teacher educators' attitude towards teaching profession and teacher empowerment are the two most important components, which help our education system to survive in changing scenario. So to excel quality of our teacher training institutions the present research paper focuses on relationship between the attitude towards teaching profession and teacher empowerment of teacher educators". For the present study the sample of 288 teacher educators" from B.Ed colleges affiliated to university of Mumbai was collected. This is quantitative study with survey method. The result of the study revealed that there is a positive and significant correlation was found between attitude towards teaching profession and teacher empowerment scores of teacher educators" with respect to types of institutions (Aided & Unaided), Years of experience ( 3- 8 & 8 and above years) and Genderwise ( Male & Female) of teacher training colleges affiliated to the University of Mumbai.*

**Introduction:** Teacher training colleges (B.Ed colleges) have a remarkable effect on the development of the country because these colleges train prospective teachers who will shape and direct the country. The primary aim of teacher training institutions is to bring about a change in the attitude of student teachers. Teachers' attitude towards the teaching profession has an effect not only on their teaching practice but also on their students. That is why they have a crucial role in making students achieve high or low attitudes towards any subject or the teaching profession. Today the education system has changed very fast in the world of globalization and privatization. So, to cope-up with the changing environment, the components of the education system must change. Teacher educators' attitude and empowerment are the two most important components, which help our education system to survive in changing scenario. Empowerment does not give people power; it allows them to release the power, knowledge, and the inspiration they already possess. Empowerment is viewed as a way to transform the school into an effective learning environment by providing school staff with authority, flexibility and the resources they need to implement change. When teachers are empowered, schools become enriched and vibrant places of learning. Research studies prove that a school that values the empowerment of teachers and students will be better at finding and developing resources than a school that does not support or hold an empowerment philosophy (Short, 1998). The number of opportunities he/she has been given for empowerment of the teacher educators, governs the attitude of teacher educators towards the teaching profession. As Winston Churchill said, —Attitude is a little thing that makes a big difference.‡ The positive attitude towards any institution forms only after giving freedom to employees working in that institution. Likewise teacher training institutions also must involve teacher educators' in decision making processes related to academic and nonacademic activity. Teachers who perceive themselves as empowered have improved self-esteem, confidence and

attitude towards the profession. So it is necessary to check the relationship between attitude and empowerment of teacher educators' working in teacher training institutions with respect to their gender, types of institution and years of experience.

**Statement of the Problem:**

A study of relationship between Attitude towards Teaching Profession and Teacher Empowerment of Teacher Educators'.

**Operational Definitions of the Variables:**

**Attitude towards Teaching Profession :** It is the feeling, opinion or perception of Teacher Educators (may be positive ,negative or neutral) towards teaching profession and the components related with teaching profession such as economic status and social status of the teacher, teaching –learning process, pupils, sincerity to the profession, rewards in teaching and future of teaching profession.

**Teacher Empowerment:** Teacher empowerment is the strength of teacher educators, which increases their professionalism by giving opportunities for their professional growth and involvement in decision making, which makes the greatest impact on students' achievement and which improves the status of the teacher educators.

**Aims of the Study:** The broad aim of the study is to study relationship between Attitude towards Teaching Profession and Teacher Empowerment of Teacher Educators' of B.Ed. colleges affiliated to University of Mumbai.

**Objectives of the Study**

The research will be conducted with the following objectives:-

1. To ascertain the relationship between Attitude towards Teaching Profession and Teacher Empowerment scores of Teacher Educators on the basis of types of institution.  
(a) Aided Teacher Training Colleges (b) Unaided Teacher Training Colleges
2. To ascertain the relationship between Attitude towards Teaching Profession and Teacher Empowerment scores of Teacher Educators on the basis of years of Teaching experience.  
(a) Teacher Educators with 0-3 Years of Teaching Experience  
(b) Teacher Educators with 3-8 Years of Teaching Experience  
(c) Teacher Educators with 8 and above Years of Teaching Experience
3. To ascertain the relationship between Attitude towards Teaching Profession and Teacher Empowerment scores of Teacher Educators on the basis of gender.
4. To ascertain the relationship between Attitude towards Teaching Profession and Teacher Empowerment scores of Teacher Educators for the total sample.

**Hypothesis of the Study**

1. There is no significant relationship between Attitude towards Teaching Profession and Teacher Empowerment scores of Teacher Educators on the basis of types of institution.  
(a) Aided Teacher Training Colleges (b) Unaided Teacher Training Colleges
2. There is no significant relationship between Attitude towards Teaching Profession and Teacher Empowerment scores of Teacher Educators on the basis of years of teaching experience.

- (a) Teacher Educators with 0-3 Years of Teaching Experience
  - (b) Teacher Educators with 3-8 Years of Teaching Experience
  - (c) Teacher Educators with 8 and above Years of Teaching Experience
3. There is no significant relationship between Attitude towards Teaching Profession and Teacher Empowerment scores of Teacher Educators on the basis of gender.
4. There is no significant relationship between Attitude towards Teaching Profession and Teacher Empowerment scores of Teacher Educators for the total sample.

#### **Methodology of the Study**

**Design of the Study:** The method used by the investigator in this study was the descriptive method of the causal –comparative and correlational types. In the present study, the researcher studied teacher educators' attitude towards teaching profession in relation with Teacher Empowerment.

**Correlational Method:** In the present study, correlation method has been used to measure the strength and direction of relationship between the variables attitude towards teaching profession and Teacher Empowerment.

**Causal Comparative Method:** The present study is causal comparative in that it seeks to examine interrelationship between the variables namely attitude towards teaching profession and Teacher Empowerment on the basis of types of institution, years of experience and gender.

**Sample of the Study:** The sample for the present study comprises of 288 teacher educators from teacher training colleges (B.Ed) affiliated to University of Mumbai. In the present study, a two stage sampling procedure is used. At the first stage the teacher training institutions (B.Ed Colleges) were selected randomly on the basis of their types of institutions namely Aided and Unaided. As the teacher training institutions affiliated to University of Mumbai were found in seven districts of Maharashtra. Care was taken to include teacher training institutions from each district. Thus the researcher used random sampling for selecting the teacher training institutions (B.Ed colleges). At the second stage of sampling, the incidental sampling technique has been adopted for the selection of teacher educators.

#### **Tools of the Research**

The data for the present study will be collected from Teacher Educators.

#### **Readymade Tool**

✓ **Attitude towards Teaching Profession Scale Prepared by Thampan V. (1997)**

The reliability for attitude towards teaching profession scale prepared by the researcher was established using the split half. The Spearman Brown prophecy formula was then used to obtain the reliability coefficient of the whole tool. The reliability was also established following the test-retest method. The coefficient of correlation is found using the Karl Pearson's coefficient of correlation formula known as  $r$ . The reliability of the tool by split half method was 0.88 and in Test-Retest was 0.83.

✓ **Teacher Empowerment Scale (SPES)' prepared by Short & Rinehart (1992).**

Factor analysis of the SPES revealed six dimensions at the basis of the construct. In the study by Short and Rinehart, the coefficient alpha for the SPES instrument was .94, and the

coefficient alphas for the subscales are the following a) decision making (.89), b) professional growth (.83), c) status (.86), d) self-efficacy (.84), e) autonomy (.81), and f) impact (.82).

**Scope and Delimitations of the Study:** The study has certain delimitations and limitations that need to be considered while understanding the findings. Firstly, the study used the quantitative paradigms of research, hence the sample was chosen at random after the groups under the study were defined. The tools were constructed after the researcher had operationally defined the variables under study. Hence, this study too has all the limitations that a quantitative design can offer as well as the delimitations with regard to the sample, tool and variables under study.

**Analysis of Data:** For the purpose of the present study, the researcher will carry out the descriptive and inferential analysis in order to process data. The techniques used for inferential analysis of the data in the present study includes the Coefficient of correlation i.e. pearsons  $r^2$ .

### **Findings of The Study**

The null hypothesis states that there is no significant relationship between attitude towards the teaching profession and teacher empowerment scores of teacher educators for types of institution (Aided and Unaided teacher training colleges), years of experience (0 -3 years, 3 – 8 and 8 and above years), gender wise and the total sample.

The statistical technique to test this hypothesis is coefficient of correlation.

1. The obtained  $r^2$  between attitude towards the teaching profession and teacher empowerment scores of teacher educators of aided and unaided institutions is 0.264 and 0.238 respectively, which is positive. The obtained  $r^2$  for aided institutions is greater than the tabulated  $r^2$  at 0.05 level and for unaided institution it is greater than the tabulated  $r^2$  at 0.01 level. Hence obtained  $r^2$  for relationship between attitude towards the teaching profession and teacher empowerment scores of aided and unaided institutions is found to be significant at 0.05 and 0.01 level respectively. 6.97 and 5.66 percent variance in attitude towards the teaching profession of aided and unaided teacher educators' is associated with teacher empowerment.
2. The obtained  $r^2$  between attitude towards the teaching profession and teacher empowerment scores of teacher educators' with 0 – 3, 3 – 8 and 8 and above years of teaching experience is -0.0324, 0.216 and 0.416 respectively. It is positive for 3 – 8 years and 8 and above years of teaching experience. Hence obtained  $r^2$  for relationship between attitude towards teaching profession and teacher empowerment scores of 3 – 8 years and 8 and above years of teaching experience is found to be significant at 0.05 and 0.01 level respectively but for 0 – 3 years of teaching experience it is not significant. 4.66 and 17.30 percent variance in attitude towards teaching profession with teaching experience 3 -8 years and 8 and above years is associated with teacher empowerment.
3. The obtained  $r^2$  between attitude towards teaching profession and teacher empowerment scores of male and female teacher educators is 0.371 and 0.23 which is positive. The obtained  $r^2$  for male and female teacher educators is greater than tabulated  $r^2$ . Hence obtained  $r^2$  for relationship between attitude towards teaching profession and teacher

empowerment scores of male and female teacher educators is found to be significant at 0.01 level. 13.76 and 5.29 percent variance in attitude towards teaching profession of male and females teacher educators is associated with teacher empowerment.

4. The obtained  $r^2$  between attitude towards teaching profession and teacher empowerment scores of total sample is 0.258, which is positive. The obtained  $r^2$  for total sample is greater than tabulated  $r^2$ . Hence obtained  $r^2$  for relationship between attitude towards teaching profession and teacher empowerment scores of total sample of teacher educators is found to be significant at 0.01 level. 6.66 percent variance in attitude towards teaching profession of the total sample teacher educators is associated with teacher empowerment.

**Discussion:**

1. The result of the present study reveals that attitude towards the teaching profession and teacher empowerment scores are positively and significantly correlated for the teacher educators of aided and unaided institutions. The ATTP and TE of teacher educators of aided and unaided institutions are related to each other. If ATTP is high, then TE would be high and if ATTP is low, TE would be low. The reason could be that teacher educators with a positive attitude towards teaching profession are more sincere to their profession and give equal importance to factors related to this profession. So professionally, teacher educators of aided and unaided institutions have a positive impact on students and they are self-efficient to take decisions related to daily teaching-learning activity. Hence, teachers with positive attitude always empower themselves. This is also consistent with the study of **Singh, G. and Kaur, P. (2014)**, who reported a positive and significant relation between teaching attitude and the teaching competence of prospective teachers.
2. The result of the present study reveals that attitude towards the teaching profession and teacher empowerment scores are positively and significantly correlated for teacher educators of 3 – 8 years and 8 and above years of teaching experience. It means that for teacher educators with 3 – 8 years and 8 and above years of teaching experience ATTP and TE is related to each other. If ATTP is high, then TE would be high and if ATTP is low, the TE would be low. It is evident from the table that the relationship between ATTP and TE is more for teacher educators with 8 and above years of teaching experience as compared to teacher educators with 3 - 8 years of teaching experience. The reason could be that teacher educators with 8 and above years of teaching experience are the most senior teacher educators, so if their attitude towards this profession is high they are having comparatively high status in the institution, and being senior, they are involved in many decisions related to this profession and they are self-efficient to adopt different avenues related to professional growth. So teacher educators with 8 and above years of teaching experience with high attitude towards this profession are highly empowered.
3. The result of the present study reveals that attitude towards the teaching profession and teacher empowerment scores are positively and significantly correlated for the male and female teacher educators. It means that for male and female teacher educators ATTP and TE are related to each other. If ATTP is high, then TE would be high and if ATTP is low,



TE would be low. It is evident from the table that the relationship between ATTP and TE for male teacher educators is more as compared to female teacher educators. The reason could be that male teacher educators are working in this profession sincerely because bread and butter of their family depends on this profession and this is the ultimate profession for them to fulfill their family needs. So to secure their job and to compete with female teacher educators they become involved in professional growth related activity and try to maintain their status in the institution. So the male teacher educators with a high attitude towards the teaching profession try to empower themselves. This is also consistent with the study of **Kulkarni U. K. (2011)**, who reported positive and significant correlation between teaching competency and attitude towards the teaching profession of male and female B.Ed trained teachers working in upgrade primary schools.

**Conclusion:** Teacher educators' who are high in teacher empowerment dimensions feel that institutions give them a chance to develop necessary skills to make them very efficient in the process of teaching learning. They also feel that they have recognition, support and respect from the Principal and colleagues of their institution. This will ultimately build positive attitude towards teaching profession in them. From the findings of the present study it is concluded that there is a positive and significant correlation found between attitude towards teaching profession and teacher empowerment of teacher educators' of teacher training colleges affiliated to University of Mumbai. This study highlights that empowered teacher educators' shows positive attitude towards the teaching profession. This brings positive changes in prospective teachers and hence in society. To achieve this change, policy makers and stakeholders of teacher training institutions must involve teacher educators' in decision making process and create an environment for their professional growth.

**References:**

- Block, P. (1987). *The empowered manager: Positive political skills at work*. San Francisco: Jossey-Bass.
- Kochargaonkar, S. (2010). *Use of statistical Techniques in Research*. Nasik: YCMOU.
- Best, J.W. and Kahn, J.V. (2006). *Research in Education (9<sup>th</sup> ed.)*. New Delhi: Prentice Hall of India.
- Edward, J.B. (2009). *Educational activities for young children*. Clifton Park, NY: Thomson Delmar Learning.
- Firestone, W. and Pennell, J. (1993) *Teacher Commitment, Working Conditions, and Differential Incentive Policies*. *Review of Educational Research*, 63(4), pp 489-525.
- Keller J. (2009). *Attitude is Everything*. Mumbai: Embassy Books distributors.
- Lokesh, K. (2007). *Methodology of Educational Research*. Noida, Vikas.
- Kulkarni, U. K. (2011). *Relationship between Teaching Competence and Attitude towards Teaching of B.Ed. Trained Teachers working in Up-graded Primary Schools*. *International Referred Research Journal*, 3 (30). Retrieved on 3<sup>rd</sup> May, 2015, from [http://shodhganga.inflibnet.ac.in/bitstream/10603/10584/10/10\\_chapter%20%202.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/10584/10/10_chapter%20%202.pdf)
- Singh, G. and Kaur, P. (2014). *Teaching competency of prospective teacher in relation to teaching aptitude, and attitude towards teaching*. Retrieved on 2nd September, 2015, from <http://www.ghgedu.com/images/rj1.pdf>

## CREATING GOOD CITIZENS: ROLE OF FAMILY IN POLITICAL SOCIALIZATION

**Dr.Cindrella D'Mello**, Assistant Professor, St.Teresa's Institute of Education, Santacruz,  
Mumbai. cindrellanunes@rediffmail.com

### **Abstract**

*Family is an informal agency of education and socialization too. Political socialization is an attempt to train people to do what the system requires in values, norms, information, skills that are considered desirable and useful in the society. This present paper discusses a study on role of family in political socialization of the college students based on gender. Descriptive, survey and causal comparative method was used. A stratified random sampling technique was used and sample consisted of 896 college students from greater Mumbai. Data was collected using political socialization questionnaire, its reliability index as per Cronbach alpha was 0.85. Data was analyzed through Descriptive and inferential analysis using t-test. The findings revealed a significant difference in the role of family in political socialization of the college students based on gender. Family played a greater role in female students' political socialization than the male students.*

**Keywords-** Political Socialization, Role of Family, Gender

**Introduction:** Political socialization is a process that takes place in every society. This process begins very early in life and is a continuous process. Generally, the main aim of political socialization is to create good citizen. Political socialization is the process by which people are taught, exposed or conditioned to what the norms and values of their society are and what it takes to be a productive member of it. Political socialization is affected through a variety of agents. The most important among them are the family, education, peer groups, work place and mass media. The first and the most powerful agent of political socialization is the family, which directly or indirectly influences the process of socialization. It is the family that has a distinctive power to shape the attitude towards authority. Each member of family influences the ideas of children in a particular way. In the family child learns to live in discipline. It is in the family that the potential citizen first becomes aware of power relationship and can experience authority in several contexts. If one is associated in decision-making process at the family level, his/her capacity to take political decisions can also increase at other higher levels of the society. The main reason for the family being so influential agent is that the family is the only agent that meets the physical and emotional needs of a child through its love, which makes the child dependent on the family for long years. Also children have a natural tendency to imitate their parents. Cicognani, Elvira (2012) reported that adolescents' political engagement and participation are influenced by parents' participation. Raymont said "Two children may attend the same school, may come under the influence of same teacher and the same organization, may pursue the same studies and perform the same exercises and yet may differ totally as regards their general knowledge, their interests, their speech their bearing and their moral tone, according to their family background. For the upbringing of the child, there is no better institution than his family. All the members of family act, react and this process of give and take teaches many things to the child. In short, each member of family has an

important role to influence the personality of the child. Levy, Brett L. M. (2011) found that completing civic advocacy projects positively influenced students' development of political efficacy and their understanding of political challenges.

**Need of the Study:** Political socialization is the process by which political culture is transmitted in a given society. It occurs at both the individual and community level, and it extends beyond the acquisition of political culture to encompass the learning of more sophisticated political ideas and orientations. Political socialization is a lifelong process and a variety of individuals and institutions contribute to its shaping effect. For example, individuals are politically socialized by such groups as their family, peers, and social class. Furthermore, they are socialized by existing laws, media, religion, education, their own gender, and more. Basically, the process is never ending and the factors which shape it are all encompassing. Family environment is the major context within which the individual's development of political attitudes and values takes place. The family develops a child's most fundamental ethnic, religious, party, and social-class identifications. This study will help the parents and other family members to understand the need to teach, expose or condition the students to the norms and values of their society in order to make them productive members of society. This study will also motivate the parents to give knowledge and develop understanding in the students about the political system of the country. The profusion of studies examining the role of political socialization agents in society is sadly not reflected in researches on Indian society. Therefore it is of particular interest to examine the socialization agents in India because it is through these agents that new members of the political system learn traditional as well as revolutionary forms of political life.

#### **OPERATIONAL DEFINITION**

- **Political Socialization** is a process by which students are taught, exposed or conditioned to the norms and values of society to be a productive member of it. Political socialization means level of knowledge and understanding among students about political knowledge, political participation, sense of political efficacy and political trust
- **Role** means the actions and activities assigned or pattern of behavior expected of a person or group in a particular position.
- **Family** is a group consisting of grandparents, parents, their children and relatives.
- **Role of Family Political socialization** means actions and activities assigned or pattern of behavior expected of a family by which students are taught, exposed or conditioned to the norms and values of the society with respect to political knowledge, political participation, sense of political efficacy and political trust to be a productive member of society.
- **Gender** is the classification of the students as female or male.

#### **Objectives of the Study**

1. To Study the Role of Family in the Total Political Socialization of the college students on the basis of Gender.

2. To Compare the Role of Family in the Total Political Socialization of the college students on the basis of Gender.

**Hypothesis of the Study**

1. There is no significant difference in the Role of Family in the Total Political Socialization of the college students on the basis of Gender.

**Methodology:** Descriptive, survey and causal comparative method was used

**Sample and Sampling Techniques:** Stratified random sampling technique was used. The sample for the present study consists of 896 college students (329 boys and 567 girls) pursuing different professional courses (B.Arch, BMS, B.Ed, B.E) in greater Mumbai colleges.

**Tools:** For the present study researcher constructed Political Socialization questionnaire. The tool consisted of 44 items. Each of the 44 items in the tool had *Yes /No* option. Students had to tick mark on any one option. *Yes* alternatives were given a score of 1 and *No* alternatives were given a score of 0. Its reliability index as per *Cronbach alpha* is 0.85

**Analysis of data:** Following descriptive and inferential analysis techniques were used in the study

**Descriptive statistical analysis-** Measure of Central Tendency, Measures of Normality, Measures of Deviation and Graphical

**Inferential Analysis:** t-test

**Findings of the Study:** There is a significant difference in the role of family in political socialization of college students on the basis of their **gender**. ( $p=0.00<0.05$ , S at 0.05 Level) This means that role of family differs in male and female students political socialization. The mean score of female students is higher than male students which indicate family plays greater role in female students' political socialization than the male students. This indicates that male and female students are taught, exposed or conditioned by their family, to a similar extent about the norms and values of their society in order to be a productive member of it. There is a significant difference in the role played by family in **political socialization** of college students on the basis of their gender. This means that role of family differs with respect to the way students of different gender are taught, exposed or conditioned to the norms and values of their society. Family plays a major role in making them productive member of the society. Role played by the family in political socialization of female students is higher than male students. This indicates that actions and activities assigned or pattern of behavior expected from family by which students are taught, exposed or conditioned to the norms and values of the society are performed differently for male and female students. This could be also because of the differential gender role socialization of the students by their families. In the 1940s Murdock (a functionalist) examined 250 societies in different cultures. He concluded the family is universal and inevitable as no society had a substitute for the family. Socialization was one of the main functions of family which teaches children the norms and values of society to keep society going. According to the social role theory, the core principles are that men's and women's political attitudes diverge because of diffuse gender roles (e.g., broad expectations based on sex) as well as differential specific roles (e.g., family and

occupational roles). A range of evidence showed that the general shape of gender differences in political attitudes aligns with the social roles of men and women, particularly with regard to elements that associate agency and higher status with men and communion and lower status with women. The difference in the political interest, political maturity, political ambitions and political attitude of the family members with respect to male and female students could be the factors responsible for this difference. Familial relationships of both the groups could be of different types. Political socialization of male and female students is also subject to transmission of political information, attitudes, skills, behavior from parents. Family could differ in the upbringing of male and female students in order to prepare them for the social roles. This could also contribute to the differences in the political socialization of both the groups. More time spend by the female students with the family members could result in more political socialization of the female students as there could be more scope for political discussions, debates, review of news channels and newspapers. More opportunities available with the female students to listen to the family conversations and interactions could have an impact on their political socialization. More favorable attitude of family members towards female education could add to political socialization of the female students. Imitation is one of the factors in the process of socialization. More imitation of parents, siblings, grandparents, other family members, by female students could be a reason for greater political socialization of female students. More faith of family members in female students' education, skills, actions, intellectual capacity, and decision-making could lead to more political socialization of the female students. Motivation and encouragement provided by the family members with respect to political socialization could be more for female students compared to male students. Efforts put in by the family members to guarantee women's rights could also add to the role they play in politically socializing female students. Efforts put in by family in protection, safety of female students could add to their level of political socialization.

**Conclusion:** Role of family in political socialization of male students is 11.16 % whereas % for female students. However, family plays moderate role in political socialization of male and female students. Family needs to put in more efforts in political socialization of male and female students. Both the groups should be politically socialized in order to empower them equally. Political discussions, debates in the family will prepare the students for their political roles and life. Necessary skills, knowledge and attitudes should be provided by the family to male and female students in order to create future nation builders.

### **References**

- Odoemelam, U. (2013) *Political Socialization and Nation Building: The Case of Nigeria*. Retrieved on 8<sup>th</sup> June 2015 from <http://eujournal.org/files/journals/1/articles/978/submission/original/978-2885-1-SM.pdf>
- Catterberg, G. (2005) *The Individual Bases of Political Trust: Trends in New and Established Democracies*. Retrieved on 14<sup>th</sup> August 2015 from <http://ijpor.oxfordjournals.org/content/early/2005/01/01/ijpor.edh081.full.pdf>.
- .*Functions of the Family*. Retrieved on 4<sup>th</sup> August 2015 from

- <http://sociologytwynham.com/2008/06/10/functions-of-the-family>  
Research Paper on Political Socialization” Retrieved on 18<sup>th</sup> June 2015 from  
<http://research-paper.essayempire.com/examples/political-science/political-socialization/>  
Dasgupta, Samir (2011 ,b) Political Sociology .ICFAI University,  
Dorling Kindersley (India) Pvt Ltd.( Pg 58-59).  
Cicognani, Elvira., Zani, Bruna., Fournier, Bernard., Gavray, Claire. B,Michel.  
(2012, b). Gender Differences in Youths' Political Engagement and Participation.The Role of Parents  
and of Adolescents' Social and Civic Participation. *Journal of Adolescence*, v35 n3 p561-576  
Jun 12. Retrieved on 24<sup>th</sup> Feb 2014 from ERIC database. (EJ967281).  
Informal Agencies of Education. Retrieved on 11<sup>th</sup> June 2013 from  
<http://books.google.co.in/books?isbn=8171566359>.  
Levy, Brett L. M. (2011) *Fostering Cautious Political Efficacy through  
Civic Advocacy Projects: A Mixed Methods Case Study of an Innovative High School Class.*  
*Educational Psychology*, v33 n3 p350-383 2013 Retrieved on 20<sup>th</sup> March 2013 from ERIC  
database (EJ1004567).*

## DEVELOPING AND IMPLEMENTING A MOOC – THE CHALLENGES

**Ms. Sandychris Inchiparamban**, *Junior Research Fellow (UGC), Department of Education, University of Mumbai, India sandychris1986@gmail.com*

**Dr. Sudha Pingle**, *Assistant Professor, Department of Education, University of Mumbai, India gsudha6@rediffmail.com*

### **Abstract**

*A Massive Open Online Course (MOOC) may be defined as an online course that caters to a large audience at little or no cost. Big names such as Coursera, EdX, and Udacity, in collaboration with top universities the world over, have MOOCs on varied topics running on their platforms. But what is it that goes into the development of such MOOCs? What are some of the challenges that an instructor may have to face while developing and implementing a MOOC? This paper presents some of the challenges faced while developing and implementing a MOOC in Educational Technology and how these challenges were overcome.*

**Keywords:** *MOOC, challenges, educational technology, teacher trainees*

**Introduction:** Considering the busy and fast paced world we live in, it is getting difficult to pursue higher education full time. Individuals may prefer to get on to a job to make ends meet rather than continue with education. However, jobs may require continuing education to remain abreast of the latest happenings. In such situations, distance education may come to the rescue. Now, distance education has been around for long. However, it is only recently that it has gone digital. Online courses, as a means of imparting distance education, are getting popular and one form of online courses is the massive open online courses (MOOCs). MOOCs have proved to have great potential when it comes to imparting education to a wide audience. MOOCs, on various topics, are available to one and all. From working professionals, who would like to continue their education, to students in remote locations to knowledge seekers, can avail MOOCs as per their requirements and receive credible certifications upon completion. While all this seems straightforward, the fact is that a lot of effort goes into the development and implementation of a MOOC, especially as an individual instructor. Several challenges could arise and these must be dealt with before making a MOOC available to the public. In the present study, a MOOC in Educational Technology was developed and implemented for teacher trainees.

**Need:** The learners of today are heavily techno-savvy. Equipped with the latest technological tools and gadgets, they have everything they want at the tip of their fingers, literally! From being on various social media platforms to using messenger services, the learners know it all. The question, therefore, arises why not use these very tools for classroom instructions. Wouldn't the learners pay more attention and be involved in their learning then? eSchool News (2013) reported that more than half the students in grades 6–8 have access to a tablet computer. Also, Project Tomorrow's survey reported that more than 364,000 students use technology including the use of the Internet to complete their homework and Facebook to collaborate with classmates for school projects. The researchers, therefore, felt that they should

develop an online course with the objective of providing knowledge and understanding of educational technology for the teachers, or more specifically, the teacher trainees, so that when they enter their classrooms, they would at least be equipped with the basic know how of the use of technology in classroom instructions. Additionally, studies by Punia, Y. (2017), Goto, J., et. al. (2015), and Smith, J.J., et. al. (2013) on pre-service teachers found that MOOCs do lead to positive outcomes. Hicks, K. (2015) also suggested that MOOCs play a role in continuing education and teacher professional development. Thus, the researchers felt that a massive open online course should be developed so that it could cater to not only teacher trainees but also those already teaching at various levels. This MOOC would not help them build a solid foundation of educational technology but do it in such a way that they are not inconvenienced.

**Developing and Implementing the MOOC – The Challenges:** The researchers developed a MOOC, *Educational Technology – Changing the Face of Education*, for trainee teachers. Developing and implementing this MOOC came with its share of challenges. These challenges and the ways in which the researchers handled these challenges are discussed here.

**Choosing the Content of the MOOC:** A careful decision regarding the content of the MOOC was essential. The researchers decided to choose only the most relevant content that would be beneficial to the teacher trainees in one way or another. The content selected was such that it would help build a foundation of educational technology among the trainee teachers. This, in turn, would make the trainee teachers equipped with at least the basic knowledge and understanding of the use of technology to enhance their classroom interactions. Bose, S. (2010), in her paper, points out the need to integrate technology in the instructional system of teacher education institutions in India. She emphasizes that teachers need to be taught, during teacher education programs, through methods that integrate Information and Communications Technology (ICT) so that they may be prepared to integrate ICT when they teach in schools.

The topics dealt with in the MOOC, developed by the researchers, were identified after analyzing available literature and the syllabus of the Bachelor of Education (B.Ed.) and Master of Education (M.Ed.) programmes offered by the University of Mumbai. The topics, thus, identified were divided into ten modules as:

- Module 1: Educational Technology – Getting Started
- Module 2: The Benefits, Limitations, and Disadvantages of Using Technology
- Module 3: Tools You Can Use in the Classroom
- Module 4: Tools You Can Use in the Classroom and Beyond
- Module 5: The Computer and The Internet
- Module 6: What About the Infrastructure?
- Module 7: All About e-Learning
- Module 8: Instructional Design – An Upcoming Field
- Module 9: Where Are We Headed?
- Module 10: The Future



Once the modules were decided, information for each was gathered from available literature on the Internet and in the books, and lesson plans were developed for each module.

**Choosing a Platform:** A major challenge, even before developing the MOOC, was the platform on which it would be hosted. The researchers were looking for a free platform due to cost constraints without compromising on other facilities such as user-friendliness and availability of free e-certificate. For the present research study, a thorough review of the available MOOC platforms was done before zeroing in on two platforms, *Eliademy* and *Coursesites* by Blackboard. The content of the MOOC was put up on both. On comparison, the researchers found *Eliademy* to be more user-friendly and with an easier navigation. The background of the *Eliademy* course page, too, was less distracting. Therefore, *Eliademy* was chosen as the MOOC platform to deploy the MOOC developed by the researchers. The MOOC can be found at <https://eliademy.com/app/a/courses/da79ccdba3>. One can sign up for the course using their Facebook, LinkedIn, Microsoft, or Google+ credentials or their email address.

**Validation of the MOOC Programme:** As part of the research process, it was mandatory to get the content of the MOOC validated by experts. Among the experts were both educationists and instructional designers. The experts were based in four cities around India and the researchers, therefore, could meet in person only those who were based in the same city as theirs while the researchers communicated with experts based in other cities through telephone (both voice calls and chats) and email. In order for the experts to validate the MOOC programme, the link to the course along with a request letter and a rubric to evaluate the course was sent to them. The experts went through each module, scrutinizing the content and the overall look and feel of the platform. They rated various aspects of the course on the rubric provided and also gave valuable feedback and suggestions to further enhance the course. The researchers studied the feedback and suggestions thoroughly and incorporated the most relevant ones into the course. Only after the implementation of expert feedback and suggestions was data collection started.

The process of content validity was begun by the researcher in June 2016 and ended in December 2016. A delay, therefore, of six months in terms of the overall research was one of the biggest challenges faced by the researchers. Some of the reasons for this delay could be:

- Challenges in using an online platform.
- The busy time schedules of the experts.
- Their expertise in the said content.
- No response from the expert due to reasons unknown to the researcher.

**Technical Constraints:** The biggest challenge, though, was the lack of adequate number of computers and other related facilities in the colleges of education. While some colleges had an approximate of 10 computers, there were others that shared a single computer room with other disciplines. As a result, conducting the experiment in a structured setting (where the researchers would have been present with the participants while the experiment was on) was practically not possible.

In order to deal with this situation and bearing the spirit of MOOCs in mind, the entire implementation of the MOOC programme was done electronically and online. This way, the teacher trainees were at liberty to undertake the MOOC programme at their convenience from anywhere and at any time. Additionally, the MOOC was such that the teacher trainees could do it on a personal computer or using their smartphones.

***Bachelor of Education (B.Ed.) – Still a Hectic Course:*** The Bachelor of Education (B.Ed.) programme, offered by teacher training institutions affiliated to the University of Mumbai, is a two-year regular programme. This programme is filled with activities in addition to the regular lectures, practice teaching, and internship. In the event of no contact with the teacher trainees while the programme was on, the researchers had to constantly remind them to do the course. This was done through a point of contact in each of the participating teacher training institution. Emails and WhatsApp were primarily used for communication. The teacher trainees had to be constantly reminded, through the point of contact, to do the necessary tasks for the completion of the programme. Eventually, the MOOC programme was implemented over a period of up to three months. Several reasons as to delay in completing the programme came up during the interviews with the teacher trainees. Some of these were:

- A packed B.Ed. schedule
- Assignments and examinations
- Personal reasons
- Technical constraints such as no Internet connectivity

***Constraints from the Authorities:*** While some authorities involved in teacher training were enthusiastic, others were skeptical citing safety of their students as the reason. Some others refused point blank for varied reasons such as their students being capable of bullying the researchers. So much so, the researcher was not allowed to communicate with these teacher trainees. The researchers, therefore, took into consideration only those teacher training institutions that gave permission to implement the MOOC among their teacher trainees.

***A Check on the Online Course and Keeping Track of Data:*** Yet another challenge was keeping a vigilant eye on the course in terms of repairing broken links or keeping a tab on important updates from *Eliademy*. There were days when the number of notifications was large while on some days, there were no notifications. These notifications were in terms of new enrollments, an end of module assessment completion, or comments in the discussion forums. The researchers kept a constant check on the happenings in the course and pitched in whenever required.

***Testing the Teacher Trainees:*** As with the implementation of the MOOC programme, the teacher trainees were tested online, too. The achievement test in educational technology was in the form of a Google Form and was emailed to each of the participants, both in the experimental and control, groups. Here, too, the teacher trainees had to be constantly reminded, through the point of contact, to fill out the achievement test and submit the same. Eventually, with a lot of coaxing, the testing of the teacher trainees was accomplished.

**Gathering Experiences:** As mentioned earlier, the teacher trainees were also interviewed in order to understand their experiences as they underwent the MOOC. While a majority of teacher trainees were available for the interview, some were not due to reasons such as ill health and those of personal nature. Therefore, those not available in person had to be interviewed over the telephone. Eventually, however, with these challenges, the MOOC in Educational Technology was implemented successfully.

**Conclusion:** Developing a MOOC is an experience by itself. From the conception of the idea to putting it together to its implementation is a long journey filled with challenges. The MOOC, developed by the researchers, saw a positive reception but due to various constraints, accepting it, especially in teacher training, even as a means of online, distance learning seems far away for now.

### **References**

- Ten facts about K-12 students' technology use.* (2013). Retrieved July 26, 2015 from <http://www.eschoolnews.com/2013/02/25/ten-facts-about-k-12-students-technology-use/>
- Punia, Y. (2017). *Supplementing the Pre-service Teachers' Training through MOOCs.* *Voice of Research*, 5(4). (pp. 15–16). Retrieved July 25, 2017 from [http://www.voiceofresearch.org/doc/Mar-2017/Mar-2017\\_5.pdf](http://www.voiceofresearch.org/doc/Mar-2017/Mar-2017_5.pdf)
- Goto, J., Batchelor, J, and Lautenbach, G. (2015). *MOOCs for pre-service teachers: Their notions of 21st Century Learning Design.* Paper presented at IST-Africa Conference. DOI: 10.1109/ISTAFRICA.2015.7190556. Retrieved July 25, 2017 from <http://ieeexplore.ieee.org/document/7190556/>
- Smith, J. J. and Greene, H. C. (2013). *Pre-service Teachers Use E-Learning Technologies to Enhance their Learning.* *Journal of Information Technology Education: Research*, 12. (pp. 121–140). Retrieved July 24, 2017 from <http://www.jite.org/documents/Vol12/JITEv12ResearchP121-140Smith1223.pdf>
- Hicks, K. (2015, March 3). *Why MOOCs are Great Teacher Development.* Retrieved July 10, 2017 from <http://www.edudemic.com/5-moocs-educators-should-take-as-students/>

# INDEX

SR. NO.	TITLE & AUTHOR (S) NAME	PAGE NO
28	<b>TOOLS TO AVOID ACADEMIC PLAGIARISM AND RESEARCH MISCONDUCT</b> <i>Rupesh G. Sawant</i>	160-165
29	<b>CHALLENGES OF TRIBAL EDUCATION IN PALGHAR DISTRICT</b> <i>Dr. Rekha Gore</i>	166-174
30	<b>PROMOTING RESEARCH FOR QUALITY OF TEACHING AND LEARNING IN HIGHER EDUCATION</b> <i>K. Shivakumar</i>	175-179
31	<b>A STUDY OF EMOTIONAL INTELLIGENCE WITH SELF AWARENESS OF SECONDARY SCHOOL STUDENTS</b> <i>Dr. Joan Lopes</i>	180-184
32	<b>THE SCHOOL CURRICULUM AND SUSTAINABLE DEVELOPMENTAL GOALS - ARE SCHOOLS EQUIPPING THEIR STUDENTS TOWARDS IT?</b> <i>Dr. Swasti Dhar</i>	185-189
33	<b>OPPORTUNITIES FOR INTEGRATING EDUCATIONAL APPS IN THE INDIAN CLASSROOM</b> <i>Rochelle P D'souza &amp; Dr. Sudha Pingle</i>	190-196
34	<b>TEACHER AS AN ALCHEMIST IN EDUCATION 3.0 INTERATING TECHNOLOGY INTO EDUCATION</b> <i>Dr. Arvind Pandurang Joshi &amp; Mrs. Anitadevi Kishor Patil</i>	197-201
35	<b>EFFECTIVENESS OF BLENDED LEARNING APPROACH FOR TEACHING A UNIT OF MATHEMATICS</b> <i>Dr. Rekha Chavhan</i>	202-206
36	<b>EFFECT OF STUDY SKILLS TRAINING ON ENGLISH SUBJECT ACHIEVEMENT</b> <i>Dr. Vaishaliben B. Patel</i>	207-211
37	<b>ENHANCING COMMUNICATIVE SKILLS – AN ICT SUPPORTED APPROACH</b> <i>Dr. Asha A. K</i>	212-215
38	<b>IDENTIFICATION OF KEY AREAS FOR DEVELOPMENT OF ACADEMIC SELF CONCEPT OF ADOLESCENTS</b> <i>Dr. Mabel Pimenta</i>	216-221
39	<b>SOCIAL MEDIA AS DIGITAL TOOL FOR PEDAGOGIC PRACTICES: IMPORTANCE AND IMPLICATIONS FOR Y-GENERATION</b> <i>Abdunnazar PT</i>	222-226

40	<b>CHALLENGES FOR INDIAN HIGHER EDUCATION SYSTEM : ISSUES AND SUGGESTIONS</b> <i>P. Bhavani &amp; Prof. T. G. Amuthavally</i>	227-235
41	<b>CONSTRUCTIVIST APPROACH IN TEACHING OF MATHEMATICS</b> <i>Ms. Angelina Nunes</i>	236-243
42	<b>INNOVATIONS IN TEACHER EDUCATION</b> <i>Dr. Vincent Kaitan D'Mello</i>	244-246
43	<b>EDUCATION FOR GLOBAL PEACE AND SUSTAINABLE DEVELOPMENT</b> <i>N. Swaminathan</i>	247-250
44	<b>LIFE SKILLS FOR EDUCATION AND DEVELOPMENT</b> <i>Shalini Devi</i>	251-256
45	<b>EDUCATION FOR P EACE AND SUSTAINABLE DEVELOPMENT</b> <i>Dr. Manju Bala</i>	257-261
46	<b>ATTITUDE TOWARDS RESEARCH: INVESTING FOR CHANGE</b> <i>Dr. Mrs. Radhika Samar Vakharia</i>	262-266
47	<b>PERCEIVED INFLUENCE OF FLIPPED LEARNING ON STUDENTS' MOTIVATION AND ENGAGEMENT</b> <i>Dr. Sunita Jain</i>	267-271
48	<i>मराठी माध्यमिक शाळांतील अभ्यासक्रमामुळे विद्यार्थ्यांमध्ये जीवित कौशल्यांच्या अंगरंगे सामाजिक कौशल्ये विकसित-एक विप्लवकालीन अभ्यास डॉ.सुहेल देवें "श्रीमती जयश्री रामनाथ वाळं"</i>	272-284

## TOOLS TO AVOID ACADEMIC PLAGIARISM AND RESEARCH MISCONDUCT

**Rupesh G. Sawant**, Assistant Professor, Department of Commerce, R. P. Gogate College of Arts & Science and R. V. Jogalekar College of Commerce, Ratnagiri – 415 612. (Affiliated to University of Mumbai) E-mail: rupeshsawant71@gmail.com

### *Abstract*

*Plagiarism is becoming an increasing and worldwide phenomenon. The major reason behind it is a lack of oversight and proper training for scientists, researchers and academicians those who are involve knowingly or unknowingly in such a kind of activities. Besides it, a growing popularity of and dependence on the Internet is leading to the rise in plagiarism and research misconduct around the world. Many countries like US are having a statutory body to deal with plagiarism and research misconduct, but India does not have such a kind of regulatory body. Hence, cases of plagiarism are often dealt in ad-hoc fashion with different routes being followed in different cases. Even penalties for plagiarism vary from one institution to another. However, it should be considered as a very serious academic offense. There is need to follow ethics or code of conduct, guidelines laid down for this purpose and to use certain tools which can help significantly in this matter. The objective of this research article is to foster a discussion on the term "Plagiarism" and related issues. This research article mainly deals with the concept of plagiarism along with its examples. It also provides readers with the commandments as well as the tools which can help to avoid plagiarism which take place accidentally or intentionally.*

**KeyWords:** *Plagiarism, Academic dishonesty, Research misconduct, Tools to avoid plagiarism.*

**Introduction:** When we talk about quality of education there comes so many things, in which "Research" is one. And when we talk about research, we need to talk seriously about "Plagiarism". The word "Plagiarism" is originally derived from Latin word —Plagiarium which is used in the sense of "Literary thief". In the context of academic research, "Plagiarism" is the "Wrongful appropriation" and "Stealing and publication" of another author's "Language, thoughts, ideas, or expressions" and the "Representation" of them as one's own original work [1][2]. Plagiarism is considered as an "Academic Dishonesty" and a "Breach of Ethics". In research it is known as a "Research Misconduct". It occurs when a writer duplicates another writer's language or ideas and then calls the work of his own [3]. Basically, plagiarism is not in itself a crime, but can constitute copyright infringement. In academia and industry, it is a serious ethical offense. Many a times, plagiarism and copyright infringement overlap to a considerable extent, but they are not equivalent concepts, and many types of plagiarism do not constitute copyright infringement, which is defined by copyright law and may be adjudicated by courts. However, plagiarism is not defined or punished by law, but rather by institutions including professional associations, educational institutions, and commercial entities, such as publishing companies. Thus, to be summarize, plagiarism means presenting the words, phrases, ideas or work of another, including certain facts and statistics, as if they were one's own [4]. Plagiarism can be avoided with some deliberate attempts and efforts. To avoid plagiarism, one must clearly acknowledge the source of any borrowed language or ideas that one present in his/her own work. In addition, quotation marks, followed by documentation,

should be used to indicate the exact words of others. Mostly, unintentional plagiarism can be traced to three sources i.e. confusion about when and how to cite sources, uncertainty about how to paraphrase, and carelessness in taking notes and downloading Internet materials.

**What is a Plagiarism?** No universally adopted definition of academic plagiarism exists. However, some of the definitions like given below may exemplify the most common characteristics of academic plagiarism. Basically, "Plagiarism is an act or instance of using or closely imitating the language and thoughts of another author without authorization and the representation of that author's work as one's own, as by not crediting the original author." In other words, "It is a piece of writing or other work reflecting such unauthorized use or imitation." The term is also known by different names such as appropriation, infringement, piracy, counterfeiting, theft, borrowing, cribbing, and passing-off [5]. According to Bela Gipp academic plagiarism encompasses, "The use of ideas, concepts, words, or structures without appropriately acknowledging the source to benefit in a setting where originality is expected" [6]. The definition by Bela Gipp is an abridged version of Teddi Fishman's definition of plagiarism, which proposed five elements characteristic of plagiarism. According to Teddi Fishman, plagiarism occurs when someone:

- Uses words, ideas, or work products,
- Attributable to another identifiable person or source,
- Without attributing the work to the source from which it was obtained,
- In a situation in which there is a legitimate expectation of original authorship,
- In order to obtain some benefit, credit, or gain which need not be monetary [7].

Thus, in simple words, plagiarism means presenting the words, phrases, ideas or work of another, including certain facts and statistics, as if they were one's own. In practice, many types of plagiarism exist; some are obvious and some are not. A writer must know what constitutes plagiarism because ignorance of the facts will not excuse him/her from the consequences. The University of Pittsburgh's undergraduate plagiarism policy lists the following examples of plagiarism:

- Copying text "As it is" without quotation marks and with no citation or source.
- Reordering the elements of the source text without citation.
- Copying pieces (sentences, key phrases etc.) of the source text without citation.
- Paraphrasing without citation and proper referencing.
- Reproducing information that is not common knowledge or self-evident without citation.
- Incorporating an idea heard in conversation without citation.
- Using one's own past material or another's material as a new idea without citation.
- Paying to another for contributing to your work without citation.
- Using software or online translators to translate material without citation.
- Paying someone else to do your work, purchasing material, or translating from someone else's material (web-based or hard copy) [8] [9].

To avoid plagiarizing, one must clearly acknowledge the source of any borrowed language or ideas that one presents in his/her own work. Quotation marks, followed by

documentation, should be used to indicate the exact words of others. A single phrase identifying a source and/or parenthetical citation or a superscript number should denote the summarized or paraphrased ideas of others, depending on the particular style the paper follows. However, the best defense against plagiarism is the knowledge and practice of effective writing skills. Learning how to paraphrase, quote, and to properly cite and reference material is critical one. And a writer will never gain good writing skills if one does not create his/her own work. Always remember that, not procrastinating and beginning papers early will help to squelch the temptation to cheat by plagiarizing. Do not forget, the writer's academic, professional, and personal reputation is too valuable to lose over a moment of laziness or weakness. Therefore, using a plagiarism checker is a helpful way to check for plagiarism, even accidental, and ensure that writing is original and well cited.

**What Types of Work must be Cited?** Always remember that the work of others includes not only written words and ideas, but also art, graphics, computer programs, music, charts, pictures, graphs, diagrams, facts or data, websites, or other communication or recording media, including formatting, images, statistics, and problem solutions etc. should be cited.

**Which Sources must be Cited?** Both published (in digital or traditional formats) and unpublished sources must be cited. Published sources mainly include books, magazines, newspapers, websites, plays, movies, photos, paintings, and textbooks and online papers; and unpublished sources on the other hand may include class lectures or notes, handouts, speeches, other researchers' papers, or material made available from a research service [10] [11].

**What to do to Avoid Plagiarism?** Avoiding plagiarism in itself is an art. However, it can be made possible by adopting some useful tools or techniques like paraphrasing, citation, quotation, referencing etc. in a scientific or systematic manner. Even some guidelines, rules must have to be followed along with ethical behaviour of one's own. Text given in the section below are the commandments, golden rules, and tools to avoid plagiarism which takes place accidentally or intentionally.

**Commandments to Avoid Plagiarism:** Following are the ways for avoiding plagiarism and its consequences:

- Plan your work early under guidance of the guide or instructor and avoid procrastination
- Know what plagiarism is and make clear understanding about its meaning, nature, and scope.
- Know the policies and practices on plagiarism and citing sources, where you are submitting or publishing your work.
- Cite Internet sources, too. Various external or outside sources along with the internet should be cited or attributed in the body, or as a footnote or endnote.
- Always remember that ideas are not public domain and hence they must be cited properly. Never copy from any source without providing quotation marks and with proper citation.
- Every time take good notes and/or print out/photocopy all source information.
- Always keep in mind that secondary sources are used to provide additional support, facts and data, and general information. All such sources must be cited properly.



- Keep and maintain list of all sources, you have used, so that you can refer back to them in the case of doubt.
- For this begin constructing your bibliography early i.e. right from the beginning when you start your writing on your idea or subject.
- Try to retain all drafts and other writing, so that it can facilitate paper trail of each essay's development.
- Don't succumb to the argument that everyone's doing it. It is not the acceptable ethical behavior from the academician and researcher.
- Never misrepresent others' work as one's own. This will lead to betray one's honor, damage or destroy the trust, harm self-esteem, and also endanger one's academic future.
- Consult the following sites or anti-plagiarism pages for more information about avoiding plagiarism, in case of doubt if any:

<http://www.indiana.edu/~wts/wts/plagiarism.html>

<http://www.virtualsalt.com/antiplag.htm>

<http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>

<http://www.plagiarism.org>

<http://www.plagiarism.phys.virginia.edu>

<http://www.academicintegrity.org> [12].

**Golden Rules to Avoid Plagiarism:** Besides the above mentioned commandments, you as a writer of research paper or article are required to follow some golden rules as given below to avoid plagiarism, which occurs in any way or manner.

Rule 1: Paraphrase the source.

Rule 2: Quote the source.

Rule 3: Give credit to the source i.e. cite the source.

**Tools To Avoid Plagiarism:**

- **Paraphrasing** – When one found the information which is perfect for the research paper, one has to read it and put it into own words. Further one has to make sure that there is no copying of verbatim more than two words in a row from the text which has found. If more than two words are used together, one has to use quotation marks. In simple words one has to write it again in altogether different words or language of his/her own.
- **Citing** – Another way to avoid plagiarism is citing. In doing this one can follow the document formatting guidelines i.e. APA, Harvard, MLA, Chicago, etc. as demanded in the research request. This mainly consists of addition of the author's name, date of the publication, title of work, name of the publication, volume and issue number, page numbers or similar information. Citing is a simple technique. If one do not cite properly, it may constitute plagiarism.
- **Quoting** – While quoting any source in the paper, one has to use the quote exactly the way it appears. In this scholarly world no one wants to be misquoted. Basically, a research scholar should be able to paraphrase the material effectively. No doubt, this process takes

time, but somewhere one can learn and do effectively. Thus, quoting must be done correctly so as to avoid plagiarism.

- **Citing Quotes** – Here, citing a quote is altogether different from citing paraphrased material. In this practice there is usually the addition of a page number, or a paragraph number in the case of web content which are used or followed in writing a paper.
- **Citing Own Material** - If someone is using the material from his own research paper which is written previously, then one has to cite himself. Here, one can treat the text the same as would if someone else wrote it. It may sound odd, but it should remember that using one's own material which one has used before is called self-plagiarism, and it is not acceptable.
- **Referencing** – Finally, the most common and important way to avoid plagiarism is writing or including a reference page or citation page at the end of the research paper. Importantly, this page must meet the document formatting guidelines which is demanded by the institution or authority. This is very specific and mainly includes name of the author, date of publication, title, and source referred to. [13]

Always remember that the responsibility to avoid plagiarism lies on to the writer. It becomes his/her responsibility to cite and reference everything used by him/her while preparing the research paper or article. He/she has to put quotes in quotation marks and indent quotes of significant length so that they stand out from the rest of the text in his/her paper. This marks them as not writer's own words. Most importantly, one should acknowledge the source within the text and in full within the bibliography at the end of the paper. Even, where paraphrasing is used a writer should acknowledge it as the source of the ideas. Therefore, it is always advisable to go through some useful sites, which help and keep away the writer from wrongful act such as plagiarism. And the last but not least, do not leave the work until the last minute, in order to avoid panic plagiarism.

**Concluding Remarks:** At the end this article, the author would like say that it should always keep in mind that plagiarism, intentional or not, comes with penalties. Therefore, using appropriate tools and taking the required time to cite and developing original material is important to the academicians, researcher scholars, and the professionals. Every writer should take due efforts to know what constitutes plagiarism and to know how to cite properly. A writer should develop his/her correct writing process by following the guidelines available for this purpose. Moreover, a writer should develop as a practice which leads to ethical behaviour and conduct. At last, it is up to the writer whether to plagiarise or not, either intentionally or not.

**References:**

- Nelson, V. and Robert S. (2007). *Library Plagiarism Policies*. Association of College and Research Libraries. ISBN: 0-8389-8416-9. p. 65. Available from: [https://en.wikipedia.org/wiki/Random\\_House\\_Webster%27s\\_Unabridged\\_Dictionary](https://en.wikipedia.org/wiki/Random_House_Webster%27s_Unabridged_Dictionary).
- Random House Webster's Unabridged Online Dictionary*, (2<sup>nd</sup> Revised Edition, 2002). Random House Reference. ISBN-10: 0375425993, ISBN-13: 978-0375425998. Available from: <https://unabridged.merriam-webster.com>.

- Oxford English Dictionary (OED) (3<sup>rd</sup> Revised Edition, 2010). Oxford University Press. (Print) ISBN-13: 9780199571123, (Online) eISBN: 9780191727665. Available from: <http://www.oed.com>.*
- Valpy - Etymological Dictionary of the Latin Language. (Edition 2005). Adamant Media Corporation. ISBN-10: 1402173849, ISBN-13: 978-1402173844. Available from: <https://www.amazon.com/Etymological-Dictionary-Language-Francis-Jackson/dp/1402173849>. p. 345.*
- Collins English Dictionary - Complete and Unabridged (Digital Edition 2012). William Collins Sons & Co. Ltd. HarperCollins Publishers LLC. ISBN: 9780007522743. Available from: <https://www.harpercollins.com>, <https://www.harpercollins.co.uk>.*
- Gipp, Bela (2014). Citation-based Plagiarism Detection: Detecting Disguised and Cross-language Plagiarism using Citation Pattern Analysis. Springer Vieweg. eBook ISBN: 978-3-658-06394-8, Softcover ISBN: 978-3-658-06393-1, ISBN: 978-3-658-06393-1. p.10. Available from: <http://www.springer.com>.*
- Fishman, Teddi (2009). We know It When We See It Is Not Good Enough: Toward a Standard Definition of Plagiarism that Transcends Theft, Fraud, and Copyright (PDF). Proceedings of the 4<sup>th</sup> Asia Pacific Conference on Educational Integrity. (4APCEI) 28–30 September, 2009, University of Wollongong NSW Australia. p.5. Available from: <http://www.bmartin.cc>.*
- Calvano, B. (2012). Plagiarism in Higher Education. iThenticate, Turnitin LLC. p.1. Available from: <http://www.ithenticate.com/plagiarism-detection-blog/bid/87315/Plagiarism-in-Higher-Education-Research>, <http://www.ithenticate.com>.*
- Undergraduate Plagiarism Policy. University of Pittsburgh. (2008). Available from: <http://www.frenchanditalian.pitt.edu/undergraduate/about/plagiarism.php>, <http://www.english.pitt.edu/undergraduate/understand-and-avoid-plagiarism>.*
- Avoiding Plagiarism: Mastering the Art of Scholarship. Student Judicial Affairs. University of California, Davis. (2003) Available from: <http://sja.ucdavis.edu/avoid.htm>.*
- Code of Academic Conduct. Student Judicial Affairs. University of California, Davis. (2003). Available from: <http://sja.ucdavis.edu/pdf/CAC.pdf>.*
- Hansen, Katharine. 10 Tips for Avoiding Plagiarism. MyCollegeSuccessStory.com: Empowering Academic, College, and Career Success. Available from: <http://www.mycollegesuccessstory.com/academic-success-tools/avoiding-plagiarism.html>, <http://www.empoweringsites.com>.*
- 6 Ways to Avoid Plagiarism in Research Papers. Writecheck (BETA), Turnitin, LLC. Available from: Available from: <http://www.writecheck.com/ways-to-avoid-plagiarism>.*

## CHALLENGES OF TRIBAL EDUCATION IN PALGHAR DISTRICT

**Dr. Rekha Gore**, *D.G. Ruparel College, History Department, Matunga Road, Mumbai:-  
400016. Email Id:- dr.rekhagore@gmail.com*

### Objective

- To highlight the vulnerable education in Palghar
- To focus on discrimination in education

**Introduction:** India is home to a large variety of indigenous people. The Scheduled Tribe population represents one of the most economically impoverished and marginalized groups in India. With a population of more than 10.2 crore, India has a single largest tribal population in the world. This constitutes 8.6 per cent of the total population of the country [Census of India, 2011. Prof. Amartya Sen recently emphasized education as an important parameter for any inclusive growth in an economy. So, education is an important avenue for upgrading the economic and social conditions of the Scheduled Tribes. Literacy and education attainment are powerful indicators of social and economic development among the backward group in India. This disparity is even more marked among Scheduled Tribe women, who has the lowest literacy rates in the country [Maharashtra, 2005]. The male-female gap in literacy and educational attainment among the Scheduled Tribes [STs] is significant. Despite the sincere and concerted efforts by the government for the overall development of the STs, they are still backward as they are not aware of most of the programmes and policies made for their development. This is mainly due to the high incidence of illiteracy and very low level of education among the tribal people. Hence, the education status of the STs and the role of governance in this direction are highly essential. It is Well known that the educational background of tribes is very discouraging as compared to the rest of the population. So, education is an important avenue for upgrading the economic and social condition of the Schedule Tribes. In this context, this paper is an attempt to analyse the status of education of the Sts of in Palghar District (Maharashtra). Education being a basic component of human development. Education reinforces the socioeconomic dynamics of society towards equality and promotes a social order conducive to an egalitarian ethos. The principle of equality or nondiscrimination is the foundation of international human rights law. Discrimination results from deep-rooted attitudes of population and it are for governments to take the lead to induce the change in attitudes through education. In short, education is the best social investment. This significance of quality higher education. India's record in education development is a mixed bag of success and failures. Despite the directive principle of state policy for free and compulsory education to every up to the **age of 14 years** in article 45 [now a **fundamental right in articles 21A**], nearly one-third of the population remains illiterate, most of whom are young. There remain critical gaps in the availability of infrastructural facilities and qualities equipment and personnel in the education system. On the other hand, the national literacy percentage has increased from 18.3 in 1951 to 74.04 as per census 2011. Education reinforces

the socioeconomic dynamics of the society towards equality promoting social order which facilitates an egalitarian ethos. The principles of equality and nondiscrimination is the foundation of international human rights law. Education serves as the best social investment. Higher education exercises direct influences on national productivity. Universities and higher education institutions support knowledge driven economic growth and poverty reduction in developing countries in a number of ways. They provide training for a qualified and adaptable labour force which includes high-level scientists, professionals, and technicians, teachers in basic and secondary education, civil service personal and business leader. They generate new knowledge and build the capacity to access existing store of global knowledge and to adapt that knowledge to local use. In addition to providing the capability to integrate and create synergy among these areas, access to higher education offer better employment and income opportunities to underprivileged students, thereby enhancing equity, the norms, values, attitudes. The following are a few of them which were accepted: free compulsory education; common school system; introduction of the 10+2+3 system of education; vocationalisation of school education; and education for moral, social and spiritual values. In fact, **Kothari Commission** was probably the last serious effort made in our country to reform the education system.

**Long Term Development:** \_‘Long term development which includes the establishment of basic economic and social institutions necessary for economic growth‘‘ The role of education in reducing poverty, both at individual and national levels, in improving the health and nutritional status of population, in reducing fertility and population growth and thereby contributing to demographic transition, in strengthening democratic forces and in ensuring civil and political rights of the people – is well documented In the present context of transformation into knowledge societies, higher education provides not just educated workers, but knowledge workers to the growth of the economy. Higher education in an Instrument of development. In India, there exists a wide gap in the level of income and development between various states. There is also a great rural – urban socio – economic divide within the states. The Greater Majority still remains outside the purview of quality. Thus, there exist the demand supply gap in higher education on the hand and a low gross enrollment ratio on the other. The same goes for **regional disparities** in facilities as well, which further widens the gap.

**Palghar Tribes:** There was a time when the Indian sub-continent was blessed with an amazing variety of natural life, made possible by diverse geographical features and climatic conditions. Innumerable early communities, which we now refer to as tribes or adivasis, lived as an integral part of Nature, harvesting its bounties. Even though each tribe had its own lifestyle, specific habitat, food habits, customs and rituals, it shared a common divinity with the others. Nature was their God, their guide, their very reason for being. However, as we all are so acutely aware, radical change has mutated the sub-continent. The abundance of natural life has been depleted and towns, cities and metropolises have mushroomed. Even though these changes have happened, tribal communities still persist, holding on to their way of life, in settlements spanning the length and breadth of the country – sometimes living in little pockets

very close to highly civilized and modern cities, sometimes far away in isolated cloisters, along the sea coast, in dense forests or snow clad mountains. They are a vital part of the country's living heritage. In the state of Maharashtra alone there are communities belonging to **forty-seven** different tribes living along the western coast of India. This accounts for 9% of the total population and ranks third with respect to the tribal population in the country. Few of the communities living here are the **Malhar koli, Warlis, kokana, katkari**. Although in recent years their decorative art has been celebrated and has gained wide acceptance, little is known about these self-effacing people. Now onwards these tribes will be referred by Adivasi in following paragraphs in this article. The indigenous tribal people who have lived in the Thane district of Maharashtra for centuries. They are originally hunters/farmers but with deforestation and access denied to the existing forests, paddy farming is now the main stay of their existence. Even today, their entire life revolves around nature. Seasons dominate every aspect of their life with the year getting divided into various periods of rice growing. All the work is done manually with no help whatsoever of machines. The entire family, including women and young children, get engrossed in the work every day throughout the year, leaving old women at home to look after the babies.

**Tribal Occupation & Culture:** The Tribal community has developed an astonishing set of eco-indicators with the help of which they can predict the coming of the monsoon. Minute changes in sunrise and sunset and the cry of a particular bird, herald the onset of the rainy season – ushering in a period of plenty and cause for joy. The first rain in June announces the birth of a new cycle of life. The seeds are sown and the first seedling that sprouts is celebrated as a gift from Dharitri (mother earth) with a rite known as Koli Khaane (Kaavali). The seedling is cooked into a curry and shared by all the family members. Transplanting of seedlings takes place after this rite has been performed. From June to September, they are busy in their fields, managing water, weeding, tightening plants that have become loose, chasing away rodents and cutting the abundance of grass and storing them for their cattle. Nature responds and by September the crops are standing tall in the fields. We then harvest the crops, but only after Saavari the field Goddess is thanked for her generosity.

**Celebration:** After harvesting, it's time to celebrate Diwali. Entire clans come together under the same roof and prepare to eat the newly harvested grain for the first time. This is accompanied by joyous dancing, singing, drinking and merry-making. More celebrations follow with the propitiation of Vaghadeva (the Tiger God), Kaansaari (the Corn Goddess) and a host of other Gods and Goddesses. The harvest is threshed and the new grain is brought home and stored in a kaanagii which is a circular rice bin.

**Dwelling System:** The Adivasi abodes, food habits and clothing point to an inherent austerity. Their homes are windowless spacious simple structures of wood, bamboo, karvi reeds, earth and cow dung with roofs of straw and dried leaves. Inside, the rooms are dark, empty and bare, except for a handful of possessions. Although we share our living spaces with our domestic animals like dogs, goats, hens and even cows cleanliness is overtly apparent. Surprisingly, there is no furniture and no storage containers like boxes, cupboards or trunks. The only food

stored is the rice in the kaangiis. All the clothes that we possess hang on a rope tied across the room. But nowadays this picture change for few peoples Their food is simple, varied and nutritious and consists of rice along with pulses like vari, udid, tur and chavli. This is accompanied by fresh and dried fish. It is only on festive days that they include the meat of a fowl or goat. Our clothing is also scanty and minimal, yet practical – allowing for free movement. Men wear a loin cloth and sometimes a thin kurta and a turban. Women wear a nine yard sari which is tightly wound around their waist and thighs. The upper part of the body is covered by a choli and a piece of cloth called the padar. Little girls wear skirts and cholis while little boys wear shorts or nothing at all. The women's clothes are brightly coloured and on festive days they look gorgeous with their hair well oiled and decorated with flowers, intricate pins and coloured ribbons. But nowadays many people's wears the modern dress codes

**Education:** The Adivasi seem to have no material possessions. Except for a single gold bead threaded in black beads given at the time of marriage, the women have no gold or silver jewellery. Young children now go to government schools in the nearby villages, but very few of them get good chance for quality education, if any, pursue higher education. Even though there is no doctor in the village we people are relatively healthy. This is because traditional knowledge about medicinal plants is passed on down generations and is still practiced.

**Traditional Art:** The Adivasis are well known today amongst elite circles for their unique form of decorative art. We paint life with an intricacy of detail and an amazingly beautiful way of depicting every aspect that surrounds their daily routine. Traditionally, they painted on walls during the time of celebrations or for auspicious occasions but gradually over the years the images and themes were also transferred to small curios made of bamboo, cloth, pots of mud and dried bottle gourd. One of the main themes that occur in their paintings is that of people dancing in spirals and open-ended circles. For the Adivasi, time is akin to a circle – with cycles within cycles repeating themselves endlessly. They see themselves as joyous dancers in this time frame. This cyclic nature of time is played out in all spheres of their life and can be best seen in their annual cycle of work, thanksgiving, enjoyment and work again. Their art also expresses an interesting aspect of their inherent philosophy, that of austerity. All their stories, with its various moods and nuances are expressed with just two basic colours – the brown of the earth and the white of the rice paste. The Adivasi paintings are well known by world as “**Warli painting**”. Our paintings prominently depict tigers, corn fields, rats, cockroaches, horses, snakes, peacocks and other manifestations of nature. This reflects the unique relationship that we share with Nature. A Adivasi, brings out the relationship between his tribe and the rest of Nature. The forest is full of friends and the Adivasi will only take as much as is essential for survival.

**British Rule:** Between 1800 and 1947, Thane was under British rule. The Adivasi was marginalized and impoverished on many fronts. One of the most important policy decisions that affected them was that their community land was converted into ownership land, to facilitate tax collection. In 1807, The East India Company passed a proclamation that

transferred the rights over all community forests in the country to the East India Company while in 1878; **the British passed an act that made the Adivasi an illegal trespasser in his own forest.** These policies changed the status of this tribal group, from a self sufficient and independent tribe, with adequate resources and unlimited wisdom, to a tribe of serfs and bonded labourers. At Present, the Adviasis continue to fight to regain access to a tiny fraction of the land that was theirs, and access to the forest that they have lived off and protected for ages. Today, the Adviasis are being denied their rights to forest and land in the name of providing protection to the tiger and the forest. It is time that these gentle people are given back their rightful place in the forest, as ‘Jungle cha raja’ or king of the jungle. It is time Pardhi (hunter) was reunited with Hirva (nature). The biggest cultural lost to Adivasi community is the impact of missionaries in rural area, the peoples influence by Christianity creates partitions in adivasi community. This will be great problem for adivasi community in near future. But new generation nowadays aware about the missionaries’ hidden agenda & they are openly support the pure tribal unity without any external interference. All educated tribal’s should come together for our community development work, is today’s need

**Palghar Population:** Palghar Taluka of Thane district has **total population of 550,166** as per the Census 2011. Out of which 288,514 are males while 261,652 are females. In 2011 there were total 128,526 families residing in Palghar Taluka. The **Average Sex Ratio of Palghar Taluka is 907**. As per **Census 2011** out of total population, 41% people lives in Urban areas while 59% lives in the Rural areas. The average **literacy rate in urban areas** is 88.1% while that in the rural areas is **75.6%**. Also the Sex Ratio of Urban areas in Palghar Taluka is 827 while that of Rural areas is 967. The population of Children of age 0-6 years in Palghar Taluka is 69554 which is 13% of the total population. There are 35520 male children and 34034 female children between the age 0-6 years. **Thus as per the Census 2011 the Child Sex Ratio of Palghar Taluka is 958** which is greater than Average Sex Ratio ( 907 ) of Palghar Taluka.

**The total literacy rate of Palghar Taluka is 80.69%**. The male literacy rate is 76.34% and the female literacy rate is 64.05% in Palghar Taluka.

**Palghar Taluka Data:** As per the Population Census 2011 data, following are some quick facts about Palghar Taluka.

	<b>Total</b>	<b>Male</b>	<b>Female</b>
Literacy	80.69%	76.34%	64.05%
Scheduled Tribe	168,152	83,424	84,728
Illiterate	162,340	68,274	94,066
Maharashtra Literacy Rate of ST	82.9 percent	89.8 percent	75.5 percent

**Schedule Tribe (ST) were 30.6% of total population in Palghar Taluka.**

	<b>Total</b>	<b>Male</b>	<b>Female</b>
Schedule Tribe	168,152	83,424	84,728

**Sources: GOI, Ministry of Human Resource Development, Selected Educational Statistics 2004-05 and NSSO**



**Lack of Communication:** In rural areas, the demand for education among the poorer sections of the population is much lower than it is in urban areas. Poor women in rural areas have to work in order to cope with their daily living and do not place a high value on education unless it is linked to vocational training. Additionally, in remote rural areas where a good infrastructure is lacking, tribal women find it difficult to have access to schools. Many are not even aware of the existence of schools in their areas due to lack of communications and networks.

**Scheduled Tribes:** The district is aptly known as the home of aboriginals who are locally known as " Adivasis ". They account for 25.40 per cent of the total district population and are mostly concentrated in rural areas. This proportion is the second largest among the districts in Maharashtra. The district scheduled tribe population accounts for 19.62 per cent of the corresponding total in the State. The taluka-wise population of scheduled tribes in the district is given in **table**. Scheduled tribe population is found in considerable numbers throughout the district though mostly concentrated in Dahanu, Jawhar, Shahapur, Talasari and Mokhada talukas which are classed as scheduled areas.

**The following statement gives the percentage of Scheduled Tribes to total population in some talukas in the thane district:**

Taluka	Percentage of scheduled tribes to total population
Palghar Taluka	35.12
Dahanu Taluka	64.93
Talasari Taluka	88.31
Jawhar Taluka	88.98
Mokhada Taluka	92.62
Wads Taluka	48.85
Shahapur Taluka	32.01

**The comparative position of scheduled tribe population in 1951, 1961 and 1971 in the district is as follows:**

Year	Total Scheduled Tribe population	Percentage to total district population		
		Total	Rural	Urban
1951	2,84,949	18.77	26.89	3.40
1961	5,00,558	30.29	41.85	3.58
1971	5,79,538	25.40	38.60	2.17

**Sources: - Census Report Year 1951, 1961 & 1971.**

The phenomenal growth in Scheduled Tribe population in 1961 and 1971 was partly due to the addition of Koli Malhar to the list of scheduled tribes in the district in 1956 which resulted in an addition of about 90,000 in 1961. Varlis with 2,61,753 persons in 1971 accounting for 45.16 per cent of the district scheduled tribe population are numerically the largest. among all the tribes. The percentage distribution of important tribes to the district scheduled tribe population is shown below according to their numerical strength:

<b>Scheduled tribe</b>	<b>Percentage of each tribe to total scheduled tribe population</b>
Varli	45.16
<b>Koli Malhar</b>	17.19
<b>Thakur</b>	13.04
<b>Kathodi</b>	9.72
<b>Kokna</b>	5.69
<b>Mahadev Koli</b>	5.12

Of the title Scheduled Tribe population, 48.15 per cent or 2,79,967 are lame and educated as per 1971 Census.

The distribution of scheduled tribe population by literacy is given in

The Mahadev Kolis are more advanced in literacy than other tribals, while the Kathodies are the most backward in the district.

The percentage of literates among some scheduled tribes in the district in 1971 is given in the following statement:

<b>Scheduled tribe</b>	<b>Percentage of literates and educated g each scheduled tribe</b>
Mahadev Koli	26.30
Kokna	13.55
Koli Malhar	10.13
Varli	8.01
Thakur	7.21
Kathodi	3.05

Women from scheduled tribes in the district appear to be more backward as regards literacy as they account for only 13.33 per cent of the total literate population of scheduled tribes.

**Source** Bureau of Economics and Statistics. Government of Maharashtra.) 34,941 students (26,221 boys and 8,720 girls) were granted free educational facilities and other concessions by Government in the district. According to the 1872 Census, the early population of the district included nine leading tribes with a total strength of nearly 3,80,000 souls or forty-five per cent of the total population. These were, in order of strength, **Agris 1.20,000, Kolis both sea Kolis and hill Kolis 80,000, Varlis 70,000, Thakurs 55,500, Kathkaris 34,000, Dublas 8,600, Vaitis 4,500, Konkans 4,500 and Dhodiahs 3,000.** Except the Mahadev Kolis, who are said to have come from the Deccan in the fourteenth century, these tribes seem to have been settled in the district from pre-historic times.

**The outsiders Rehabilitation:** The number of husbandmen seems to have been little increased by outside settlers. But more than one set of labourers have come from Gujarat, Upper India and the Deccan. Several classes of the people, though they cannot tell when or why they came, are of sufficiently marked appearance, speech and dress, to show that they are comparatively late arrivals. Of these the most noticeable are, from Sindh, Halvais or sweetmeat-sellers ; from Upper India, Kachis or market gardeners, and different classes of Pardeshis chiefly messengers and servants. From Gujarat, almost all of whom dress. in Gujarat fashion and speak Gujarati at

home, there are of Brahmans, Audichs, Bhatelas, Dashaharas, Jambus, Modhs, Nagars, Saraswats and Tapodhans ; of traders, Bhansalis, Bhatias, Golas, Lohanas and Vanias ; of craftsmen, Kataris or wood-turners, Kumbhars or potters and Lohars or black-smiths ; of husbandmen, Bath, Kamlis and Sorathias ; of shepherds, Bharvads ; of fishers, Kharpatils, Kharvis, Mangelas, Machhis and Mitne-Machhis ; of servants, Nhavis who seldom stay for more than two or three years ; of unsettled tribes, Waghris ; and of depressed classes, Bhangis and Dheds. From the Deccan have come, of Brahmans, Deshastha, Golaks, Kanojas : Karhadas, some Madhyandins, and Tailangs ; of traders Komtis and Lingayats ; of craftsmen, Kumbhars or potters, Patharvats or AO= masons, Saris or weavers, Sangars or blanket-makers, Lohars or black-smiths, and Sonars or gold-smiths ; of husbandmen, Kunbis and Marathas known in the Konkan as Ghatis, or highlanders, who are labourers and porters ; of servants, Nhavis or barbers and Parits or washermen ; and of unsettled tribes, Buruds or bamboo workers and Vadars or earth-diggers. From Ratnagiri and Kolaba have come, of Brahmans, Devrukhas, Javals, Kirvants, Sarasvats and Shenvis ; of husbandmen, Hetkaris ; of servants, as constables and messengers, Marathas and Kunbis, and of craftsmen, Chambhars from Chaul and Dabhol. Among Musalmans several classes show their foreign origin and recent arrival, Bohora and Meman traders from Gujarat through Bombay, and Momin and Benares weavers from Upper India. There has also been an increase in the number of Gujarat Parsi liquor-contractors and Government servants, who are found all over the district, and of traders and tavern-keepers who are settled along the railway lines and near Bombay.

These additions to the Palghar population may roughly be said to have divided the district into four sections ; the rugged north-east where the early tribes remain almost unmixed ; the coast whose people have a strong element from beyond the sea, chiefly from Gujarat and Kathiawar ; the great central Vaitarna valley the head- quarters of the Talheri tribe whose surnames show an early Rajput or foreign element ; and in the south, along the valley of the Ulhas where the leading tribes are, or at least call themselves, Marathas.

**Conclusion:**

- We need to expand higher education, as we have to raise the enrolment ratio in higher education to above 20 per cent for the economy to rapidly progress. But this does not mean that there can be proliferation of low quality institution all over the country. That would indeed be counterproductive . There is need for a strong regulatory mechanism that would ensure higher quality and standard.
- Higher education develops and nurtures values. It is important that special efforts are made to preserve and promote educational values as thirst for knowledge, critical thinking, and search for truth, and more importantly to inculcate universal human values such as peace, tolerance, non-violence , love ,patriotism, social welfare, etc., through education.
- We hope all tribal's will come together at common stage & ensure our tribal success!
- Now days many of us are highly qualified across the professions.

**References**

- Government of Maharashtra, October, 2013, *Report of the High Level Committee on Balanced Regional development Issues in Maharashtra*, Planning department, Mumbai.
- Government of Maharashtra, 2014, *Annual Plan 2014-15: District Plan Part-4, Planning Department*, Government of Maharashtra, Mumbai.
- Government of Maharashtra & UNICEF, *Children in Maharashtra: An Atlas of Social Indicators*, Planning department, Mumbai.
- Hussain, S., 2009, *Nandurbar: Rich District – Poor People*, UNICEF, Mumbai.
- Kokate, C.N. and R. S. Solunke, 2011, *The Tribal Development in Maharashtra - A Case Study*, International Referred Research Journal, February, Vol.I, Issue 17.
- Planning Commission, 2005, D.O.No.M-13011/3/2005-SP-Co. dated 31-10-2005 and D.O.No.M-13054/2/2005-BC. dated 28-12-2005.
- Prasad, Anamalai, 1996, *Training Manual on the Provision of Panchayats (Extension to scheduled Areas) act*, Centre for Equity and Social development.
- Rajaretnam, T., Parasuraman, S., and Sunil, R, 2010, *Vidarbha Baseline Survey of Rural Livelihoods*, Tata institute of Social sciences, Mumbai.
- SEEDS (Socio Economic and Educational Development Society), 2007, *Research Study on Livelihood options, Assets creation out of special component Plan (SCP) & tribal Sub-Plan (TSP) schemes and its Impact among SCs and STs in India*, (Sponsored by Planning Commission, Government of India), New Delhi.
- Tata Institute of social science, (unpublished), *Tribal Atlas, TISS*, Mumbai.
- TDD (Tribal Development Department, Government of Maharashtra), 2013, *Annual Tribal SubPlan 2013-14*, Mumbai.
- TDD (Tribal Development Department), 2014, *Programmes and Budget Estimate for 2014-15*.
- Tribhuwan, R., 2006, *Functional Review of Maharashtra State Departments: Detailed Report III Tribal Development Department, Research and Documentation Centre, YASHADA, Pune*.
- YASHADA (Yashwantrao Chavan Academy of Development Administration), 2014, *Maharashtra Human Development Report: Towards Inclusive Human Development 2012*, Sage India, New Delhi.
- Hand Book Maharashtra District*, State Government of Maharashtra Press 2001 - 11

**PROMOTING RESEARCH FOR QUALITY OF TEACHING AND LEARNING IN  
HIGHER EDUCATION**

**K. Shivakumar**, *Research Scholar, (Ph.D) Department of Education, Osmania University,  
Hyderabad, Telangana. [kandekarshiva@gmail.com](mailto:kandekarshiva@gmail.com)*

**Abstract**

*Research in education is necessary in order to provide a basis for educational planning, is one the main fields that should be embed in higher education curriculum and in public discussion. Academic research remains or prime source of knowledge and innovation for higher education institutions that strive to grow, expand and develop their academic reputation and standards. Content of this paper is organized around a number of issues that concern policymakers, educators and researchers. The aim of this paper is to develop through understand of teaching and learning to the research development process. Qualities in teaching in higher education institutions to ensure that the education they offer meet the expectations of students and the requirements of employee both today and for the future. The purpose of research is to analyses the effectiveness of opportunities of in a streaming the students research proceeds which furthers the quality of learning outcomes and research based academic studies are provided in higher education.*

**Keywords:** *Quality education, promoting research, Teaching.*

**Introduction:** One of the important challenges for universities and academic institutions today is their continuation as the backbone of society, providing the knowledge and educating young people for addressing complex global challenges. The gap between research and academic studies through a research-based approach to education by creating environment that includes vital integration of research activity and academic studies, new emphasis and support for innovations, better preparation of students as future professionals (Deem, 2007; Haverhals, 2007; Simons, 2006; Strazdins, 2007; Tranter, 2007; Velez, 1996). Teaching is demanding and complex in nature. Those individuals who make it a lifelong career, under the right circumstances, become much better at it over time. This is most likely to happen when teachers get good feedback and guidance about their performance tied to meaningful opportunities to improve. As their skills evolve over a well-defined continuum of growth, teachers must be offered challenging and interesting career paths and professional opportunities to use their expertise in a variety of interesting roles. Such levels of responsibility and achievement in teaching will involve giving classroom teachers greater influence over schooling through a wider variety of roles, both in their classrooms and in leading the work of schools and the profession. Logically, these new opportunities are linked to an improved, robust, growth-oriented model of teacher evaluation. In contrast to our vision of a vibrant profession, the current career path in teaching is a flat and narrow one. Regardless of their skills as teachers and leaders, too many teachers are limited by the current system.

**Need and significance of the study:** Exploring the new trends and new facets of higher education and research has assumed added significance in the globalized world of the twenty-first century. Since the strength of today's economies is increasingly based on how well they can harness knowledge and expertise, the role of the higher education system has become crucial in international competition. It is this system that determines an economy's capacity to

adapt swiftly to new situations, new markets and new technologies: countries with the least competitive higher education systems incur more substantial costs than others in our globalized world. Globalization is exerting a deeper impact on higher education and research than ever before. Industry and services have been off-shoring into emerging countries at a fast pace, highlighting the crucial role of technological sophistication and, more generally speaking, the importance of the knowledge economy in international competition.

**Teaching as a research-based profession:** The starting point for this chapter is an assumption that teaching should be an evidence-led and research-based profession: that is that teachers should be expected to both be aware of relevant research about teaching and learning, and to also be capable of undertaking small-scale classroom research to address professional issues and problems that arise in their work. This assumption is based upon the nature of teaching itself. It will be argued below that given current understandings of the nature of learning, teaching must be seen as a profession (with the accompanying expectations and responsibilities of a profession) rather than a skilled job for which a person can simply be trained. The professional responsibilities of a teacher, consequently, cannot be understood simply in terms of acquiring ‘mechanical’ teaching skills, but rather need to be seen in terms of developing professional expertise through the interplay of practice, scholarship and enquiry. The present paper develops this argument, and offers as an example of what is possible, a case study describing how one University has responded provides elements of research training within the particular context of acquiring ‘Qualified Teacher Status’ through post-graduate study in the UK.

**Review of literature:** Defining the distinctive nature of the university –Teaching and research are central to the delivery of higher education. For many observers, the relationship between teaching and research is fundamental in defining the distinctive nature of the university as an institution (Taylor 2007). But what is the nature of the relationship between teaching and research, the so called teaching: research nexus. Ever since Boyer (1990) defined the scholarship of teaching as distinct from the scholarship of research, the issue of the links tying teaching to research has been the most controversial one among scholars writing on Quality Teaching. Some scholars suggest that there is a strong, symbiotic link between teaching and research. Benowski (1991), teaching should not be separated from research. Indeed, —professors teach best what they know best (Benowski, 1991). Stephenson (2001) found that one of the characteristics of extraordinary teachers is that they have passion for their field. —Good researchers are good teachers!: one of the myths of Higher Education? Gibbs (1995) wrote the most radical critique of the assumption, common in many universities, that quality in teaching flows from quality in research. For Gibbs, as for Terenzini and Pascarella (1994), the belief that good researchers are good teachers is one of the myths of higher education. -The notion that teaching excellence flows directly from research excellence is absurd: they are in direct conflict, compete for academics attention and only one of them is rewarded (Gibbs, 1995).

### **Objectives**

1. To study the quality research in higher education.
2. To study the out a successful research in Quality teaching initiative.
3. To study the support Quality Teaching.

**Operational definitions:** The definition of Quality Teaching depends on the meaning one chooses to give to the concept of quality.

–Quality” is indeed a multi-layered and complex word. As Biggs (2001) points out, –quality can alternatively define an outcome, a property, or a process. Therefore it is hardly surprising that the phrase —Quality Teachingl has been given several definitions.

**Quality of research:** sound methodology from start to finish, good sampling, applied research questions.

**A quality teacher** is one who has a positive effect on student learning and development through a combination of content mastery, command of a broad set of pedagogic skills, and communications/interpersonal skills. To promote quality of the students” learning outcomes in the research-based academic studies Master’s students were offered various opportunities for research process in the framework of the programme. In the next chapter we describe which of them Master’s students have made use of, and how they have promoted the quality of students” learning outcomes.

**Quality research in higher education institute to be achieved and promoted:** create peer reviewing committee (at institutional level), prepare a so called gold standard publication checklist for higher educational teachers teachers, provide financial support, allow for flexible and light teaching load, provide incentives for well research achievers, allow for promotion of good researchers, support for each other (research teams), ongoing professional development, ability to —buy outl a teaching load to conduct research, publication should be promoted in many ways like other university lecturers must receive some credits, academic publications can be improved by following journals’ instructions and publication can positively impact higher education by conducting quality research studies and support them according to the quality assurance rules and regulations. It is very important to have between research and teaching. Because when the research is based on teaching it will provide hands on implications for other teachers. To realize the main objectives of this small scale study, teacher researchers believed that quality research could be affected by institutional, international, and logistical factors. Quality teaching is focused on student achievement (including social outcomes) and facilities high standards of student outcomes for heterogeneous groups of students. Pedagogical practices enable classes and other learning groupings to work as caring, inclusive, and cohesive learning communities. The learning community concept has arisen out of the research literature and denotes both a central focus on learning and the interdependence of the social and the academic in optimizing learning conditions. Student motivation is optimized and students' aspirations are supported and extended. Caring and support is generated through the practices and interactions of teachers and students. Teaching and tasks are structured to support, and students demonstrate, active learning orientations. Teaching includes specific

training in collaborative group work with individual accountability mechanisms, and students demonstrate effective co-operative and social skills that enable group processes to facilitate learning for all participants. Students help each other with resource access and provide elaborated explanations. Effective links are created between school and other cultural contexts in which students are socialized, to facilitate learning. Teachers ensure that student experiences of instruction have known relationships to other cultural contexts in which the students have been/are socialized. Student diversity is utilized effectively as a pedagogical resource. Quality teaching respects and affirms cultural identity and optimizes educational opportunities. Its effects are maximized when supported by effective school-home partnership practices focused on student learning. School-home partnerships that have shown the most positive impacts on student outcomes have student learning as their focus. When educators enable quality alignments in practices between teachers and parent/caregivers to support learning and skill development then student achievement can be optimized. Teachers can take agency in encouraging, scaffolding and enabling student-parent/caregiver dialogue around school learning. Quality homework can have particularly positive impacts on student learning. The effectiveness of the homework is particularly dependent upon the teacher's ability to construct, resource, scaffold and provide feedback upon appropriate homework tasks that support in-class learning for diverse students and do not unnecessarily fatigue and frustrate students. Teachers have knowledge of the nature of student learning processes in the curriculum area, can interpret student behavior in the light of this knowledge and are responsive, creative and effective in facilitating learning processes. Classroom management enables the teacher to be responsive to diverse learners. Responsive teaching is important for all learners and particularly critical for students with special needs. Opportunity to learn is effective and sufficient. Curriculum content addresses diversity appropriately and effectively. Multiple task contexts support learning cycles. Curriculum goals, resources including ICT usage, task design, teaching and school practices are effectively aligned. The school maintains an 'unrelenting focus on student achievement and learning. Whole school alignment optimizes opportunity to learn, particularly in language immersion, literacy, ICT, social studies and health. Whole school alignment enables a common language, teacher collaboration and reflection and other synergies around improving teaching. Whole school alignment minimizes disruptions to quality teaching and sustains continuous improvement. School policies and practices initiate, and support teachers in maintaining, school-home partnerships focused on learning. Pedagogy scaffolds and provides appropriate feedback on students' task engagement. The teacher provides whatever assistance diverse students need to enable them to engage in learning activities productively, for example, teacher use of prompts, questions, and appropriate resources including social resources. Teaching develops all students' information skills and ensures students' ready access to resources when needed to assist the learning process. Pedagogy promotes learning orientations, student self-regulation, metacognitive strategies and thoughtful student discourse. Quality teaching promotes learning orientations



and student self-regulation. Teachers and students engage constructively in goal-oriented assessment.

**Recommendations**

1. Create a career ladder that defines and compensates tiered levels of teaching expertise.
2. Expand teachers' roles and responsibilities.
3. Develop a well-funded system fostering equity and quality change.
4. Ensure steady, long-term funding to sustain a new compensation system.
5. Provide supports to bring high-quality teachers to high-needs schools.
6. Take time for deliberation and collaboration.

**Conclusion:** Higher education plays an essential role in society by creating new knowledge, transmitting it to students and fostering innovation. Quality teaching in higher education matters for student learning outcomes. But fostering quality teaching needs higher education .Institutions to ensure that the education they offer meets the expectations of students and the requirements of employers, both today and for the future.

**Bibliography**

- A. Brew, D. Boud *Teaching and research: establishing the vital link with learning Higher Education, 29 (3) (1995), pp. 261-273.*
- Brew, A. & Lucas, L. (2009). *Academic Research and Researchers. Society for Research in Higher Education/Open University Press.*
- L. Elton *Research and teaching: Conditions for a positive link Teaching in Higher Education, (1) (2001), pp. 43-56.*
- R. Lindsay, R. Breen, A. Jenkins *Academic research and teaching quality: the views of undergraduate and postgraduate students Studies in Higher Education, 27 (3) (2002), pp. 309-327.*

**A STUDY OF EMOTIONAL INTELLIGENCE WITH SELF AWARENESS OF  
SECONDARY SCHOOL STUDENTS**

**Dr. Joan Lopes, Asst. Professor, St. Teresa Institute of Education, Santacruz**

**Abstract**

*Our emotional intelligence has such a large impact in life, it is important that we fully develop our emotional skills. Here are the top five reasons why your emotional intelligence determines your success in life. To become effective learners, young people need to develop a strong sense of self worth and confidence in their abilities. They need to learn to take responsibility for their own learning and performance, and demonstrate persistence in the face of obstacles or setbacks Our education has always emphasised on academic results, but is that all we need to get success in our life? Why are students performing very well in schools and called as best students not able to handle the college / peer pressure, is this something which can't be handled or these students have never been taught about this. Emotions do affect how and what we learn. Being more aware of our emotions and reaction to it will help us manage the stress. Once we learn to understand our emotions we will be able to communicate better.*

**“If you want maximal productivity and if you want work that gets the best results, you want the people doing that work to be in the optimal brain state for the work. You are a person who can evict them from the zone of optimal performance by slothfully handling your own interactions with them. So it's up to you to take responsibility for your impact on their ability to work at their best”. -- Daniel Goleman**

Emotional intelligence is the capability of individuals to recognize their own and other people's emotions ,to discern between different feelings and label them appropriately, to use emotional intelligence as an support information to guide thinking and behaviour , and to manage or adjust emotions to adopt environment or to achieve one's goal. We have an emotional mind and a rational mind. In large part, without emotional intelligence it would be exceedingly difficult to interact effectively with others. Emotional intelligence allows us to perceive emotions, which then allows us to understand them. This enables us to understand another person's motivations so we can reason with them. Emotional intelligence further enables us to manage our own emotions. Without awareness, we are subject to our emotional states and will easily be caught up in them. Our emotional intelligence has such a large impact in life, it is important that we fully develop our emotional skills. Here are the top five reasons why your emotional intelligence determines your success in life.

**Self Awareness** is having a clear perception of your personality, including strengths, weaknesses, thoughts, beliefs, motivation, and emotions.

**Physical Health** – The ability to take care of our bodies and especially to manage our stress, which has an incredible impact on our overall wellness, is heavily tied to our emotional intelligence.

**Mental Well-Being** – Emotional intelligence affects our attitude and outlook on life. It can also help to alleviate anxiety and avoid depression and mood swings. A high level of emotional intelligence directly correlates to a positive attitude and happier outlook on life.

**Relationships** – By better understanding and managing our emotions, we are better able to communicate our feelings in a more constructive way. We are also better able to understand and relate to those with whom we are in relationships.

**Conflict Resolution** – When we can discern people's emotions and empathize with their perspective, it's much easier to resolve conflicts or possibly avoid them before they start. We are also better at negotiation due to the very nature of our ability to understand the needs and desires of others.

**Success** – Higher emotional intelligence helps us to be stronger internal motivators, which can reduce procrastination, increase self-confidence, and improve our ability to focus on a goal. Emotional intelligence can be thought of as set of skills that help learners to be successful in school at work and in relationship. As a consequence of this ,they are more likely have robust self esteem and be better placed to cope with disappointment and setbacks. To become effective learners, young people need to develop a strong sense of self worth and confidence in their abilities. They need to learn to take responsibility for their own learning and performance, and demonstrate persistence in the face of obstacles or setbacks. There are two kinds of self-awareness. *Private self-awareness* is when your child is aware of something about himself that other people might not be. For example, say your child has to read in front of the class. Recognizing the feeling of butterflies in his stomach as a signal that he's nervous is private self-awareness. *Public self-awareness* is when your child is aware of how other people are seeing him. This can be hard for kids who have trouble reading social cues. For example, say your child stands very close to other kids while talking. Noticing that he is making others uncomfortable and taking a step back is an example of public self-awareness. Studies show that people with high EI have greater mental health, job performance and leadership skills. In general emotional intelligence relates to the leadership quality. Their future studies which have begun to provide evidence to help characterize the neural mechanisms of emotional intelligence. There are five domains in which emotional intelligence is been studied they are self-awareness, handling emotions, self-management , empathy and self-motivation

**Need of the Study:** India with her ever increasing population comprises of a large percentage of children or rather teens that belong to the adolescent phase. Among this large percentage of adolescents there are those who have an extremely high opinion of themselves or a very low opinion of themselves. As known, emotional intelligence plays a large role in the life of the adolescents. Our education has always emphasised on academic results, but is that all we need to get success in our life? Why are students performing very well in schools and called as best students not able to handle the college / peer pressure, is this something which can't be handled or these students have never been taught about this. Emotions do affect how and what we learn. Being more aware of our emotions and reaction to it will help us manage the stress. Once we learn to understand our emotions we will be able to communicate better. Self-awareness is important for kids with learning and attention issues. A child might be aware of his challenges, but being aware of his interests and strengths is important, too. **Self awareness** is the first step in creating what you want and mastering your life. Where you focus

your attention, your emotions, reactions, personality and behaviour determine where you go in life. Helping child gain self-awareness can start in small ways. Thus it was necessary to conduct an action research to address this important issue and study the Emotional Intelligence and Self Awareness of secondary school students.

**Aim of the Study**

—To study the emotional intelligence with self-awareness of secondary school students.¶

**Objectives**

- 1 .To ascertain the emotional intelligence of secondary school students (boys and girls) with their self awareness.
2. To study the gender difference in emotional intelligence students of secondary school students

**Scope and Delimitations of the Study**

- The sample comprised of students of the S.S.C board only and not the C.B.S.E and I.C.S.E board.
- The sample comprised of students of the English medium only and not the vernacular medium school of the locality.
- The sample was restricted to Our Lady of Health High School, Sahar, Andheri and other schools were excluded from the study.
- The sample comprised of students of standard VII only and not all the other standards.
- The sample includes girls and boys from the same school and same class.
- The study is concerned with only emotional intelligence with self awareness.

**Significance of The Study:** The following stakeholders will benefit from this research. Researchers and educational practitioners who contribute to educational theory and practice. Students themselves who could be made aware of the invaluable worth of their own self esteem. School based counseling services. Parents and teachers who could create an environment at home and in school respectively that enhances the child's self esteem. Psychiatrists and self help organizations who conduct programmes on emotional intelligence with self awareness. Policy planners could revamp the educational system and restructure of a child of a particular age. The principals, headmasters and others in charge of school who can help the child increase his/her self awareness.

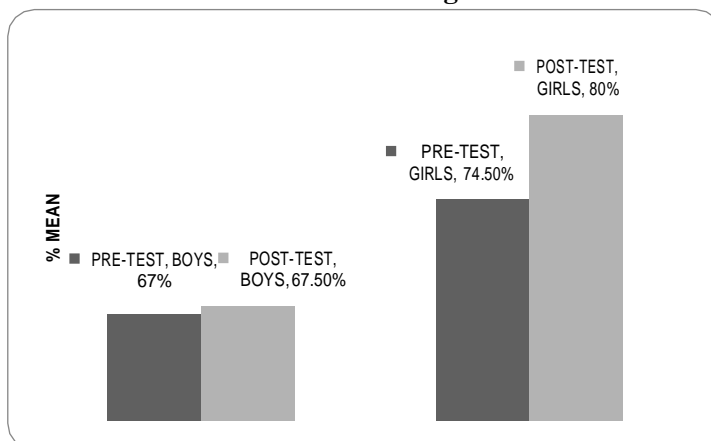
**Methodology:** The researcher in this project has used the descriptive method to carry out the study.

**Sampling Technique Used for the Present Study:** For the Present research, the researcher has used convenience sampling as a sampling technique. The researcher used a questionnaire and a rating scale for the study as the researcher found this tool the most apt tool to use for her study. In this tool the respondents responded to statements in writing. The data was collected by the student of St. Teresa's Institute of Education from Our Lady of Health High School, Sahar, Andheri.

**Descriptive Analysis:**

MEAN %	BOYS	GIRLS
PRE-TEST	67%	74.50%
POST-TEST	67.50%	80%

**Pre Test And Post Test Scores Of Emotional Intelligence On The Basis Of Gender**



**Findings of the Study:** The study conducted by the researcher shows that girls have a higher level of self-awareness than the boys. As it is indicator of the higher emotional intelligence. There are many reasons that would support these statement that today girls are more aware about their self emotions and feeling as they are been accepted by the society as liabilities. In order to foster their emotional intelligence they are given opportunities to showcase their talents and skills. With media and other sources of knowledge they are exposed to outside world where they can display their self-worth. This shows that the girls are more confident, self- aware and their have higher emotional intelligence than boys.

**Summary and Conclusion:** The researchers choose to carry out the survey on emotional intelligence in students of std VII on basis of their self-awareness. The topic was chosen in order to make the children aware about their emotions and feelings and to let them alert what they think and feel about their self. Hence this research would throw light on the discovering child's self and in fostering the child's emotional intelligence. The next step after choosing the topic was of choosing the method of the study. In order to study the problem the investigator studied prepared the questionnaire which was used on the students of our lady if health high school, sahar. The researcher studied the responses of the students and her findings were tabulated and graphed accordingly. The next step was the analysis and interpretation of the data collected because it is the purpose of the analysis to summarize the completed observation in such a way that they yield answers to the research questions. The last was to study data collected and to use it to draw conclusions. The researcher then had to give recommendations and suggestions and point out area of further study. The emotional development of a child or the core of ones's self-awareness needs to be understood and fostered at home and in the classroom. Teachers should focus on child's emotional development or the feeling's that generally have both psychological as well as cognitive effect. Parents and teachers should

praise, but also challenge and encourage the students to take risks. Help them in knowing their way of living, point out their strengths and weaknesses and help them in working on their weaknesses. If you are self-aware you are quite confident, happy, highly motivated and have a right attitude to succeed in life. It is very important because it affects how you think , act and even how you relate to other people. Thus, high level of self-awareness can help you feel good about yourself. hence, increases your emotional intelligence.

**References**

- Gardner, J. (1983). Frames of mind: The theory of multiple intelligences. New York: Basic Books.*  
*Gardner, J. (1999). Intelligence reframed: Multiple intelligence for the 21st century. New York: Basic Books.*  
*Goleman, D. (1995). Emotional Intelligence: Why it can matter more than IQ. New York: Bantam Books.*  
*Goleman, D. (1998). Working with emotional intelligence. New York: Bantam Books.*  
*Goleman, D. (2006). Social Intelligence: The New Science of Human Relationships. New York:*

**THE SCHOOL CURRICULUM AND SUSTAINABLE DEVELOPMENTAL GOALS -  
ARE SCHOOLS EQUIPPING THEIR STUDENTS TOWARDS IT?**

**Dr. Swasti Dhar**, Assistant Professor, Pillai College of Education & Research, Chembur,  
Email id: [sdhar@mes.ac.in](mailto:sdhar@mes.ac.in)

The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, have replaced the Millennium Development Goals. These goals have been accepted by all the 193 participant countries and India, too, is a primary signatory towards the same. The SDGs consists of 17 global goals with 169 targets between them to be attained by 2030. Some of these goals are 'No Poverty, Zero Hunger, Quality Education, Gender Equality, etc'. In order that these goals be attained, it is imperative that the mindset seeps into the minds of all those at the grassroot level as ideas like peace, sanitation, cleanliness and sustainability needs not only a strong legal and structural framework but also a shift in the mindset of those at the bottom of the rung. This paper presents the result of a survey conducted by the presenter to ascertain if the school curricula across the various boards in India caters to spreading awareness, knowledge and/ or skills to spread awareness about the SDGs. The focus of this paper was to ascertain the awareness about these goals among the educated masses and specifically among school teachers and educators. This paper looks at two of these goals - Sustainable Development (Goal 11) and Global Peace (Goal 17) and the perception and understanding of the target population towards the topic.

**Objectives of the Study**

- To ascertain whether the teacher community in India is aware of the SDGs in general and about Global Peace (GP) and Sustainable Development (SD) in particular.
- To determine if the various school curricula caters to the SDGs.
- To identify whether co-curricular activities and/ or internal assessment projects cater to SDGs.

**Methodology of the Study:** The study was conducted through a survey and the target participants (respondents) were the school teachers belonging to various Boards of Education in India. The survey was conducted in both online (via Facebook Survey) as well as offline (via survey conducted amongst the teachers from Practice Teaching schools affiliated with the institute).

**Delimitations of the Study:**

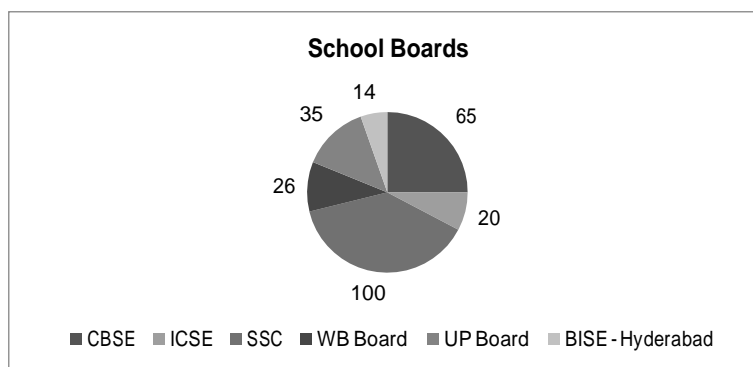
The study was delimited to:

- Schools situated in India
- Teachers teaching at the Secondary level (Class V to Class X)

**Results of the Survey**

**Nature of the respondents:** A total of 260 respondents answered the survey. Of these, 100 belonged to teachers of the Maharashtra SSC Board (mainly in Mumbai) and 160 of them were

spread throughout India across various Boards as seen in the diagram below which shows the nature of the respondents with respect to the Educational Board that the school follows.



**Fig. 1 Chart showing the distribution of School Boards to the survey**  
*Awareness about SDGs in general and about Global Peace & Sustainable Development, in particular*

Almost none of the correspondents were aware about the SDGs as a set of Global Goals set by the United Nations in 2015 which is mandated to be attained by the participant countries by 2030. At a metacognitive level, they believe that global peace and sustainable development are important and every country should work towards it though they don't know how, as individuals or as teachers, they can contribute towards it.

**Responses With Respect To Global Peace:** UNESCO defines Global Peace not only as an absence of violence but as a state of stability, progress and freedom from civil disorder. It needs understanding and cooperation amongst all the countries in the world and acceptance of the idea of peaceful coexistence. At the curriculum level, this translates to students who know about the conditions of war continuing at present, the reasons behind these conflicts and a mind which is trained to seek solutions with the belief that peace is essential for human growth. It translates to abilities to understand the root cause of conflicts and strategies to manage conflict. It also requires an understanding and practice of fair play, equality of opportunities for all. The survey showed a trend amongst the respondents to equate global peace with religious harmony especially amongst Hindus and Muslims in India. There was a marked lack in the knowledge of world history and current affairs. The reasons for the cause of the conflict were not clearly formulated and no probable solutions for resolving any perceived conflict were forthcoming. Many of the teachers felt that though there was no dedicated paper on Global Peace in any of the educational boards, subjects such as English literature and civics promote the concept of Global Peace. Co-curricular activities such as sports, drama practice and cultural events promote knowledge of various cultures and thus promote multicultural values and tolerance and such values can also be incorporated through assignments.

The results of the survey are shown in a tabular form below:



Questions asked	Responses					
Understanding of Global Peace (GP)	Peace amongst all countries in the world	2%	Peace amongst Hindus and Muslims in India	34%	No opinion	64%
Which subjects in school promote GP?	History/ Civics English Literature Geography	55% 13% 5%	No Subject	12%	Not sure	32%
Do CCA activities promote the concepts of Global Peace?	Yes	89%	No	0%	Not sure	11%
Have you conducted a CCA where the theme is Global Peace	Yes	1%	No	99%		
Do school assignments promote the concepts of Global Peace?	Yes	84%	No	2%	Not sure	14%
Have you given an assignment on Global Peace?	Yes	1.2%	No	98.8%		

**Table 1: Results of the Survey on Global Peace**

**Discussion of the results:** The school curriculum in India is not looking at inculcating an understanding of the meaning of Global peace and neither putting forth the seeds of how to resolve conflicts. The teachers too neither understand the concept nor consider it very important. The researcher found that most of the understanding about peace related to resolving Hindu-Muslim conflicts in India with no clear understanding of the problem nor any solutions for it. Clichés such as ‘India has a history of tolerance’ or ‘The British created the problem through its policy of divide and rule’ were touted but most teachers could not state what the history of the divide and rule policy was.

**The way forward:** India’s contribution to attaining Global Peace by 2030 and then sustaining it thereafter seems to be very much in doubt as the students of today are not being trained to resolve conflicts and look towards peaceful solutions to problems. The education system needs to look at this lacuna and correct it while there is still time otherwise, we as teachers, would have failed in inculcating a very basic life skill amongst the generation which will take up the mantle of the country’s governance in the future.

**Responses With Respect To Sustainable Development:** UNESCO focuses on Sustainable Development with its main emphasis on the oceans, marine resources and water development management which need to be aligned with the capacity development of nations. This is mainly because water is held as the source of life on Earth and the depletion and degradation of this resource results in unsustainable development. In all those projects, where care has been taken to manage the wastage and effluence (instead of dumping it into any water body such as a river or the sea), the development has been planned and systematic and has done more good than bad for the population. The paradigm of sustainable development looks at the resources available to us as a 'borrowing from the future generation' and tries to ensure that any development which we undertake should not deprive the future of their share. This paradigm must be inculcated into the curriculum so that the students are made aware as to how any project affects the environment. This is done through an understanding of the resources available, locally, nationally and globally; a knowledge of environmental science and development of an appropriate technology to foster the same. The survey showed some awareness amongst teachers towards the environmental impact and though students are not trained to find solutions, at least, they are aware of some of the environmental degradation which is taking place in the world today. The result of the survey is given below.

Questions asked	Responses					
Understanding of Sustainable Development (SD)	Good Understanding	62%	Poor Understanding	24%	No opinion	14%
Which subjects in school promote SD?	Science Geography	88% 48%	No Subject	12%	Not sure	2%
Do CCA activities promote the concepts of SD?	Yes	12%	No	75%	Not sure	13%
Have you conducted a CCA where the theme is SD?	Yes	0.8%		No	99.2%	
Do school assignments promote the concepts of SD?	Yes	1.2%	No	82%	Not sure	15.8%
Have you given an assignment on SD?	Yes	17%		No	83%	

**Table 2: Results of the Survey on Sustainable Development**

**Discussion of the results:** Teachers seemed to be more aware of the concept of sustainable development through there was a tendency to relate it to environmental problems being faced

by us such as global warming, deforestation etc. Science and Geography are considered to be the two subjects which deal with such topics. However, the concept of sustainable development does not get translated into action via the co-curricular activities promoted in the school, nor via assignments. The teachers who stated that assignments were given on the topic were all Science teachers.

**The way forward:** The environmental problems that we are facing today are the results of the way development has taken place in an arbitrary manner without any concern for the consequences. However, to promote an attitude for sustainable development, the curriculum has to focus on the technology available for production, the skill to conduct feasibility reports, the ability to calculate the environmental and ecological cost of projects etc. Unless these skills are provided to our students, they are unequipped to move forward to bring about change in a sustained manner.

**Ref:**

*Aloni, N. and Weintrob, M.(Ed.) (2009). Beyond Bystanders: Educational Leadership for a Humane Culture in a Globalizing Reality. Sense Publishers*

*Stadtler, L. (2012) More than Brick in the Wall – Education is the way forward. Cambridge Publication*  
<http://www.un.org/sustainabledevelopment/>  
<http://en.unesco.org/cultureofpeace/>

## OPPORTUNITIES FOR INTEGRATING EDUCATIONAL APPS IN THE INDIAN CLASSROOM

**Rochelle P D'souza**, *PhD Research Scholar*

**Dr. Sudha Pingle**, *Assistant Professor, Department of Education, University of Mumbai*

### **Abstract**

*Technology is an indispensable part of our lives. It has entered our lives and also transformed the teaching-learning process. The advent of apps and their popularity have changed many aspects of our life. Not just gaming apps but educational apps have found favour too and are being downloaded in large numbers. These educational apps thus present another occasion to integrate technology in our classrooms. Both rural and urban learning environments face several challenges. This is true especially for those institutions that are plagued by crammed classrooms and poor teacher-student ratio. Integrating educational apps in the classroom is the next step for technology entering our classrooms. But are our classrooms ready to integrate educational apps? Can the environment aid this integration? The authors examine the presence of opportunities in the current educational set-up and seek to present these as elements that can galvanise the integration of educational apps in the Indian classroom.*

**Keywords:** *Educational apps, Integrating, Opportunities*

### **Introduction**

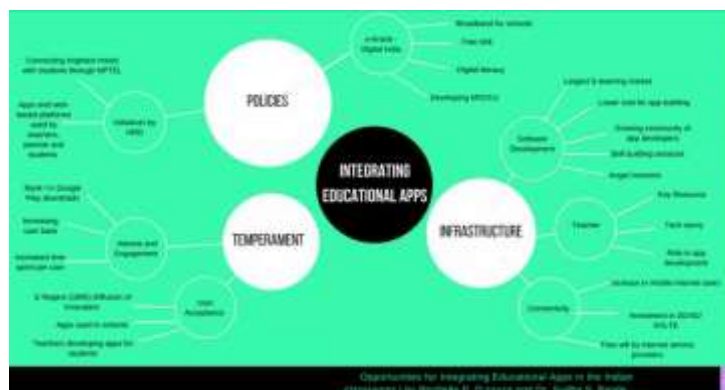
—Tech will transform from something we actively use to a more seamless integrated experience that is *‘on’* all the time. |

- Daniel Bæk, Co-founder of Nodes

Daniel Bæk's *‘seamless integrated experience that is ‘on’ all the time’* refers to applications or apps. Interestingly, Steve Jobs back in 1983, in his speech at Aspen, predicted the evolution of a *‘new digital distribution system’* where *‘software would be downloaded over phone lines’*. This set the stage for technology that would influence not only our day-to-day lives but also have the potential to impact the teaching-learning process. From July 2008, where the first apps were developed for Personal Digital Assistants (PDAs), app technology has come a long way. Launched in October 2008, Google Play Store offered approximately 3 million apps in March 2017, according to Statista's (2017), with the top grossing apps being gaming apps. iTunes has 80,000 educational apps. Boost e-Learning (2015) reported that Google Apps for Education has grown from 8 million users in 2010 to over 40 million users as of February 2015 which includes students, faculty, and staff using Google Apps for Education, a free service for schools. With apps finding place not only in our tech devices but also in our lives, what then prevents our Indian education system from integrating educational apps as a catalyst in enhancing the teaching-learning experience. A study by the government in 2014 revealed that 67% of India's population belonged to rural areas, with nearly 60% of rural students up to the age of 10 not possessing basic reading or mathematical skills and having a high dropout rate of nearly 50% by the age of 14, which is more pronounced in female students, due to the prevailing socio-economic conditions. The teacher-student ratio in rural schools was appalling, with crammed classrooms having more than 100 students of different age groups. Walking many miles to school and being taught in these poor learning conditions further exacerbates the woes of students. Urban schools too suffer from poor teacher-student

ratio. With these problems plaguing the current education system, can these inefficiencies be managed if not completely eliminated? Can the teacher be better equipped to transact the curriculum, motivating students to be active participants? Can integrating educational apps be the answer to overcome these challenges? India isn't among the early adopters of technology in the education sector but the scenario has changed with access to high speed broadband internet, low cost computers, tablets and mobile devices. Chaplot, Vivek (2016) opined that the effectiveness of e-Learning has increased considerably over the last few years as he reviewed the development of e-Learning products and e-Learning opportunities among students. He recommends it to be one of the most promising areas of education and training. However, he observed that rural students fall back due to lack of mobile devices and the ones to benefit the most are on-campus students. Having found favour with its users, e-Learning can now pave the path for app-based learning whether native, web-based or hybrid or whether offline, online or both. In a study taken in China, where Zhang, Jinlong & Liao, Boqin (2015) deliberated on the opportunities (mobile terminal and wireless network, the use habit of the user, mobile learning and online education market) and the challenges (imbalance of development, poor quality and unclear business model) of educational apps, they proposed 'educational apps fit the demand for portability and contribute to the learning style on the fingertip'. Further, Francois, Uwizeyimana's (2016) 'anywhere, anytime learning' actuated the authors' search for opportunities that will mobilise the educational app revolution in India. Is it easy to integrate educational apps in our teaching-learning environment? Is this a myth or can this be for real? If this is real, what then are the opportunities that aid integrating apps in the classroom to reach the goals of education? An opportunity is a time or a set of circumstances that makes it possible to do something. The authors believe that the current scenario has many circumstances which are opportunities to integrate educational apps in our classrooms. These are categorised into three major areas, represented as 'TIP' for Integrating Apps in the Classroom and explained in Figure 1.

- 1. Accepting Temperament**
- 2. Robust Infrastructure**
- 3. Supportive Policies**



**Figure 1: Opportunities For Integrating Educational Apps In The Indian Classrooms**

**1. Accepting Temperament:** Temperament is the usual attitude, mood or behaviour of an individual. An **accepting temperament** is one where user acceptance is high. It further indicates interest and user engagement. User acceptance is governed by Diffusion of Innovations by E Rogers (1995) which explains how **an innovation is communicated through certain channels over time among the members of a social system**. This is a 5-step process that involves knowledge, persuasion, decision, implementation and conformation. The steady number of increasing downloads and app users verifies an accepting temperament. App Annie's Fourth Annual Retrospective Report (2017) confirms that India outpaced the US and ranks number one in Google Play downloads. Indians downloaded over 6 billion apps in 2016, up from 3.5 billion in 2015 and engagement is also significant. The report explained that these increases are a result of **exploding user bases and increases in time spent per user**. In Share of Available Active App, Dogtiev, Artyom's (2016) reported that among the most popular App Store Categories in 2015, educational apps are the second most popular category (9%) in Google Playstore after Games (21%). User acceptance is also substantiated by the fact that schools today use customised web-based apps for administrative work and Whatsapp for communication. Also, students use language learning apps and other educational apps. Teachers like Imran Khan and Dheeraj Mehrotra by turning app developers depict how user acceptance for educational apps is a reality. An accepting temperament, coupled with user interest and engagement, is favourable in achieving educational goals.

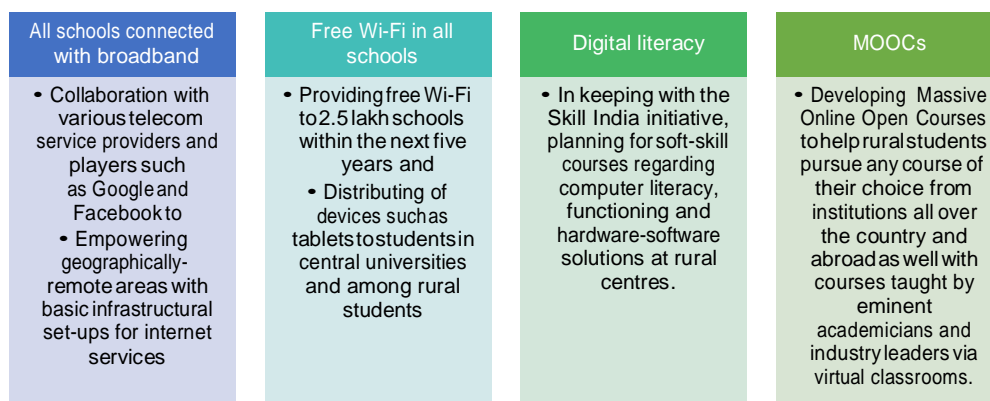
**2. Robust Infrastructure:** Infrastructure includes the environment that aids the process of integrating educational apps. The authors have considered three dimensions here - software development, teachers and connectivity.

**(i) Software development:** Suri, S. P. (2016) reported that the e-Education market is expected to touch \$40 billion by 2017 as India is currently the largest market for e-Learning, next only to the U.S. Nandakumar.V; Director of Datta Educational Consultants opined —They are growing because schools have failed. Another report based on a study by Hyperlink Infosystem in Business Insider stated —on average, across both iOS and Android, an app that takes eight weeks to develop from beginning to end will cost roughly \$48,000 in the US and that same app is 10x less expensive to develop in India. According to Sengupta, Google VP of Product Management Caesar -The significant difference in cost of developing an app in the US versus India could be driving the projected uptick of developers in the country. India's developer community is set to reach 4 million by 2018, making it the largest in the world. The report stated that in July 2016, Google launched Android Skilling in India aimed at training 2 million developers with Apple announcing similar plans in Bengaluru to provide additional and specialized support for local iOS developers. Byjus Learning App is an excellent example to gauge the promise of these EdTech companies - 5.5 million downloads with 250,000 plus students using it on an annual subscription basis in one year since it was launched in August 2015. From investors like Mohandas Pai to Chan-Zuckerberg Initiative, the app has found favour with all. All these suggest how time and circumstances encourage software development in India.

**(ii) Teacher:** The teacher is an alchemist who through her initiatives converts challenges into opportunities. Being a key resource and an important stakeholder in the teaching-learning process, teachers who are abreast with modern technological developments and willing to tap into the huge potential of app-based learning play a vital role. **Imran Khan**, a teacher from Rajasthan has made 50 mobile applications in 2015 and dedicated them to students free of charge. Inspired by Imran Khan, **Dheeraj Mehrotra**, a recipient of the National Award for teachers has developed more than 100 Android educational apps (namely Six Sigma in Education, 99 School Improvement Plans and WoW Classroom) for students, teachers and parents on one common platform.

**(iii) Connectivity:** Going from no connectivity to over 350 million mobile Internet users in less than two decades is encouraging. Over the last few years, new and existing players have made significant investments in transforming the infrastructure for 3G/4G/LTE roll-outs in India. Further, these players namely BSNL, Airtel, Reliance Jio propose to connect schools and colleges by providing free Wi-Fi. These are great opportunities to improve reach, increase access and thus galvanise the process of integrating online app-based learning. Improved connectivity will bridge the gap between software development and the teacher and go a long way in achieving educational goals.

**Supportive Policies:** Policies not only smoothen and remove impedances but often pave the path to a better future. One such policy is the **Digital India Programme** whose vision to ‘\_transform India into a digitally empowered society and knowledge economy’ bestows a great opportunity to integrate educational apps in our classrooms. One of its major pillars is e-Kranti, under which emphasis has been given to digitising rural India through e-Technology, especially in the domain of education. Figure 2 explains the various initiatives of this programme.



**Figure 2: Initiatives Under E-Kranti (Digital India)**

The Human Resource Development (HRD) ministry in 2015 launched a number of mobile apps and web-based platforms like 'E-pathshala', 'Saransh', 'Shala Siddhi' that allow students access to study material online and encourage parents to keep a track of the performance and attendance of their children. Another important enterprise is the NPTEL (National Programme on Technology Enhanced Learning), a joint initiative of the IITs and IISc. Available also as an app, this initiative conducts various online courses and certifications in various topics offered by the brightest minds in the country. Accepting temperament, infrastructure and policies are important forces that encourage the use of educational apps, providing the basic thrust for integrating them in our classroom. Without user acceptance, educational apps will not find favour in the teaching-learning environment in spite of policies and infrastructure. An accepting temperament and supportive policies are of little use without the environment to encourage software development, technologically-adept teachers or improved connectivity. Poor infrastructure prevents growth and results in stagnation. Policies provide the foundation for future investments and direct future goals; without them, very little can be achieved.

**Conclusion:** The stage appears set for integrating educational apps in the classrooms. With supportive policies, robust infrastructure and an accepting temperament towards educational apps, we are prepared to integrate educational apps to achieve our educational goals. This is backed by the fact that India has the second largest mobile phone user subscription base in the world, with over 900 million mobile phone users on an average spending 3 hours and 18 minutes every day with their smartphones. The introduction of tablets (Aakash promoted by the government) and smartboards and the presence of technology-adept teachers have set the tempo. However, challenges do exist. User acceptance in terms of students' acceptance of apps and their learning curve can be studied. Massive content creation will aid acceptance but there is a need to review student engagement with these apps which may be different for India. Supportive policies could help in engagement and this can be further probed. Further, while addressing this gap, the need to exploit demand drive would also provide valuable insights. The delivery model (apps or web-based or hybrid) needs to be investigated from the perspective of user acceptance and preference to interact with mobiles, tablets or computers. The preference of developers and teachers and suitable business models can also be probed. The various opportunities have set the ball rolling but probing these gaps will facilitate the integration of educational apps in a better manner and enhance the learning environment. As Dr. Marcus Specht says -The students of the future will demand the learning support that is appropriate for their situation or context. Nothing more. Nothing less. And they want it at the moment the need arises. Not sooner. Not later.¶

**References:**

- Adler, Bryn (2014, July 24). *The 10 Most Telling Quotes About the Future of Mobile*. Localytics. Retrieved from <http://info.localytics.com/blog/the-10-most-telling-quotes-about-the-future-of-mobile>
- App Store. *Whatever the lesson, makes apps part of the plan*. Retrieved from <https://www.apple.com/education/apps-books-and-more/>



- BI Intelligence* (2017, January 20). *India is 10x cheaper than US for app development. Business Insider*. Retrieved from <http://www.businessinsider.com/india-is-10x-cheaper-than-us-for-app-development-2017-1?IR=T>
- Boost eLearning* (2015, July 1). *Google Apps for Education Anticipated to Reach 110 Million Users by 2020. Cision PR Newswire*. Retrieved from <http://www.prnewswire.com/news-releases/google-apps-for-education-anticipated-to-reach-110-million-users-by-2020-300107878.html>
- Bothwell, Ellie* (2015, December 10). *India will have the largest student population by 2025, study predicts*. Retrieved from <https://www.timeshighereducation.com/news/india-will-have-the-largest-student-population-by-2025-study-predicts>
- Chaplot, Vivek* (2016). *E-Learning with Respect to Indian Educational Environment. International Education and Research Journal*. (2016, July). 2(7), pp 94-95. Retrieved from <http://ierj.in/journal/index.php/ierj/article/view/387/365>
- Choudhary, Vidhi* (2017, January 17). *India beats US in 2016 mobile app market growth, sees most Google Play downloads. Livemint*. Retrieved from <http://www.livemint.com/Consumer/IXEa9IR07ZAx7yROaRcarK/India-beats-US-in-2016-mobile-app-market-growth-sees-most-G.html>
- Dillon, Andrew & Morris, Michael G.* (1996). *User acceptance of new information technology: theories and models*. In M. Williams (ed.). *Annual Review of Information Science and Technology*, Vol. 31, Medford NJ: Information Today, pp 3-32. Retrieved from <https://www.ischool.utexas.edu/~adillon/BookChapters/User%20acceptance.htm>
- Dogtiev, Artyom* (2016, February 26). *App Store Statistics Roundup. BusinessofApps*. Retrieved from <http://www.businessofapps.com/app-store-statistics-roundup/>
- Gupta, Priyanka* (2015, September 14). *20 Popular Technology in Education Quotes. EdTechREview*. Retrieved from <http://edtechreview.in/news/2112-technology-in-education-quotes>
- Faboya, Olusola T. & Adamu, Bola J.* (2017). *Integrating Web 2.0 Tools into Teaching and Learning Process through Mobile Device Technology in Nigerian Schools: Current Status and Future Directions. International Journal of Education and Research*. (2017, May). 5(5), pp 113-124. Retrieved from <http://www.ijern.com/journal/2017/May-2017/10.pdf>
- Francois, Uwizeyimana's* (2016). *Glimpse of mobile learning technologies: a golden mean in current educational field. International Education and Research Journal*. (2016, October). 2(10), pp 3-4. Retrieved from <http://ierj.in/journal/index.php/ierj/article/view/475/447>
- IBM* (2015, June 2). *Mobile learning: Smart Education System for India. Forbes*. Retrieved from <http://www.forbesindia.com/blog/business-strategy/mobile-Learning-smart-education-system-for-india/>
- Indo-Asian News Service* (2016, October 24). *10,000 primary schools in Kerala to get free Wi-Fi*. Retrieved from <http://cio.economictimes.indiatimes.com/news/internet/10000-primary-schools-in-kerala-to-get-free-Wi-Fi/55029593>
- Ministry of Electronics and Information Technology*. *Digital India* Retrieved from <http://digitalindia.gov.in/>
- Mullick, Rajeev* (2016, March 3). *Lucknow teacher develops more than 100 educational apps. Hindustan Times*. Retrieved from <http://www.hindustantimes.com/education/lucknow-teacher-develops-more-than-100-educational-apps/story-6191xDQ3Yyy5mSv1WYptcM.html>
- Orr, Greg* (2003, March 18). *Diffusion of Innovations, by Everett Rogers (1995)*. Retrieved from <https://web.stanford.edu/class/symbysys205/Diffusion%20of%20Innovations.htm>

- Pandey, Neelam (2017, July 24). *Reliance Jio wants to give free Wi-Fi to college students, 3 crore may benefit*. *Hindustan Times*. Retrieved from <http://www.hindustantimes.com/india-news/reliance-jio-wants-to-give-free-wi-fi-to-college-students-3-cr-may-get-benefit/story-5HOa7bT5W6FvQdbkae1rIP.html>
- Press Trust of India (2015, November 9). *HRD Minister Smriti Irani launches education-based mobile apps*. *Indiatodayintech*. Retrieved from <http://indiatoday.intoday.in/technology/story/hrd-minister-smriti-irani-launches-education-based-mobile-apps/1/519798.html>
- Ralhan, Beas Dev (2016, October 3). *Digital classrooms in schools: Is rural India ready?* *Financial Express*. Retrieved from <http://www.financialexpress.com/jobs/digital-classrooms-in-schools-is-rural-india-ready/401931/>
- Saha, Devanik (2017, April 17). *In 5 Years, Private Schools Gain 17 Mn Students, Govt Schools Lose 13 Mn*. *IndiaSpend*. Retrieved from <http://www.indiaspend.com/cover-story/in-5-years-private-schools-gain-17-mn-students-govt-schools-lose-13-mn-261466FV1ic7RLtmWc0ZkhBQBM.html>
- Samtani, Kanchan & Sarawgi, Sumit (2017, January 24). *Building India's digital highway*. *Livemint*. Retrieved from <http://www.livemint.com/Politics/xLnErGf2Mq9xDQYj3VHWmI/Building-Indias-digital-highway.html>
- Statista (2017). *Number of available applications in the Google Play Store from December 2009 to June 2017*. Retrieved from <https://www.statista.com/statistics/266210/number-of-available-applications-in-the-google-play-store/>
- Strain, Matt (2015, February 13). *1983 to today: a history of mobile apps*. *The Guardian*. Retrieved from <https://www.theguardian.com/media-network/2015/feb/13/history-mobile-apps-future-interactive-timeline>
- Super User (2016, June 2). *Role Of Technology In Indian Education System*. *SICOM Limited*. Retrieved from <http://www.sicomindia.com/blog/122-role-of-technology-in-indian-education-system>
- Suri, S. P. (2016, October 22). *India's best schools: Application based Learning*. *Careers360*. Retrieved from <https://school.careers360.com/articles/indias-best-schools-application-based-learning>
- Swarup, Anil (2016). *Educational Statistics at a Glance*. Retrieved from [http://mhrd.gov.in/sites/upload\\_files/mhrd/files/statistics/ESG2016\\_0.pdf](http://mhrd.gov.in/sites/upload_files/mhrd/files/statistics/ESG2016_0.pdf)
- Warrier, Shobha (2016, October 7). *2 lakh to 3300 crore: The BYJU's Classes success story*. Retrieved from <https://m.rediff.com/money/interview/two-lakh-to-330-crore-the-byjus-classes-success-story/20161007.htm>
- Zhang, Jinlong, & Liao, Boqin (2015). *Learning on the Fingertips: The Opportunities and Challenges of Educational Apps*. *Journal of Education and Practice* (2015) Vol 6 (20) p 62-67. Retrieved from <http://files.eric.ed.gov/fulltext/EJ1079047.pdf>

**TEACHER AS AN ALCHEMIST IN EDUCATION 3.0 INTERATING TECHNOLOGY  
INTO EDUCATION**

**Dr. Arvind Pandurang Joshi**, *Principal and Research Guide D.E.S. College of Education,  
Dhule Department of Education, N.M.U., Jalgaon.*

**Mrs. Anitadevi Kishor Patil**, *Principal, D.V.S''S D. EL. ED. College, Dhule And Research  
scholar. Department of Education, N. M. U., Jalgaon.*

**Abstract**

*The role of teacher in India has always got immense important, Since Vedic age to still today. The role of teacher should be matched with today''s e-based age. In this information explosion era technology is playing like boon for teachers as well as students too. Technology has provided uncountable facilities to make learning easy, long lasting, interesting, lively, motivational, Class room friendly and immediate feedback giving. Technology is playing like ALADIN KA CHITAG and teacher as ALADIN who teach the students to how to use CHIRAG while learning. Now is the generation of mobile phones and advanced technology. The lives are driven by apps, websites and social media. In this context, it is necessary to smartly use the technology in transforming learning process. Our educational system and teacher needs revolutionary changes for providing quality education. Teacher is main pillar for revolution and technology is helping hand. Technology based learning is two ways interactive system which provides immediate access to students, online availability of materials, and it improves learning outcomes too. Computer based learning has considerable potential to positively impact learning. The present paper is attempted to discuss the role of teacher in transforming technology into learning system.*

**Keywords:** *Technology, I.T., C.A.I*

**Introduction:** Teacher has got immense importance in India since the Vedic historical period. There are so many examples have been found about teacher is considered greater than mother. There are the worldwide glories of Gurus like saint Tulasidas, Saint Kabir. We can find in History about the great relationship of the student-teacher like Eklavya- Drawhnacharya, Krishna-Arjun. The Gurus were regarded as the alchemist because of imparting knowledge. Later, Education got flourished; there were the changes in teacher's role. Gurukul method started and as the matter education was given in a formal way. The teacher got computers and mobiles in hand who would previously say the proverb like —Chhadi lage chham chhaml. The present age is an age of scientific development and technology. Since last two decades, the computers have been used in education immensely. The main frame computers transformed into super computers and now laptop to nail tops such progress have been done by the technology. In every field of life there is seen increasing use of technology. There is no field remain working without computer. So in this age, the use of technology has become essential. Many schools and colleges have been using the computers nicely. The schools are being changing into *digital schools* in villages too. So role of teacher is more important and should always be changing. Computers are like \_ALADIN KA CHIRAG', what we demand make it present. So teacher should be an enchanter of using this CHIRAG. There are so many advantages of using technology, it is time saver, variety, and not having limitations of time and place, rapid and repetition are the results of technology. Yes there are few barriers in between

use of computers but by overcoming demerits, teacher's responsibility is to use the technology effectively in teaching.

**Role of technology as an effective teaching tool:-** With the use of technology the students will not learn anything mechanically as they would memorize the bookish information, reading for examination purpose and forgetting later, this has been seen in today's education process. Students are lacking behind in the use of applied knowledge. To overcome all these things technology is becoming useful. Learning is nothing but better understanding. When the words are incapable of imparting the content knowledge, the technology makes it alive, gives the concrete form to the words and makes experience enriched. Experiences makes memories in the brain and these mummies last long that is called conception. We teach students so many abstract concepts just by using words such as we teach that water consist of two hydrogen atoms and one oxygen atom, but student cannot see them in water. So whatever they are told, they memorize it and in the examination the formula is used as two oxygen atoms and one hydrogen atom. If we teach this by using computer using different iconic structure the student will remember all the chemical reactions in future and they will not say it is magic if the red litmus paper turns blue. No waves are seen, though they are sound waves or stationary waves. So how brain waves and unseen sound waves can be connected their wavelengths. If, once the students see the wave difference in symbolic form on computer, their understanding about wavelength will everlastingly fix. Teacher needs to do this with the use of technology. Technology is the boon to lessen the abstractness in the subjects like physics, chemistry, maths, and languages. Many rare events, concepts, experiments are understood properly by direct observation. The classroom atmosphere becomes playful, interest and motivation in the subject is developed. In this way, there are enumerable advantages of technology in framing the learning process.

**Various tools provided by technology:-**

- 1) **E-Books:-** There is seen the scarcity of books in this knowledge explosion era. Electronic books are available on internet easily. Teacher can provide extra information using this source. E-books are available in various languages, various subjects. There no limitations of time, place, repetition. Teachers should use this source effectively and encourage students to use.
- 2) **Audios:-** The teacher can prepare an audio for each content. Perhaps uploading it on internet many students can take its advantage. Students can make to listen the audio clips of experts, their lectures, and important events. Variety can be created in the classroom. Student at any corner of country can get advantage of this.
- 3) **Videos / Movies :-** Teacher can prepare the video clips on various content or units. The prepared videos can be shown to student on youtube, vidmate, Go animate, crazy talk and so many applications and software's. So it helps the students to understand the content and it's utility. Students can be shown the rare events, educational movies. Variety and liveliness can be created in the classroom. On Google teachers-students can found number of educational videos, expert lectures, classroom teaching, and lectures by using integrated

form of technology, graphical representations so on endless knowledge. We can edit available videos as per our convenience by using video editor software's. By using these features of technology teacher can change environment of classroom teaching and alternately quality of education.

- 4) **Smart phones :-** In this age of mobile, teachers should be mobile. The smart phones are available in affordable prices now and they are as same as mini computers. The teacher should take advantage of phones in the classroom teaching. The technology like conference call, video call, video conferencing, virtual classrooms can be used in teaching. The students can be got participated in the expert lectures, conversations, discussions, guidance, carrier counseling. The student can be got communicate with anyone in the world with the use of this tool. To make avail this to the students in rural area is the responsibility of the teacher. Students can be motivated using the educational game, puzzles, and combining the entertainment and brain development thing.
- 5) **Animation:-** PPT, flash, prezi, open office, impress, slidebean, apple keynote, visense, flowvella etc. software's can be used for animation and to prepare presentation. The excellent teaching tool is created in the integration of audio, video, text, graphics. If such tools will be uploaded on open access into teacher forum, the students can use them. Tools can be enriched through the opinion, suggestion of other subject experts and teachers. Through animation stories, songs, entertainment, demonstration on content can be created, by which the quality of education can be developed.
- 6) **Computer assisted instruction:-** It is one of the best tools to integrate various features of technology. Computer Assisted Instruction is a self learning technique, usually offline or online, involving interaction of the students with programmed instructional materials. It uses a combination of text, graphics, sound and video in enhancing the learning process. It refers to the use of computer as a tool to facilitate and improve instruction. It provides tutorials i.e. response oriented interactions, problem solving, enrichment programs, and remedial teaching (continuous and repetitive learning), games (applications of problems or concepts), testing (test banks with evaluation and analysis), and immediate feedback (students letting know their achievement).

By selecting problem area, specific objectives, Computer Assisted Instruction programme can be developed. Different software can be used like Microsoft office flash, Corel draw, page maker, adobe Photoshop, Microsoft publisher, Picasa, vector graphics editor etc.

**Educational games / puzzles :-** There software's can be made available to the students. There are n number of educational video games available on internet. Teacher should guide students how to use them. Through puzzles they can learn words, synonyms, antonyms, sentence making. Teacher can create their assessment program using puzzles. So that class environment can become more interesting and motivational.

**Dictionaries and language learning:-** Word meaning, synonyms, antonyms, grammar, spell checking, sentence making such things are available in the form of software's. Students and teacher can use these software's for learning the languages.

**Educational Tablets :-** Educational tablets have been prepared and distributed by government to the students in few states of India. It resulted into drastic change in learning process. Subject wise academic programme prepared tablet can make the students performance fast and qualitative.

**Online learning:-** In so many colleges and universities, online courses have been started. Students are able to take a degree from other countries, state, and cities. They are completing their courses from their living place. There is a growth in the online learning and distance learning. The big window of knowledge sharing is open. Teacher can take advantage of this by guiding students to use online learning. If above all characteristic features are integrated, the technology can best be used in education. The use of this and making changes in it is the responsibility of teacher. There are lots of advantages of technology yet it needs to do research for the effective use of technology in education.

**Need of research in integrating technology into learning:-**

- 1) **Preparation of class wise teaching modules:-** There is huge knowledge on internet to be used, which is infancy. But there should be specific modules of teaching. Such modules provide content necessary for particular age group students. Instead searching this and that, they can get exactly what they needed. So there is need to develop modules on every subject. For the preparation of class wise teaching module research should be done. Such modules can be prescribed in the curriculum. All students will get the skill of using it.
- 2) **Good assessment tools:-** It is essential to do research on creation of assessment software so that the students can evaluate and assess themselves as per the curriculum and exam system concerned. This is one of the biggest challenges in conducting research on lack of appropriate assessment instrument to evaluate students learning. There should be variety in assessment tools to develop higher order thinking of students and to create interest in self assessment.
- 3) **Technology based books :-** Using computer assisted instruction teacher can create the text books (soft copy of text book) the research study can be conducted to develop such books.
- 4) **Monitoring students interaction with technology:-** There is need to monitor students interaction with technology. How they are connecting with technology and how different strategies are best to promote understanding. There is scarcity of researches done in this aspect.
- 5) **How to create best teachers to use best technology:-** Technology has replaced role of teacher. Technology has make teachers to learn and introduce technology to students. Many teachers get professional training of how to use technology in classrooms. But it is not enough to take training about. It is necessary that teacher should be efficient to use technology, knowing how and when to use technology and choosing the most appropriate tool for the task. Creation of efficient techno teacher is one of important area do conduct research.
- 6) **Good C.A.I. materials:-** Computer assisted instruction provides great use of technology for preparing teaching materials. But still research is needed to produce good C.A.I

materials for students in each subject. Research should be needed at quality of C.A.I. study materials. Instructional material should be unique, great integration of all features of computer, original, appropriate to selected subject, easy to understand, suitable for content; unless Learning can become complex instead simple. Now use of technology at its best is role of teacher. Teacher should be up to date and techno friendly because today's students find more techno friendly. They are using technology better than even their teachers. This is a need and alarm to teacher to change their self and education system to promote quality of education. Nation doesn't need factory products but quality products are necessary. Teacher is creature of generations; it is great responsibility of them to produce quality generations. Technology can help them to do revolutionary changes. But teacher need to change their role by technological means.

**Conclusion:-** The use of technology for effective teaching is a boon. The drastic change can be made using and integrating the characteristics of computer. The teacher should use technology in classrooms teaching and heighten the standard and create the high-tech generation by which educational development in quality will be done by teacher. The use of technology is the need of students, society and time. Doing some research studies on neglected factors the technology generation will be formed. Teachers are expected to be a techno teacher and form techno students.

**Work cited:-**

- Allesi, S. M., & Trollip, S. R. (1995); Computer assisted instruction. New York; SJSU*  
*Brophy, A. K. (1999), Is computer assisted instruction effective in the science classroom? Masters abstract International, 37(5), 1302, (UMI NO.1393859)*  
*Gail Burrill, Jaon B. Garfield(1997); Research on the role of technology in teaching and learning statistics. International statistical institute voorburg, The Natherlands.*  
*www.encyclopedia.com*  
*http://www.google.co.in/url:sa*  
*http://www.sciencedirect.*

**EFFECTIVENESS OF BLENDED LEARNING APPROACH FOR TEACHING A  
UNIT OF MATHEMATICS**

**Dr. Rekha Chavhan**, *Asst Professor And Ms Bhindya Ramchandran Department of Education  
S.N.D.T.Women"s University, Mumbai.*

**Introduction:** The 21<sup>st</sup> century is a century for technology because of this the expectations and needs of the learners have changed accordingly. In today's education development of 21<sup>st</sup> century skill is of pivotal importance. 21<sup>st</sup> century skills broadens students' knowledge, skills, work habits, and character traits that are believed to be critically important to success in today's world, particularly in collegiate programs and contemporary careers and workplaces. Without these skills, students will not be able to successfully participate in the global economy. Development of 21<sup>st</sup> century skills is possible by integrating ICT in teaching learning process. According to the needs of the present learners there should also be change in pedagogies. Pedagogy should have the potential to increase intellectual engagement and foster deep understanding through the development of hands on and minds-on dispositions towards teaching and learning. Blended learning approach is one of such practice which has the potential to revolutionize teaching and learning. Flipped classroom is a blended learning approach of learning wherein the traditional way of teaching and learning is reversed. It inverts the traditional teaching by delivering instruction online outside of classroom and moving homework and discussion into the classroom. The Flipped Classroom model flips the traditional relationship between class time and homework. Students learn at home via online coursework and lectures, and teachers use class time for teacher-guided practice or projects. This model enables teachers to use class time for more than delivering traditional lectures. In a traditional classroom the students are taught the concept in the classroom and expected to do homework at home whereas in flipped classroom the students will learn the concepts at home and then do the -homework- which becomes -classwork- in the classroom with the direct help of the teachers. The flipped classroom is a pedagogical model in which the typical lecture and homework elements of a course are reversed. This definitely does not mean that the teachers work is reduced as the learning material provided to the students, that the students are expected to learn at home are prepared by the teachers. These learning materials include videos, podcasts, screencasts etc. The learning materials used in the classroom for in-class activity must also be taken into consideration- like worksheets, puzzle sheets, quizzes etc. In a flipped classroom the learning starts from home and again ends at home i.e. first the students watch video at home at their own pace, then they are expected to apply the knowledge in the in-class activity, during this phase the teacher helps the students in case of any difficulty in understanding the concepts or applying the knowledge. Then finally the students are given opportunity to extend their learning at home. It acknowledges that knowledge construction is a complex process; hence it requires teachers and the students to collaboratively build and reflect on learning. Considering the importance of this approach following study was conducted to



enhance student learning. This study was conducted by Ms Bhindya Ramchandran , M.Ed student of Dept. of Education, SNDT women's University.

**Title of the Study:** Effectiveness of Flipped classroom model for teaching a unit of mathematics

**Variables of the study:** The study has following variables.

Independent variable: Flipped classroom Model

Dependent variable: a. Achievement in mathematics  
b. Self-regulated learning

**Objectives of the Study:**

- To develop learning material for flipped classroom model for teaching mathematics.
- To study the effectiveness of flipped classroom model for teaching of mathematics in terms of
  - a. Achievement in mathematics
  - b. Self-regulated learning
- To estimate effect size of the treatment on experimental group for
  - a. Achievement in mathematics
  - b. Self-regulated learning

**Hypotheses of the study:**

The following null hypotheses were formulated.

- There is no significant difference in the pre-test and post-test scores of mathematics achievement of the students of experimental group.
- There is no significant difference in the pre-test and post-test scores for self-regulated learning of the students of experimental group.

**Methodology of the study:** For the present study the experimental method has been used. The pre experimental pre test-post test single group design was used. The design is symbolically represented as:

T1	X	T2
Pre-Test	Treatment	Post-Test

**Sample: its size, nature and technique:** For the present study the non probability sampling technique has been used. The total sample of fifty seven students was selected through cluster sampling technique. The final sample in the experimental group was thirty five students, as the rest of the twenty two students have remained absent for one or more sessions of the flipped classroom.

**Scope and Delimitation of the study**

- The study deals with the students of St. Marys High school, Dahanu Road.
- Only the 7th B students of St. Marys High school, Dahanu Road are considered.
- It includes school affiliated to SSC board excluding other boards like CBSE, ICSE, IB, IGCSE etc.
- Only English medium students have been chosen for the present study.

- Only one unit of mathematics of standard VII was taught through flipped classroom model.

**Tools for data collection:** For the purpose of collecting quantitative data the following tools were used by the researcher

- a. Achievement Test
- b. Self-regulated learning Scale (Zimmerman & Risemberg; 1997)

**Data Collection:** For data collection researcher took permission from the St.Mary's High school's principal. After getting permission all the tools were administered on students of VII-A as pre test. The program was implemented for a period of one month (9<sup>th</sup> Jan 2017-8 Feb 2017) . After completion of the program same tools were administered as post test on the experimental group and after that data was analyzed.

**Data Analysis:** For analyzing this data the researcher made use of t test. t-test was conducted to determine if there was a significant difference between the pre-test and post-test scores of students' achievement in mathematics and self-regulated learning. The calculated  $t'$  was compared with the corresponding tabulated value of  $t'$  in the distribution table for accepting or rejecting the null hypothesis. For measuring the extent of the effect of the program implemented effect size was also calculated. The effect of the program on achievement in mathematics and self-regulated learning was calculated.

**Analysis of data:** t-test has been used to calculate the difference in the pre-test post test score of students. The relevant statistics for significance of difference in achievement in mathematics is indicated in the following table.

**Table1.1 Significance of mean difference in pre –test and post- test scores of Achievement in Mathematics**

Test	N	Mean	SD	t-ratio	L .O. S.
Pre test	35	4.85	1.71	34.76	0.01
Post test	35	23.91	3.32		

It is observed from the above table that there is a significant difference in the pre-test and post test scores of students of experimental group in mathematics achievement. This implies that the achievement of the students has been increased after the administration of the flipped classroom sessions.

Significance of difference in Self Regulated learning is indicated in the following table.

**Table1.2 Significance of mean difference in pre –test and post- test scores of Self Regulated learning**

Test	N	Mean	SD	t-ratio	L .O. S.
Pre test	35	227.8	24.40	9.62	0.01
Post test	35	257.82	25.83		

It is observed from the above table that there is a significant difference in the pre-test and post test scores of students for self-regulated learning . This implies that the self-regulated learning of the students has been enhanced after the administration of the flipped classroom sessions.

**Effect on Achievement :** To obtain the magnitude of the effectiveness of the programme on achievement of the experimental group, Cohen's d was calculated,  $d = 7.24$ .

**Interpretation:** The obtained  $d = 7.24$ , is more than the Cohen's d index 0.8. That means there has been a large effect of this program in increasing the achievement of the students.

**Effect on Self-Regulated Learning:** To obtain the magnitude of the effectiveness of the programme on the self-regulated learning of the students of the experimental group, Cohen's d was calculated,  $d = 1.19$ .

**Interpretation:** The obtained  $d = 1.19$ , is more than the Cohen's d index 0.8. That means there has been a large effect of this program in enhancing the self-regulated learning of the students.

**Findings and Conclusions of the study:**

- There is a significant difference in the pre-test and post test scores of students of experimental group in mathematics achievement. This implies that the achievement of the students has been increased after implementation of flipped classroom sessions.
- There is a significant difference in the pre-test and post test scores of students for self-regulated learning of the students of experimental group. This implies that the self-regulated learning of the students has been enhanced after implementation of the flipped classroom sessions.
- The obtained  $d = 7.24$ , is more than Cohen's d index 0.8 . That means there has been a large effect of the program in increasing the achievement of the students.
- The obtained  $d = 1.19$ , is more than Cohen's d index 0.8 . That means there has been a large effect of the program in enhancing the self-regulated learning of the students.

In conclusion it can be said that the flipped classroom program was effective in enhancing the mathematics achievement of the students and the self-regulated learning of the students.

**Recommendations:** Teachers can prepare learning materials like screencasts, videos, audios, audio embedded power point presentations etc so that the learners can learn by themselves.

Teachers can identify additional resources for ( pre-class and post-class activities) to enhance students learning. Games on the websites like:

<http://www.sheppardsoftware.com/mathgames/geometry/shapeshoot/VolumeShapesShoot.htm>

OR Exploring sites like: <https://www.mathsisfun.com/definitions/volume.html>

Teachers can design different assessment tools like quizzes, puzzles, worksheets etc.

Teachers can ask the students to prepare KWL charts, Mind maps, Concept maps of the topic taught.

**References**

- Al-Zahrani,A (2015) *From passive to active: The impact of the flipped classroom through social learning platforms on higher education students' creative thinking*. Retrieved on July 17, 2016 from World Wide Web: <http://onlinelibrary.wiley.com/doi/10.1111/bjet.12353/abstract>
- Attardi, S., Faden, L., Goldszmidt, M., McLean, S. (2016) *Flipped Classrooms and Student Learning: Not Just Surface Gains*. Retrieved on July 24, 2016 from World Wide Web: <https://www.ncbi.nlm.nih.gov/pubmed/26847257>
- Brame, C., (2013). *Flipping the classroom*. Vanderbilt University Center for Teaching. Retrieved November 12, 2016 from World Wide Web: <http://cft.vanderbilt.edu/guides-sub-pages/flipping-the-classroom/>
- Brown,K (June 2015) *Evaluating student performance and perceptions in a flipped introductory undergraduate biology classroom*. Retrieved on July 12, 2016 from World Wide Web: [http://scholarworks.umb.edu/masters\\_theses/304/](http://scholarworks.umb.edu/masters_theses/304/)
- Chipperfield, J., Dorsett, P., McNally, B. et al. (2016) *Flipped classroom experiences: student preferences and flip strategy in a higher education context*. Retrieved on July 18, 2016 from World Wide Web: <http://link.springer.com/article/10.1007/s10734-016-0014-z>
- Clark, K (2013) *Examining the effects of the flipped model of instruction on student engagement and performance in the secondary mathematics classroom: An action research study*. Retrieved on July 14, 2016 from World Wide Web: <http://search.proquest.com/docview/1437012328/70082D498EB44D25PQ/1?accountid=141537>
- Cobb (2016) *Turning the Classroom Upside Down: Experimenting with the Flipped Classroom in American Government*. Retrieved on July 18, 2016 from World Wide Web: <http://www.tandfonline.com/doi/abs/10.1080/15512169.2015.1063437>
- Enfield, J (2013) *Looking at the Impact of the Flipped Classroom Model of Instruction on Undergraduate Multimedia Students at CSUN*. Retrieved on July 14, 2016 from World Wide Web: <http://link.springer.com/article/10.1007/s11528-013-0698-1>
- Ferriman, J (2014) *6 steps for flipping your classroom*. Retrieved July 27, 2016 from World Wide Web: <https://www.learndash.com/6-steps-for-flipping-your-classroom/>
- Sierra ,H (May 2015) *Students' Experiences in a Math Analysis Flipped Classroom*. Retrieved on July 14, 2016 from World Wide Web: <http://search.proquest.com/docview/1688710068/F34DBD8EB01F493FPQ/1?accountid=141537>
- Smith ,J (2015) *The efficacy of a flipped learning classroom*. Retrieved on July 12, 2016 from World Wide Web: <http://gradworks.umi.com/37/19/3719573.html>
- Wiginton, B (2013) *Flipped Instruction: An investigation into the effect of learning environment on student self-efficacy, learning style, and academic achievement in Algebra I classroom*. Retrieved on July 14, 2016 from World Wide Web: <http://search.proquest.com/docview/1505373684/7F45567B20AA4BCCPQ/1?accountid=141537>

## EFFECT OF STUDY SKILLS TRAINING ON ENGLISH SUBJECT ACHIEVEMENT

Dr. Vaishaliben B. Patel, Sheth M.N.C..College of Education, Dabhoi

### *Abstract*

*This study aimed to test the impact of study skills training on the achievement in English subject. It aimed to find out that the mean post test scores of achievement in English subject for study skills trained group is higher than the control group in the total sample and sub sample. It also aimed to find out if there is any difference between mean percentage scores of achievement in English subject of study skill trained group over the control group in total sample and sub sample. It also aimed to find out that is there any remarkable improvement in study skills and student performance as perceived by the teachers and students, after study skill training. The researcher designed -Test of achievement in English Subject, Study skills questionnaire, & training module. Percentages, means and standard deviations, and C.R. were used on the obtained data. The descriptive results showed that the development of study skills will remain important in advancing student's academic, personal and professional success. At least a few hours in every term should be set apart to develop newer techniques and skills which will make the learners better in learning and achieving.*

**Keywords:** Study Skill Training, Achievement, Student Performance

**Introduction:** Effective study skills are an important element in achieving academic success. Teaching students how to study is as important as teaching the subject matter of a course. Students with effective study skills are more likely to feel competent and confident about their ability to learn. This leads to better attitudes about schoolwork. Study skills help prepare students for lifelong learning — not just academic learning. Specific skills such as organizing, listening, and retaining information can be applied in a variety of settings and situations, such as when applying for a job or planning errands. It is therefore important for teachers to make students aware of the various types of study skills and their benefits. Study skills, study habits, meta learning skills etc. are major factors that help students for attaining this goal. The acquisition, integration, organization and storage of knowledge are all facilitated by the use and practice of effective and efficient learning strategies and techniques. These processes can be facilitated through study skills training.

**Objective:** The objective of the study is to test the impact of study skills training on the achievement in English subject of standard IX students.

### **Hypotheses**

1. There will be significantly higher mean post test scores of achievement in English subject for study skills trained group than the control group in the total sample.
2. There will be significantly higher mean post test scores of achievement in English subject for study skills trained group than the control group in the sub sample of: boys and girls;
3. There will be significantly higher mean post test scores of achievement in English subject for study skills trained group than the control group in the sub samples of: (I) high achievers, (II) average achievers, (III) low achievers; based on previous achievement in English.

4. There will be significant difference in the mean percentage scores of achievement in English subject of study skill trained group over the control group in total sample and sub samples based on gender and levels of achievement;
5. There will be remarkable improvement in study skills and student performance as perceived by the teachers and students, after study skill training.

**Variables of the study:** Independent Variable: In the present study skills training is the independent variable. It denotes the systematic training and practice for scheduling the study time, not making, efficient reading, correct and neat drawing, different techniques of organizing ideas, preparation for examination etc. for improving the academic performance of students.

**Dependent Variable:** Achievement in English subject is the dependent variable. It denoted the knowledge attained or skills developed in English determined through test scores on the content of the unit 'Blue Whale' of standard IX English subject of secondary schools of Vadodara.

**Control Variables:** Sex and previous achievement are the control variable in the present study.

### **Methodology**

**Sample:** The sample was from standard IX of grant in aid schools of Vadodara district of Gujarat. Two division of standard IX with a combined strength of 65 students formed the experimental group and an equal number formed control group, selected through individual to individual matching technique on the basis of previous achievement in English subject

### **Tools**

1. Test of achievement in English Subject
2. Study skills questionnaire
3. study skill training module
4. Questionnaire on teacher's opinion about student's performance
5. Questionnaire on student's perception about the usefulness of study skills training.

**Analysis and Interpretation:** The mean performance of study skills trained group and control group on the pre-test of achievement in English subject was studied and compared by using the test of significance of difference between means, in the total sample. the obtained critical ratio for test of significance of difference between the mean pretest scores of study skills trained group (25.74) and control group (25.07) was 0.36, which was not significant because the value obtained was less than the tabled value (1.67) required. Hence, there was equality of the study skills trained groups and control groups on the previous achievement in English subject. The mean post test scores of achievement in English of the study skills trained group and control group were studied and compared by using the Test of Significance of difference between mean scores, in total sample. Critical ratio obtained for the test of significance of difference between means (3.90) was found to be exceeding the limit set (2.39;  $P < 0.1$ ) i.e. there is significant difference in the mean post test scores of achievement in English subject between study skills trained group and control group in the total sample. Mean scores indicated that

study skills trained group was superior over the control group with regard to post test scores of achievement in English. The means and SD of post test scores of achievement in English subject of study skills trained group and control group in the sub samples were found out and subjected to the test of significance of difference between means for small samples. there was significant difference in the mean post test scores of achievement in English subject for study skills trained group (14.60) and control group (9.97) in the sub sample of boys at 0.01 level of significance (C.R.=3.07;  $P < 0.01$ ). There was significant difference in the mean post test scores of achievement in English subject for study skills trained group (19.50) and control group (15.14) in the sub sample girls at 0.01 level of significance in the mean post test scores of achievement in English for study skills trained group (20.43) and control group (16.90) in the sub sample high achievement category at 0.01 level of significance (C.R. = 4.28;  $P < 0.01$ ). Significant difference was found in the mean post test scores of achievement in English subject for study skills trained group (13.95) and control group (10.90) in the sub sample average achievement category at 0.01 level of significance (C.R.= 7.82;  $P < 0.01$ ). There was significant difference in the mean post test scores of achievement in English subject for study skills trained group (9.72) and control group (5.50) in the sub sample low achievement category at 0.01 level of significance (C.R. = 5.86;  $P < 0.01$ ). In order to know the extent of difference in mean post-test scores of achievement in English of the study skills trained group and control group, the difference in the post-test scores were transformed into percentage terms, for the total sample and sub samples. The difference between study skills trained group and control group scores in percentage score terms gave an index of the effectiveness of the study skill training enhancing the achievement in English subject. In order to know whether the obtained percentage differences were significant, the test of significance of difference between percentages was also employed. In total sample, the difference in the mean scores of achievement in English subject between study skills trained group and control group was 13.60%. In the sub samples of boys and girls, the difference in the mean scores of achievement in English subject between study skills trained group and control group was 18.60% and 17.50% respectively. In the sub samples of high, average and low achievement categories, the difference in the mean scores between study skills trained group and control group were 14.10%, 12.20% and 16.80% respectively. All these percentage score differences between the study skills trained group and control group were significant as indicated by the critical ratios obtained for the test of significance difference between percentages. An average student made an improvement of 13.60 in achievement in English subject due to study skills training. It is also notable that boys gained in achievement better than girls and low achievers improved better than average and high achievers in English subject achievement owing to study skills training. Responses of other teachers and students regarding the effectiveness of study skills training on the improvement in students' performance related to various study skills were analyzed from student as well as teacher perspectives, the effectiveness of study skills training was highest in the area of time management, 91 per cent of teachers' opinion was that time management skill practice made more effect on student's performance in terms of organizing

their available time purposefully for study and other activities. 98 per cent students agreed that time management skill helped them more in scheduling their time for study, home work, play etc. The importance and usefulness of note-making was supported by 90 per cent of students. Their opinion was that as a result of skills training they could prepare notes by considering the important components of the skill and able to prepare notes, outline and organize ideas by different techniques. About 86 per cent teachers reported that there was a notable improvement in student's drawing ability was perceived by 83 per cent teachers and was supported by 90 per cent students. According to students, important guidelines for drawing diagram and the techniques of drawing were of great importance in their studies. The usefulness of memorization in their studies. The usefulness of memorization strategies and preparation for examination skill was reported by 71 per cent and 65 per cent of teachers respectively. The same was supported by 97 per cent and 95 per cent students respectively. Majority of the students supported the advantages of mnemonic aids and metaphor using techniques in learning. There was a notable improvement in reading ability and concept mapping skill as perceived by 78 per cent and 75 per cent teachers respectively. In the case of students, it was 97 per cent and 95 per cent respectively. Thus, students and teachers highly appreciated the effectiveness the learning skills.

**Conclusion:** There is a marked effect on Achievement in English subject in study skills trained group as a result of study skills training in the total sample. The same result was obtained from the analysis of sub samples based on gender and levels of achievement. The percentage of mean post test scores of study skills trained group and control group in total sample and subsample, 11-19 per cent of increase in the achievement in English subject of IX students was observed. Students and teachers highly appreciate the effectiveness of study skills training in improving the learning skills. It was very useful in enhancing achievement as its effect is highest in low achieving strata, through high achievers and average achievers also are supported by it in improving their learning skills. The findings in general goes along with the observation of other researchers from experimental studies (Shindel 1993; Viswanath 1993; Gelat 1998) that study skills are positively related to academic achievement but goes against the findings of some others that achievement increase is not significant after study skill training (Mehta & Kumar 1985; Saroda 1999). The development of study skills will remain important in advancing student's academic, personal and professional success.

By providing proper assistance and guidance, low achievers and average achievers can improve their academic performance. In teaching process, if teachers take the responsibility of equipping students with the important study skills, students would become independent learners to a great extent. At least a few hours in every term should be set apart to develop newer techniques and skills which will make the learners better in learning and achieving.



**References**

- Gelat, V.K. (1998) Effect of study habit on educational achievement of students of secondary schools. The progress of Education 99, 205-08*
- Mehta, P. and Kumar, D. (1985) Relationship of academic achievement with intelligence personality, adjustment, study habit and achievement motivation. Journal of Psychology and Clinical Studies 1,2, 57-68.*
- Novak, J.D. (1998) Learning, Creating and Using Knowledge: Concept Maps as Facilitative Tools in Schools and Corporations. Lawrence Erlbaum Associates, Mahwah, NJ.*
- Saroda, V. (1999) Study of impact of SES study habit and achievement motivation on academic achievement of higher secondary students. The Progress of Education 99, 122-124.*
- Shinde, V.R. (1993) Study skills training programme and its impact on scholastic achievement of ashram school of Adivasi Area. Journal of Psychological Research 45,43.*
- Viswanath, R.S. (1993) The effect of training in study skills on scholastic achievement. Journal of Psychological Research 37, 22.*

## ENHANCING COMMUNICATIVE SKILLS – AN ICT SUPPORTED APPROACH

**Dr. Asha A. K.**, *Assistant Professor, Rizvi College of Education*

If education is the preparation for life, language is the most powerful means to that end. Language acts as the fundamental tool for communication. It acts as a conduit for meaningful expression of ideas, concepts and underlines expression of creativity. Language, according to Coulmas (2005), is seen as an evolutionary adaptation to convey information. It is what most distinguishes us from other beasts, chatty chimps and brainy dolphins notwithstanding. Communication is essentially the sharing of an understanding; a powerful means to express oneself. One should have excellent competency in English language to be successful in many arenas. According to Smith (1983), language is inseparable from almost every human activity and there is a strong verbal element in the aesthetic, ethical, spiritual and social aspects of school life. Language spoken or written is directly involved in the activity of learning, whatever the subject may be and it is also used for communicating what has been learned. Language is a purely human and non-instinctive method of communicating ideas, emotions and desires by means of a system of voluntarily produced symbols. To buttress the preponderance of English, it is important to stress that English is being learnt all over the world through the realisation that it has inherent advantages. The compulsions of learning English are no longer merely political but scientific and technological. It is the language required by the world for greater understanding as it is the most international of languages. The importance of English as a library language is also stressed, as a huge amount of knowledge is available in printed form.

**Problem Selected and its Significance:** According to a survey by Employability Measurement Company ‘Aspiring minds’, the English learning level among engineering graduates is very poor in India. The survey which analysed the English skills of over 55,000 aspiring engineers in 250 engineering colleges said, —Around 36 percent of engineering graduates would be unable to read official reports and transcripts and derive information out of them, even when the information is explicitly stated (Aspiring minds, 2012). The problem emerges as a pose to the development of communicative skills which even affects the career development of students. It is an issue faced not only just by students but also by the whole community. In a traditional classroom setting, the methods of imparting English language are constrained and limited. The opportunity to communicate in the classrooms is generally confined to the extent of answering a few low order questions. The neglect of communicative English does not augur well for the employability of students in a competitive, globalised world. It is not due to the lack of resources that we trail behind but many of us are not adequately aware of the tremendous potentials which can be explored and utilised effectively for developing communicative skills. —Access to the target language remains a problem and the need for students to develop sufficient accuracy to pass proficiency examinations in English remains a paramount teaching objective (Fotos, 2003, p. 667). Majority of the

students prefer to keep themselves away from the stage if they are given an opportunity to deliver a speech in English. They may be having good marks in the examinations but when it comes to the question of communication, they have no confidence. Lack of appropriate vocabulary is another drawback faced by them. The students feel the void when they speak in English as they stutter and cannot find the apt word. Their vocabulary is very poor. Stuttering and stammering while speaking was pointed out by many of them. Since they are not exposed to opportunities to speak English, they hesitate to use the language. They opined that they are not having fluency in speaking in English. They are conscious of their drawbacks and are afraid of making mistakes. Irrespective of their problems majority were not making any conscious attempt to resolve the issue and be competent in communication. Many are not subscribing English newspapers at home and are not utilising it in the college library as well. The investigator felt that an intense training focussing on communicative aspects would be of great help to the students.

### **Objectives of the study**

The objectives of the action research are:

- to develop communicative skills
- to familiarize students with online tests
- to equip students to perform well in examinations, online tests and career prospects.

**Sample selected for the study:** The sample selected were a group of 40 SY B.Ed. students from Rizvi College of Education

### **Tools for the study**

The tools used for the study were:

- Items used for the Workshop on Communicative skills
- Online tests for assessing the proficiency level of the students.

As per the need analysis, Oral tests and Online tests were introduced. Oral tests include speech, extempore, presentation, body language, fluency etc. Online tests include various components of written communication like spelling, vocabulary, sentence construction, grammar, time management etc.

### **Methodology of the Action Research**

Understanding the significance of effective communication, the investigator conducted a Workshop on communicative skills in English. The workshop comprises of items like vocabulary, grammar, spelling, speech, extempore, storytelling, narrations, debates, discussions, word building exercises, language games etc. Continuous practice was given to the students and evaluation was done on a regular basis. Evaluation on Oral and Written communicative skills were conducted regularly. In order to familiarise students with the modern strategies of evaluation, Online tests were introduced.

**Procedure of the study:** The investigator conducted a study on the effectiveness of Online tests to enhance students' communicative skills in English and evaluated the performance of students. The approach is based on an action research, which takes into account the Cycle of

Action Research – Identify problems/issues for investigation, carry out research, formulate action plan and reflect on and evaluate action.

**Method selected:** Purposive sampling technique was used.

**Sessions on Communicative skill:** The investigator started giving a group of selected students practise in Communicative English. Before beginning the sessions, the investigator evaluated the communicative competence of the students by conducting dictations, speeches, presentations and online tests. The workshop focused on developing the following aspects in the students – vocabulary, spelling, common usages and expressions, word building, sentence constructions, tenses and other grammar items. Continuous practice and evaluation were done on a regular basis.

**Importance of Online tests:** Many departments have started conducting online tests for various government jobs. Many institutes also organise online tests. Many multinational companies have started taking exams online. Students who are not familiar with Online tests may find it difficult and the chances of giving a poor performance are high. Taking into account of the importance of online tests as the need of the hour, the investigator has decided to conduct and give practice in Online tests.

**Advantages of Online tests**

- Prevents cheating in examinations
- Saves time
- Can be attended from various places
- Saves the expenses
- Easily manageable
- Number of students never causes a delay
- Results available quickly
- Accessibility and flexibility

In order to conduct an online test effectively, three major components have to be taken care of:

1. Developing an online test
2. Supervision of the examination
3. Marking of the examination

An online examination system gives a high level of transparency as opposed to the traditional method. It is highly objective in nature. Most of the online tests generate results instantly. The online tests helped the investigator to enrich her learning experience as well. The investigator received technical help and support from experts in the field of computer science in designing the Online tests in the initial stages. It served as a platform for the investigator too to learn how to create and conduct an Online test. After the initial sessions, the whole tests are designed, administered and evaluated by the investigator herself.

**Items of Online tests**



**Analysis and interpretation:** The investigator used t test to find out the effectiveness of online test and it was found that there was significant difference in the pretest and posttest scores of the students. The obtained posttest mean scores are different from the pretest mean scores. The observed value of t is **20.34** and falls in the accepted region. The calculated t-value was significant (**t=20.34: p=0.00001**). It is concluded that there is a significant difference between pretest and posttest data. This clearly shows that the Online tests were effective for enhancing communicative skills in English among the students. Initially, the performance of students was below average as they did not concentrate on the instructions given and were not well versed with aspects of grammar. After repeated practice, the students showed remarkable improvement in their scores. By comparing the pretest posttest scores the investigator found that the Online tests are very effective for developing communicative skills, proficiency in grammar, speed/swiftness in writing, better concentration and vocabulary. The students' accepted their limitations in communicating in English and worked on it. They gave importance to the necessity of managing time, following instructions properly and applying knowledge effectively. The class helped in boosting their self-confidence and in knowing the 'uniqueness' about themselves. They volunteered to contribute their talents to the overall development of themselves as well as for effectively conducting the activities in the college.

**References**

*Aspiring Minds. (2012). For a workforce conversant with English. The Hindu: Education Plus. p.4.*  
*Coulmas, F. (2005). Sociolinguistics the study of speaker's choices. Cambridge: Cambridge University Press.*  
*Fotos, S. (2003). Traditional and grammar translation methods for second language teaching. In E. Hinkel (Ed.), Handbook of research in second language teaching and learning (pp. 653-668). New Jersey: Lawrence Erlbaum Associates.*  
*Nigavekar, A. S. (2013). New UPSC rules were to test communication skills. The Hindu. March 17, p.8.*  
*Smith, L. E. (1983). English as an international auxiliary language, no room for linguistic chauvinism. Readings in English as an International Language. Oxford: Pergamum Institute of English.*  
[www.testbudha.com/advantages\\_of\\_online\\_exams](http://www.testbudha.com/advantages_of_online_exams).

## **IDENTIFICATION OF KEY AREAS FOR DEVELOPMENT OF ACADEMIC SELF CONCEPT OF ADOLESCENTS**

**Dr. Mabel Pimenta**, *Associate Professor, Pushpanjali College of Education*

**Background of the Study:** Adolescence is a period of uncertainty stuffed with expectations and glazed with rebellion. Adolescents have to face various challenges and education needs to be organized to enable them to face the same. Inadequately managed stress can lead to anxiety, withdrawal, depression and suicidal tendencies. Gradual increase in the level of academic self concept can help the students to deal with academic stress at the outset of adolescence.

**Nature of the problem-** The problem is very specific in its title -identification of key areas for development of academic self concept of adolescent students. They are on the threshold of entering into higher classes where their academic performance is going to ensure entry into desirable stream of higher education. To help students gain more confidence above their own capacities researcher will identify their weaker areas and then develop on action plan. This study will also help students to identify their own weakness and to overcome them. Undue academic stress can be avoided if student is aware of key areas of academic confidence. Though the problem has local applicability it will help in action plan which will have universal applicability.

**The need for the research:** The need for carrying out investigation of the key areas of academic self concept of the students was felt basically because of following questions in the researchers mind.

1. What are the key areas of academic self concept of students?
2. What are academic efforts necessary for students to have better academic self concept?
3. How does personality type influence academic self concept of the students?

### **Objectives of the research**

The present study is therefore conducted with following objectives in mind.

1. To identify the key areas of academic self concept among the students of class VIII.
2. To develop the intervention strategies based on data collected.
3. To develop the key areas of academic self concept among the students of class VIII.

### **Operational definitions**

The frame of reference through which the researcher approaches the problem is established with the help of operational definitions.

The following are some of the **key concepts** in this study.

1. Self concept means any person's perception about self.
2. In the study academic self-concept relates to how well we perform in school or how well we learn. Academic confidence and academic efforts of students lead to academic self concept.

3. Personality is made up of the traits or patterns of thoughts, feelings & behaviors that make a person unique. Personality arises from the individual & remains fairly consistent throughout life.
4. People with Type-A personalities are high achievers, workaholics, and multi-tasking. They push themselves with deadlines to avoid delays.
5. People with Type- B personality often live at a lower stress level. They work steadily and enjoy achievement but do not get stressed when fail to achieve. They can accept losing in competition. They are often reflective by nature.

**Sample of the Study:** The researcher used random sampling. The sample was selected from six English medium schools situated in virar – vasai region. The sample consisted of sixty boys and sixty girls of class VIII.

#### **Variables of the Study**

**Independent variables-** Academic Confidence, Academic Efforts and personality types (Type A, Type B and Mixed Type)

**Dependent variable-** Academic Self Concept

#### **Tool of the Research**

The researcher used rating scale and multiple choice test for the study.

1. **Three point rating scale on academic self concept:** This scale comprised of ten positive and ten negative statements. The rating scale has two subscales, academic confidence and academic effort. Ten statements were allotted to both the subscales. The academic confidence (AC) subscale assessed students' feelings and perceptions about their academic confidence. The academic effort (AE) subscale assessed student's commitment to and involvement and interest in academic work. Even numbered items of the scale were items that measured student's effort.
2. Multiple choice test on personality types: the test had ten statements with three options each. The personality type was assessed based on selection of option.

#### **Scoring of scales**

**Scoring of three point rating scale on academic self concept:** All the positively worded items were scored as 2, 1 & 0 and negatively worded items were scored 0, 1&2. The scores of subscale Academic Confidence and Academic Efforts were added to get scores of Academic Self concept.

**Scoring of personality test:** If a student has chosen the option A the most, then his personality type is A, maximum of options B means mixed personality and maximum of option C, means the student has type B personality.

#### **Research Design**

**The study undertaken has all the characteristic of an action research.**

1. It is situational-in the interest of students where the situation is unique.
2. It is participatory and collaborative- participation of all the students is ensured directly or indirectly.

3. It is self evaluative- the objective and the process involved in executing the research are assessed, discussed and evaluated by members involved.
4. It is need based- students and teachers directly concern with the situation carry out the research. Felt need is undertaken for the study.
5. It is specific- it deals specifically with the academic self concept of students.

**Research Methodology:** Survey technique was used to collect data from the sample. The researcher approached the principals of the schools selected for the study. In first meeting with the principal aim, nature and sample of the study was discussed. In second meeting the researcher gave a copy of rating scale on ‘Academic Self Concept’ and multiple choice test on ‘Personality Type’ to the principals for reference. Two school periods were allotted for this purpose. Initially the aim of administering the tests was explained by the researcher. She also added that there won’t be any right or wrong answer but it should be marked truthfully. The researcher gave required guidelines to answer the test and the rating scale. Students were requested to clarify their doubts with regard to new terms and meaning of the statements.

**Analysis of Data**

**Abbreviations used in the research project**

Name Of The Concept	Abbreviations Used
Academic confidence	AC
Academic efforts	AE
Academic self concept	ASC

The following statistical measures were calculated for the study-

1. Measures of Central Tendency: Mean
2. Measures of dispersion: Standard Deviation
3. Coefficient of correlation
4. ‘t’ value

**Table 1 Comparison of Means of Ac, Ae and Asc Scores**

	Mean			SD			t
	Girls	Boys	Total	Girls	Boys	Total	
<b>Academic Confidence (AC)</b>	13.78	13.03	13.41	2.50	3.42	3.01	1.3718
<b>Academic Efforts (AE)</b>	14.70	14.47	14.58	2.90	3.39	3.15	0.4049
<b>Academic Self Confidence (ASC)</b>	28.50	27.35	27.93	4.66	5.97	5.36	1.1771

**Interpretation:** Mean of AC of girls is 13.78 and standard deviation is 2.50. Mean of AC of boys is 13.03 and standard deviation is 3.42. Mean of AC of total students is 13.41 and standard deviation is 3.01. Mean of AE of girls is 14.70 and standard deviation is 2.90. Mean



of AE of boys is 14.47 and standard deviation is 3.39. Mean of AE of total students is 14.58 and standard deviation is 3.15 Mean of ASC of girls is 28.50 and standard deviation is 4.66. Mean of ASC of boys is 27.35 and standard deviation is 5.97. Mean of ASC of total students is 27.93 and standard deviation is 5.36. Calculated t value for scores of AC of boys and girls is 1.3718. Calculated t value for scores of AE of boys and girls is 0.4049. Calculated t value for scores of ASC of boys and girls is 1.1771. All the three values are not statistically significant at 0.05 level since less than table value

**Table 2 Classification of Scores Of Asc**

Level of ASC	Classification criteria		No of students					
	Girls	Boys	Girls (N)	%	Boys (N)	%	Total	%
<b>High Mean + 1SD</b>	Above 33	Above 33	7	11.67	6	10	13	13.33
<b>Moderate Mean - 1SD to Mean + 1SD</b>	23- 33	21 - 33	46	76.67	46	76.67	92	76.67
<b>Low Mean - 1SD</b>	Below 23	Below 21	7	11.67	8	13.33	15	12.5

**Table 3 Percentage Scores Of Personality Type For Girls.**

no. Of girls	Type A	Type B	mixed	Total (%)
N= 60	15	20	65	100%

**Interpretation:-** From the above table, we can say that there are 15 % girls who have Type A personality, 20 % girls Type B personality, 65% girls have mixed personality.

**Table 4 Classification of Girls On The Basis Of Levels of Asc And Personality Type**

No. of girls	Range w.r.t ASC	Personality Type					
		A	%	B	%	Mixed	%
N= 60	High	0	0	0	0	20	10
	Moderate	10	5	30	15	90	45
	Low	20	10	10	5	20	10

**Interpretation: -** 10% of girls show high Academic Self Concept of which none has A and B type personality and entire 10% have mixed personality. 65 % of girls show moderate Academic Self Concept of which 5% have A type personality, 15 % have B type personality and 45% have C type personality. 25% of girls show low Academic Self Concept of which 10% have A type personality, 5 % have B type personality and 10% have mixed personality.

**Table 5 Correlation Between Ac And Ae Scores Of Girls**

<b>No. Of girls</b>	<b>R</b>
N=60	0.471692

**Interpretation:** - Correlation between Academic Confidence and Academic Efforts was calculated using Pearson's Coefficient of correlation. As per the formula the coefficient of correlation of scores of AC and AE of girls is 0.471692. As per the table of correlation it indicates low level of correlation.

**Table 6 Percentage Scores Of Personality Type For Boys.**

<b>No. Of boys</b>	<b>Type A</b>	<b>Type B</b>	<b>mixed</b>	<b>Total (%)</b>
N=60	15	30	55	100%

**Interpretation:-** As the table indicates there are 15% boys who have Type A personality, 30% boys who have Type B personality, 55% boys who have mixed personality.

**Table 7 Classification Of Boys On The Basis Of Levels Of Asc And Personality Type**

<b>No. of boys</b>	<b>Range w.r.t ASC</b>	<b>Personality Type</b>					
		A	%	B	%	Mixed	%
N=60	High	0	0	3	15	2	10
	Moderate	1	5	2	10	3	15
	Low	2	10	1	5	6	30

**Interpretation:** - 25% of boys show high Academic Self Concept of which none has A type personality and 15% have B type personality and 10% have mixed personality. 30 % of boys show moderate Academic Self Concept of which 5% have A type personality, 10 % have B type personality and 15% have mixed personality. 45% of boys show low Academic Self Concept of which 10% have A type personality, 5 % have B type personality and 30% have mixed personality.

**Table 8 Correlation Between Ac And Ae Scores For Boys**

<b>No. Of boys</b>	<b>R</b>
N=60	0.588331

**Interpretation:** - As per the formula the coefficient of correlation of scores of AC and AE of boys is 0.588331

**Conclusions-** The difference in mean of ASC of boys and girls is 1.15, hence it can be concluded that difference in AC and AE has led to higher difference in ASC, thus boys lag behind in academic confidence and efforts. But deviation from mean is higher in boys as compare to girls that indicates girls are consistent in ASC. The difference in means of girls and boys of AC, AE and ASC is not significant since the calculated t values are not significant at level. Highest number of boys and girls are at moderate level of ASC both having same percentage 76.67. Comparatively very low percentage, 11.67% girls and 10% boys belong to

high level of ASC. Also very low percentage, 11.67% girls and 13.33% boys belong to low level of ASC. There is higher percentage of girls at high level and lower percentage of girls at low level of ASC. It indicates that performance of girls in ASC is better than boys. 15% girls have type A personality means they aim high and try to achieve it. 20% girls with type B personality not stressed due to academics and competition. 65% girls have mixed personality 15% boys have type A personality means they aim high and try to achieve it. 30% boys with type B personality not stressed due to academics and competition. 55% boys have mixed personality. Compare to girls higher percentage of boys have type B personality. Coefficient of correlation of scores of AC and AE of girls is 0.471692. As per the table of correlation it indicates moderate level of correlation. Coefficient of correlation of scores of AC and AE of boys is 0.588331. As per the table of correlation it indicates moderate level of correlation.

**Intervention Strategies:** In order to develop the Academic Self Concept the following activities were conducted as intervention strategies. Activities were conducted and worksheets were given to the students. The students were evaluated on the basis of performance and worksheets.

1. Identification and development of desired positive traits
2. Relate positive experiences that displayed qualities like courage, kindness, selflessness, love, wisdom, happiness and determination
3. Fishing for Compliments- Complementing and appreciating self and others
4. I can do this much- to feel happy that a person can do certain things and also unwrap the desires

The findings revealed that the students were happy to engage themselves in introspection, questioning, group discussion and completed the activities. They promised to enhance and maintain all positive qualities in them. They were free to consult the researcher for clarification in areas that posed challenges to them. They were further made to self analyze their weaknesses and their strengths and given feedback that focussed on their particular skill or abilities.

### **Bibliography**

Best John W. & Khan James, *Research in Education 6<sup>th</sup> Edition*, Prentice Hall of India Pvt. Ltd., Delhi (1992)

Dandapani, S. (2001), *A textbook of Advanced Educational Psychology*. New Delhi: Anmol Publications.

Dash, M. (1988). *Educational Psychology*. Delhi: Deep and Deep Publication

Mukunda, K. (2009). *What did you ask at school today?* Noida: Harper Collins Publishers.

Sharma, N., (2003). *Understanding Adolescence*. New Delhi: NBT

Walia J.S., (2002), *Foundations of Educational Psychology*, Jalandhar City (Punjab), Paul Publishers

### **Websites**

<http://www.graphpad.com/quickcalcs/index.cfm>

<http://www.journals.elsevier.com/journal-of-research-in-personality/recent-articles/>

[www.ccsenet.org/journal/index.php/jedp/article/](http://www.ccsenet.org/journal/index.php/jedp/article/)

[www.child-dev.com/page.cfm](http://www.child-dev.com/page.cfm)

[www.en.wikipedia.org/wiki/TypeA\\_TypeB](http://www.en.wikipedia.org/wiki/TypeA_TypeB)

[www.selfgrowth.com](http://www.selfgrowth.com)

[www.simplypsychology.org/self-concept.html](http://www.simplypsychology.org/self-concept.html)

**SOCIAL MEDIA AS DIGITAL TOOL FOR PEDAGOGIC PRACTICES:  
IMPORTANCE AND IMPLICATIONS FOR Y-GENERATION**

**Abdunnazar P.T**

*Research Scholar, Department of Education & Training Maulana Azad National Urdu  
University Hyderabad. nasarvalapuram@gmail.com*

**Introduction:** Technology mediated teaching and learning is necessity of current scenario of education. The education system should be shaped and modified in accordance with the changes and of technological developments. Proper effectiveness of instructional strategies can be ensured if only the educational practices modernized with educational technology especially incorporation modern web technologies. The major reason for demanding proper incorporation of technology in teaching and learning process is that the current generations of students are digital natives. The professionalism of teacher community is the hall mark of success of every nation. Hence the education system of every nation is a touchstone of its all growth and development. The advancement of each society, community, and nation is highly depended upon competency and quality of teachers. The educational undertakings without ensuring and giving proper provisions to develop and maintain teachers' professional development especially in student teachers will be ineffective. Sticking on traditional and outdated teaching methodologies may challenge the teacher capacity and competence in current educational scenario.

**Social Media:** Social media is a group of internet-based applications that build on the ideological and technological foundations of web 2.0, and that allow the creation and exchange of user-generated content. The advancement of social media over last few years has brought the ways in which the internet is experienced by most end users. Social media is built on the notion of how people know and interact with each other on a common platform. It gives people the opportunity to share, collaborate and making the world more open and connected with each other. Social networking tools have a vital influence on communication as it helps a lot in every field of life such as social field, professional field and educational field. It is thoroughly rooted in our modern life system and culture as majority of people have chosen these networks into their daily routines, using whatsapp, Facebook, Twitter, LinkedIn and other tools. Social networking makes the children more interactive and having high level collaboration with peers. The learners from new generation are commonly motivated to learn from their peers online as they learn, interact and receive feedback from one another through a common online platform. The students are motivated to learn more from each other than from adults.

**Social Media and Digital Pedagogy:** Pedagogy can be simply described as art and science of teaching. The pedagogical technique can be defined as accomplishing teaching objectives. Digital pedagogy is technology mediated instructional, as it is not mere incorporation of technological devices in teaching learning process. It is the systematic organization of transacting the content with proper instructional strategies incorporating proper e- learning

material. The practices of digital pedagogy enable the teacher to select and implement proper technology mediated learning strategies. The emergence transition of e-learning generation is central component of digital pedagogy. Social media is pivotal in digital teaching and learning. The online platforms given by social media make learning more virtually.

**Y- Generation:** Y- Generation or the Millennial Generation can be called digital natives, rather than digital immigrants (Prensky, 2001). They are the first generation to have spent their entire lives in the digital environment; information technology profoundly affects how they live and work (Bennett et al., 2008). Brosdahl and Carpenter (2011) categorize various type generations, based on their cohort studies as following; the Silent Generation (1925-1945), the Baby Boomers (1946-1960), Generation X (1961-1981) and Generation Y (born after 1981). The important characteristic for Generation- Y is their early and frequent exposure to technology (Immordino-Yang et al., 2012).

**Teaching and Learning with Social Media:** Social media in education can be referred as the practice of using tools and resources of social media as a way of enhancing the education of students. The integration of social media is emerging trend in higher education with faculty using a variety of software tools and free web applications to enhance self directed learning, collaborative communication, and engagement. The traditional learning method that provided few opportunities for learners to develop and maintain their own learning activities while learning platforms based on social media networks place the control of learning into the hands of learners themselves. Social media networks are potential to maximize the interactive side with a student, and make the participation of the students in the educational process which leads to an increase to attract them toward e-learning. Social media not only helps to acquire knowledge but also establishing enduring relationships with real people, connecting with fellow dorm residents through Facebook, Twitter and various social sites that can help a student overcome the kind of isolation in teaching and learning process. Group and personal interactions are vital to creating and sustaining a sense of belonging. The strength of social networking tools and resources is that they offer an assortment of tools that learners can mix and match to best suit their individual learning styles and increase their academic success. It sites focuses heavily on building online communities with common interests or activities. Social media also help students develop leadership skills, from low-level planning and organizing to activities that promote social change and democratic engagement. The resources from social media tools and networking sites encourage the learners to engage with each other and to express and share their creativity. Social media networking is a pivotal in the educational practices of current scenario as each student having any kind of digital connection become a link in this network. There are many social networking platforms specifically designed for educational purposes and social media such as *face book, Twitter, My space* etc. also can be used for educational purposes which maximizes learners collaboration and educational discussions on virtual platforms. *Padlet* is an important social networking site specially designed for class room teaching. It can be used for teaching and learning as it is virtual or online Bulletin Board for a class and students and teachers can present what they

express or contribute and it can be edited or modified collaboratively. It has variety of uses in language teaching sharing links for videos, images and articles, vocabulary and grammar presentation, content presentation by students and their feedback by peer groups and teachers etc. *Blend Spaces* is also very important web tool which is helpful for teachers to pull various resources from YouTube, Google Drive, Edu Creation Lessons and other social networking sites to a place and it gives storage to save all these materials. It helps teachers to enrich the presentation of topic with variety of resources. *Live Binders* is also very potential web tool that can be used for teaching for a number of purposes. Many recent research efforts have been made to support teaching and learning using a variety of social media tools and resources. The researchers report that making social media tools as part of teaching and learning is attractive to students and can motivate their participation in the learning process. Vishranti Raut & Prafulla Patil (2016) describes the Following as the positive impact of Social Media on Education: -

1. Google and education, Google has helped over 20 million student in their education using their tools.
2. By spending so much time working with new technologies, students develop more familiarity with computers and other electronic devices.
3. With the increased focus on technology in education and business, this will help students build skills that will aid them throughout their lives.
4. Talents got discovered faster, students who were good at programming got their name out their easily, student who were good in music, got their videos out and shared leading them to their dreams.
5. A lot of the students were able to inform public about their issues – using social media which brought awareness and helped solve a lot of problems.
6. The ease with which a student can customize their profile makes them more aware of basic aspects of design and layout that are not often taught in schools.
7. The ease and speed with which users can upload pictures, videos or stories has resulted in a greater amount of sharing of creative works. Being able to get instant feedback from friends and family on their creative outlets helps students refine and develop their artistic abilities and can provide much needed confidence or help them decide what career path they may want to pursue.

**Social Media Platforms for Educational Practices:** Social media is the term used to describe a variety of web sites comprising important applications that allow anyone to create and share online information or material they have created. The key element of this technology is that it allows people to create, share, collaborate and communicate. Social media resources differs from other types of websites as it does not require any web design or publishing skills to participate, making it easy for people to create and publish or communicate their work to the world. This technology makes sharing and collaborating easy and popular as a way to communicate information to either a select group of people or to a much wider audience. The following are some platforms of social media which facilitate sharing and collaboration.

**Wiki Resources:** Wikis are open and collaborative website that anyone can contribute or edit from the community its users. It can be open to a global audience or can be restricted to only a selected group of community. It commonly covers a specific topic or subject area. Wikipedia is the best example of a good social media. It enables to share dialogue and information among participants in group and allow learners to engage in learning with each other. Wikis are helpful to modify texts written by previous contributors as it facilitates to help learners each other to edit and correct what they present (Kessler 2009). Wikis allow students to publish their ideas and communicate with other learners online. This provides a platform for collaborative learning environment (Godwin- Jones 2009).

**Blogging:** Blogs are online personal journals or diaries. It gives students public and common spaces to interact and discuss for teaching and learning process. Blogs usually provide effective commentary or information on a specific area, topic or idea. Blog can be maintained by a single person or a small group of contributors. There are more than thousands of blogs as each teacher can prepare blogs for his or her own classroom purposes. It facilitates for the visitors to the blog to comment on the entries made or respond to comments made by other visitors. Blogs are primarily text but can also be the form of photos or other images, sounds, or films. It also helps to link communication between study groups within a class or other classes either same schools or outside schools. It can create an effective and interesting learning environment that extends beyond the premise of schools.

**Social Platforms for Synchronous Communication:** Many social media platforms give opportunity to communicate synchronously. It facilitates online interactive classes, discussions, seminars and debates either free of cost or any mode of payment. This online interactive class gives the students quality live classes and discussion from eminent universities, institutions and other colloquiums. It helps to boost student's professionalism and enable them to bring in to global standard education. Using synchronous communication system MOOC, edX, SWAYAM, facebook live, online Skype learning etc. provides platforms for quality online classes.

**Learning Resources from Multi Media Archives:** The classes provided by synchronous communication tools has some limitation as they are not so flexible and cannot be accessed at any time according to the convenience of learners. Though there is no interactive and live streaming facility there are thousands of lectures and discussions in online platforms which may be available in *YouTube* or any other educational tubes and learners can access at any time according to their convenience. Podcasting gives many media archive resources. It is a way of making audio or video files available on the internet by uploading individuals or organizations that can either be listened to or viewed on a computer or downloaded to a hand-held device such as mobile phone, iPod or mp3 player. Learning through the mobile phones also supports the integration of social media for educational practices. New gen- smart phones are used to search and obtain learning materials through mobile apps, social interactions and online educational hubs and platforms. It enables the learning easy and flexible, allowing the learners to access to education anywhere, anytime without any barriers. M-learning supports

the way for educational institutions to deliver knowledge and educational content to students on any platform, any place and at the time of need. Students can use mobile apps and other tools to upload their assignments to teachers, download course instruction, prepare e-portfolios etc. and work in online social groups to for effective teaching and learning process.

**Conclusion:** The integration of social media tools and resources in educational practices cannot be ignored in the current scenario of education, since the students of current generation are from Y- Generation. Social media makes the educational process more democratic. Moreover if proper digital technologies of education especially social networking sites left behind from pedagogical practices it adversely affect the all round development of learners. The teachers should equip with proper digital technologies to transact the curricular and non-curricular contents. Though there are some negative aspects of integrating social media, the potentials more useful for educational development. Proper incorporation of digital tools provided by social media will make the teaching and learning more effective and interesting.

**References**

- Bennett, S., Maton, K. and Kervin, L. (2008), *The „digital natives“ debate: a critical review of the evidence*, *British Journal of Educational Technology*, 39 (5) , 775-786.
- Brosdahl, D.J. and Carpenter, J.M. (2011), *Shopping orientations of US males: a generational cohort comparison*, *Journal of Retailing and Consumer Services*, 18, 548-554.
- Immordino-Yang, M.H., Christodoulou, J.A. and Singh, V. (2012), *Rest is not idleness: implications of the brain's default mode for human development and education*, *Perspectives on Psychological Science*, 7 (4) 352-364.
- Jones, G.R. (2009). *Personal learning environments*. *Language learning & Technology*, 13 (2), 3-9.
- Kaplan-Leiserson, E. (2005). *Trend: Podcasting in academic and corporate learning*. *Learning circuits*, Retrieved September 4, 2010 from [http://www.astd.org/LC/2005/0605\\_kaplan.htm](http://www.astd.org/LC/2005/0605_kaplan.htm)
- Kessler, G. (2009). *Student initiated attention to form in wiki based collaborative writing*. *Language learning & Technology*, 13(1), 79-95.
- Prensky, M. (2001), *Digital natives, digital immigrants*, *On the Horizon*, Vol. 9 No. 5.
- Vishranti Raut & Prafulla Patil. (2016). *Use of Social Media in Education: Positive and Negative impact on the students*. *International Journal on Recent and Innovation Trends in Computing and Communication*, 4(1), 281-285.



**CHALLENGES FOR INDIAN HIGHER EDUCATION SYSTEM : ISSUES AND SUGGESTIONS**

**P. Bhavani**, *Ph.D Research Scholar, Department of Education, Sri Padmavati Mahila Visvavidyalayam, Tirupati, AP.*

**Prof. T. G. Amuthavally**, *Head of the Department, Department of Education, Sri Padmavati Mahila Visvavidyalayam, Tirupati, AP.*

**Abstract**

*Education is powerful instrument for the progress of any nation. Higher education system plays an important role for the country's overall development which includes industrial, social, economic etc. Higher education in India has expanded very rapidly in the last six decades after independence. Presently India's higher education system is the largest in the world in terms of number of institutions and is often cited as one of the main contributors in the economic rise of India. The role of Indian higher educational institutes such as colleges and universities in the present time is to provide quality based education in the field of education, research etc to empower youth for self sustainability. Changes in our educational system have been an impetuous in last few decades, of course, there has been a marked expansion in every sector of education and quantitative improvement may be considered to be the great achievement but quality is still in vogue. In spite of various commissions and committees appointed by the Government from time to time to enhance the quality of education and various initiatives taken by the Government, Indian education is still at the cross-roads. India, being an over populated and developing nation having federal characteristics in administration, struggles with various inherent issues and challenges in its education system, needs more attention for its improvement. The present paper is an endeavour to highlight the key challenges and issues that India is currently facing in higher education and also includes some Suggestions to meet those challenges.*

**KeyWords:** *Issues, Challenges, Education, Empower, Development, Higher education .*

**Introduction:** Higher education is very important for a developing country like India and it is encouraging to increasing human development. Higher education in India has experienced phenomenal expansion since independence. India has produced scientists, engineers, technologists, doctors, teachers and managers who are in great demand all over the world. Now it is one of the top ten countries in our industrial and technological capacity, because of the significant contribution of manpower and tools provided by higher education, especially, technical education. India has already entered into the era of knowledge explosion. It has proved its tremendous potential by its performance in nuclear and space domains. In the coming few decades will be heralded by space craft, satellites, internets and others offshoots of scientific enquires. Higher Education provides opportunities to the people to reflect on the critical social, cultural, moral, economic and spiritual issues facing humanity. Higher education provides specialized knowledge and skilled persons for national development. In next few decades, India will have world's largest set of young people. While the correlation between people and higher education is not up to the mark. The increasing youth population can be a great asset if potential employability is brought to fruition. Conversely, if we fail to provide education and employment then it will open a downside gate for Indian economy. Education is an essential tool for achieving sustainability. The Education Commission 1964-66 described the role of education in social and economic transformation through a statement -the

density of a nation is shaped in its class rooms. Education creates human capital which is the core of economic progress and assumes that the externalities generated by human capital are the source of self sustaining economic process. Higher education means different things to different people. If we talk about higher education in terms of level, it means to gain higher educational qualification by the teaching-learning process in the higher educational institutes such as colleges and universities. Moreover higher education imparts knowledge, develops the student's ability and also give him/her a wider perspective of the world around. Higher education becomes input to the growth and development of industry and also seen as an opportunity to participate in the development process of the individual through a flexible education mode.

**Review of literature:** National Knowledge Commission report 2006 pointed out that the existing framework, rather than fostering accountability, constrains the supply of good-quality institutions whilst excessively regulating the existing institutions in the wrong places and is not conducive to innovation or creativity. These findings are backed up by another report which describes the Indian higher education sector as 'Over-regulated and under-governed'. At the same time, quantity expansion has also been grossly inadequate, making the challenges daunting on dual fronts of quantity and quality. According to the Team Lease report, most of young Indians suffer from some degree of skill-deprivation. The study also showed that non-availability of courses, inadequate infrastructure facilities, inadequate financial resources, lack of flexibility and autonomy to the institutions among others have dented efforts in improving the quality and scale of education, employability and employment. The study also states that the challenges of higher education been caused due to low college enrollment, employability crisis of unskilled labor and lack of flexibility of the education sector. Judhajit Das, opines that (Chief HR Officer, ICICI Prudential) The issue of employability is centered on two challenges. The first one is lack of access to education and skills, and the second is rigour in education quality standards. Calculated investment and new technology can take care of the first issue. The second challenge is more about quality of students which results in aspiration mismatch between skills and job/salary expected.

**Twelfth Five Year Plan (2012-2017):** This report suggested that accountability indicators designed to ensure quantity were inhibiting the quality of graduates, particularly in relation to their creative and entrepreneurial skills. It also pointed out that higher education system in India can scale up in quality and reach only by creating competition with transparent regulation. Some of the proposed solutions include legitimizing distance education, fostering public-private partnership models, deregulating higher education and tweaking the skill and employment ecosystem.

### **Objectives**

The main objectives of this paper were the following :

- ✓ To study the current scenario of higher education system in India
- ✓ To study on the key issues of higher education in India

- ✓ To identify on the Emerging Challenges of higher education in India
- ✓ Suggestions and Recommendations to meet the challenges and for improving quality of higher education.

**Methodology:** This study intended to examine the issues and challenges of Indian higher education system based on secondary data. The literature and data has been collected and furnished from the official website of the HRD ministry of India, University Grants Commission (UGC), reports and contributions of several institutions, organizations and individuals in India, other journals, books, websites, recent surveys, related research papers, news papers and published & unpublished work.

**Higher Education: Concepts and Meaning:** The term Higher Education is ambiguous in nature because it is used in variety of way by different people, different country and in different point of time. In fact, there is no straight forward definition of Higher Education. Internationally after school education can be divided into Higher Education and Further Education and is known as Tertiary Education. Higher Education qualification implies Higher Diplomas, Foundation Degrees to Honours Degrees and takes a minimum of 3 years to maximum of 4 years to complete. Further Education on the other hand refers to Post Graduate or Master and Doctorate degrees. In a single word Tertiary Education means colleges and university level education. Indian education ladder starts at 6 years of age. It comprise of 10 years of primary or elementary and secondary stages, 2 years of higher secondary stages, 3 years bachelor's degree, 2 years of masters degree and at least 3 years beyond masters degree for a Ph.D. According to NEP 1968, 1986 this is known as 10+2+3 system. The Post Higher Secondary Education is known as Higher Education in India.

**History of Higher Education in India:** In the long past the institution of higher education has been given an important position in the Indian society. There were perhaps three streams of tradition (i). Ancient and medieval Sanskrit and Buddhist tradition. (ii). The medieval Arabic and Persian tradition. (iii). East and South Indian such as Tamil tradition. It has been found from the writings of Chinese travellers like Fi-Hien, Hiuen-Tsang that there exist ancient seats of learning at Takshashila (5th-6th Century B.C), Kanchipura, Nalanda (5th-6th Century A.D), Odantapuri, Sri Dharryakataka, Kashmira, Vikramashila (800A.D). Among the subjects studied here were grammar, metaphysics, logic etc. In both Sanskrit and Arabic higher learning much secular and scientific learning in law, medicine, mathematics, astronomy etc. was cultivated besides literature, philosophy with the help of books, discussion and memorization. Indian Higher Education in its present form begun to appear from the time when British parliament renewed the Charter Act (1813) for educational development in India. College to disseminate English education was established in 1818 at Serampore, Calcutta. McCauley's minute (1835) to promote English education, Charls Woods' Dispatch (1854) to establish the universities of Calcutta, Bombay, and Madras in 1857 and the introduction of grants-in-aid for these universities were the major events. Indian Education Commission or Hunter Commission's (1882-83) recommendation to finance University Education in India provided a major impetus to higher educational development in India.

Calcutta University Commission (1917) called as Saddler Commission also recommended for autonomy of universities. The Hartog Committee (1929) report suggested for improvement of quality and standards at the University level education in India. The Abbot-Wood Report (1937) recommendation suggested that English should be the medium of instruction and encourages the establishment of Polytechnic Colleges, Central Technical Board and Vocational Teacher Training Colleges. Finally Sargent Report (1944) recommendation for the establishment of U.G.C and formulation of blue print for Indian Higher Education structure was the major landmark. At the time of independence there were almost 20 universities and 500 affiliated colleges with the students of near about 0.1 million in India. After independence India made various efforts to improve higher education system. The first education commission in independent India, Radhakrishnan Commission (1948-49) also recommended for the establishment of UGC. Secondary Education Commission (1952) pioneered a system of 3 year secondary and 4 year higher education. Indian Education Commission (1964) recommended for the introduction of 3 year Degree course and 4 year Honours Degree course. The National Policy on Education (1968) demanded for qualitative improvement at higher education level. The National Policy on Education (1986) recommended 10+2+3 pattern of educational system. The effects of the recommendation of such commissions can be observed from the present status of higher education in India.

**Higher Education in India:** Next to China and United States India has the third largest higher education system in the world in terms of size and its diversity and largest in the world in terms of number of educational institutions. After independence Indian higher education attained a massive growth. In the Indian system, higher education starts after the 10+2. Framework of higher education in India is very complex. It includes various types of institutions like universities, colleges, institutes of national importance, polytechnics etc. Universities are also of different types like central universities which are formed by government of India, by an act of parliament which are responsible for arranging and distributing resources required by university grants commission, State universities, Deemed universities and Private Universities. India has a federal set-up and the Indian constitution places education as a concurrent responsibility of both the centre and state. While the centre co-ordinates and fixed standards in higher and technical education, school education is the responsibility of state.

Regulatory Bodies of Higher Education in India

Under the department of higher education the following regulatory bodies and research councils are responsible for the higher education in India.

- University Grant Commission (UGC)
- All India Council for Technical Education (AICTE)
- Council of Architecture (COA)
- Indian Council of Historical Research (ICHR)
- Indian Council of Social Sciences Research (ICSSR)
- Indian Council of Philosophical Research (ICPR)
- National Council of Rural Institute (NCRI)

- Project of History of Indian Science Philosophy and Culture (PHISPC)  
Emerging Issues of Higher Education in India

The role of higher education in the emerging scenario of knowledge economy is very crucial and multifaceted for any country in general and India in particular. There are many basic problems faced by higher education system in India. These include :

- ❖ **Lower level of teaching quality.** Our education system is torture by issues of quality in many of its institutions and universities. Many of the issues like lack of faculty, poor quality teaching, Traditional teaching methods, outdated and rigid curricula and pedagogy, lack of accountability and quality assurance and separation of research and teaching are raise questions on Indian education system.
- ❖ **Financing of higher education:** One of the most important things that have to be noticed is the issue of financial constraints regarding higher education before the government. Expenditure on education in common and on higher education in particular by the government, is one of the parameters to judge the quality in education for at all nation. The State Government have already been spending 20-30 per cent of its revenue budget on education. It cannot afford to spend more. In India, higher education has received less attention in terms of public spending than other levels. It is not feasible for India to make massive state investments in research and development that produced research led universities in the west such as MIT, University of California, Berkeley in the US or University of Cambridge in Britain.
- ❖ **More concentrated on theories and rather than practical knowledge:** Indian education system is more focused on theoretical knowledge rather than practical knowledge. In many jobs there is also a minimum requirement of percentage which is high.
- ❖ **Traditional methods of teaching:** Professors still stick to those older methods of teaching like board, marker. They don't like to make use of audio visual aids in teaching. Also they are not up to date with the information available and what global industry demands.
- ❖ **Privatization'** In the present scenario, privatization of higher education is apparently a fledgling but welcome trend and is essential to maintain creativity, adaptability and quality. The economic trail of liberalization and globalization demands it. In India both public and private institutions operate simultaneously. Approximately 50 per cent of the higher education in India is imparted through private institutions, mainly unaided involving high cost. However, the-situation is not so simple. Private providers, in the interest of maximizing profit, have every incentive to *'\_minimize costs'* by compromising on the quality of education provided in their institutions. Last but not least, quality of teaching staff is one of the considerable issues for higher education sector to sustain in the future. Earlier, they were committed to their students to their subjects and to their profession. Today, high salaries are available but the commitment is less. Thus, it is the need of the hour to free the higher education system from unnecessary constraints and political interference.

- ❖ **Inadequate facilities and infrastructure:** In India, many of the universities don't have adequate infrastructure or facilities to teach students. Even many private universities are running courses without classrooms. Internet and Wi-Fi facility is still out of reach of many students.
- ❖ **Quota system:** Bringing the reservation and quota system for different categories in education lost its quality. Even deserving candidates of general categories are ignored and on quota we have to select other person from reserved category even though he is not suitable.

Challenges of Higher Education System in India

**Gap between the Supply and demand:** In higher education, India has a low rate of enrolment gross enrolment ratio (GER), at only 19%. If we compared to china and brazil GER is 26% and 36% respectively.

**Lack of Quality Research work:** There is no shortage of funding for the top Indian Institutions such as IITs, IIMs and other institutes of national importance. However, budget for the Research is not under spent due to the insufficient good quality research work. Due to the limited focus on Research and Internationalization, very few Indian higher educational institutes are globally recognized.

Number of Research papers published in India has increased continuously for the past few decades but reflected in low citation impact if compared with other countries like Germany, United States, France and China.

**Indian higher education is facing with the problem of poor quality of curriculum:** In most of the higher educational institutes curriculum is out-dated and irrelevant.

**Shortage of Faculty and High Student-Faculty Ratio:** In most of the state and central universities more than 30% of faculty positions are lying vacant. While the student enrolment in higher education is growing with faster rate in the last few years.

**Inadequate Infrastructure and Facilities:** Apart from the highly recognized higher educational institutes in India most of the colleges and universities lack in the basic and high-end research facilities. Many institutes are running without proper infrastructure and basic facilities like library, hostels, transport, sports facility etc. which is desirable to rank the quality institution.

Presently there is a very less collaboration of higher educational institutes with industries.

Low employability of graduates is one of the major problem in India. Only a small proportion of Indian graduates are considered employable. Placement outcome also drop significantly as we move away from the top institutes.

Initiatives taken by the government in human resource development

A project has been taken up to make a national digital library of eBooks on various subjects and topics and another set up through which highly qualified faculty of centrally sponsored institutions like IITs, IIMs and central universities would offer online courses free of cost.

Another special scheme called —Udaanl for girl students has launched by the Central government. Under this scheme mentoring and scholarship will be provided to enable

meritorious girl students to transit from schools to technical education without any difficulty and also to promote teaching and learning of mathematics and science at senior secondary school level by providing free resources. The focus of the project is to overcome the low enrolment ratio of girl students in prestigious technical institutions and enable them to receive special incentives and support so that they can join these institutions and go on to take leadership roles in the future. Another interesting step is the launching of a mission named after freedom fighter and educationist Pandit Madan Mohan Malviya to build a strong professional cadre of teachers by addressing all the issues related to teachers, teaching, teacher preparation, professional development, curriculum design, design and development of more effective pedagogy and better assessment and evaluation methodologies. The Central Government has also launched a scheme called Unnat Bharat Abhiyan for the promotion of technologies from the laboratory to the ground. Under the scheme, higher educational institutes would connect with villages in their neighbourhood and address the various problems faced by them. The scheme would particularly looking for the solutions for water management, organic farming, renewable energy, infrastructure and livelihood. IIT, Delhi is the coordinating institute of this scheme. About 130 villages have so far been adopted by IITs, NITs across the country under the scheme. Rashtriya Avishkar Abhiyan has launched to revive interest in the technology among youth through support for innovative learning based on observations and experimentation. The focus would be on learning outside the classroom through direct interaction with the environment around the educational institutions. Under the Global Initiative of Academic Networks (GIAN) programme, India's ministry of human resource development and department of science and technology will —create a channel for US professors in science, technology, engineering, and mathematics to teach in Indian academic and research institutions on short-term exchanges, as per the website of the US Department of State.

#### **Suggestions and Recommendations**

- ❖ Most institutes are providing traditional courses, hence there is a need to change their attitude and introduce new courses as per demand of industrial, service and agricultural sector in India.
- ❖ The government should permit grant-in-aid basis professional colleges in India for better human resource development.
- ❖ Education system should be promoted on social and moral basis not on commercial basis.
- ❖ The institutes should push and encourage the efforts of students and provide better perspective for them.
- ❖ Private sector should run educational institutes or universities on corporate social responsibility.
- ❖ Educational institutes and Teachers should take the responsibility to stop the drop out of girl students in higher education.
- ❖ Examination reforms are required on the basis of practices and creativity.

- ❖ For better output, there is a need to maintain optimum teacher-student ratio. Accordingly government should recruit teachers time to time on regular basis.
- ❖ The centre and state governments should develop a separate infrastructural fund for better infrastructural facilities and new constructions to the educational institutes/universities.
- ❖ Government should offer tax concessions and incentives for setting up higher education institutes and universities by private/corporate sectors.
- ❖ There is a need to implement innovative and transformational approach from primary to higher education level to make Indian educational system globally more relevant and competitive.
- ❖ In higher educational institutes Industrial co-operation must be there for the development of curriculum, organizing expert lectures, internships, live projects, career counseling and placements.
- ❖ Higher educational institutes need to improve quality, reputation and establish credibility through student exchange, faculty exchange programs, and other collaborations with high-quality national and international higher educational institutes.
- ❖ Government must promote collaboration between Indian higher education institutes and top International institutes and also generates linkage between national research laboratories and research centers of top institutions for better quality and collaborative research.
- ❖ There is a need to focus on the graduate students by providing them such courses in which they can achieve excellence, gain deeper knowledge of subject so that they will get jobs after recruitment in the companies which would reduce unnecessary rush to the higher education.

**Conclusion:** Higher education in India is an extraordinarily important part of modern Indian society and it is intertwined in the political and social systems of the society. It is in need of change, development and important. In order to effectively plan for reforms and improvement, it is necessary to have in realistic perceptions of what is possible and what is not. In this paper we have presented the present situation of India in higher education sector. We also identify the challenges like demand-supply gap, lack of quality research, problem of infrastructure and basic facilities, shortage of faculty etc in the higher education. The implementation framework for twelfth plan aims to focus on improving quality of state institutions, to revamp financial aid programs, to interlink expansion, equity and excellence. To improve the higher education system we need to improve teaching pedagogy, build synergies between research and teaching, facilitate alliance of higher institutions among themselves, research centers and industries. This is necessary not only to take care of economic growth, but it is also essential for social cohesion and to empower the country's youth.

#### **References**

Agarwal, P. (2006). "Higher Education in India: The Need for Change." ICRIER Working Paper, Indian Council for Research on International Economic Relations: No. 180.



- Agarwal R et al. *Higher Education and Quality Improvement: A challenge for India. Indian Journal of Applied Research* 2014; 4(10).
- Arunachalam P. *Higher Education Sector in India: Issues and Imperatives. Journal of Global Econom* 2010; 6(4)
- Barnett, R. (1992). *Improving Higher Education: Total Quality Core*, Buckingham: SRHE & OU.
- Bhatia K, Dash MK. *National Knowledge Commission-A Step towards India's higher Education Reforms on India's Higher Education. International Research Journal of Finance and Economic* 2010; 53: 46-9.
- British Council, *Understanding India: The Future of higher education and opportunities for international cooperation*, 2014.
- Chronicle of Higher Education*, various issues (cited as CHE) (<http://chronicle.com/>)
- Higher Education in India: Issues, Concerns and New Directions* <http://www.ugc.ac.in/pub/heindia.pdf>
- <http://pib.nic.in/newsite/efeatures.aspx?relid=122741>
- <http://ictpost.com/process-and-politics-ict-governance-in-indian-education/>
- <http://thenamopatrika.com/smriti-irani-launches-new-schemes/>
- Mishra Sharda, (2006). *UGC and Higher Education System in India*. Book Enclave, Jaipur. 302006.
- Padhi, S.K. (2011), „*Issues, Challenges and Reforms in Higher Education for a Knowledge Society*. PWC report on “*India-Higher education system: Opportunities for Private Participation*, 2012.
- Ramesh G. *Indian Higher Education and the Challenges of Sustainability: An Analytical Note. International Journal of Social Science & Interdisciplinary Research* 2013; 2(9).
- Sanat Kaul, “*Higher Education in India: seizing the opportunity*”, Working paper no. 179, 2006.
- Sudhanshu Bhushan, *economic & Political Weekly EPW* January 26, 2013 vol XLVIII no 4
- University Grants Commission (UGC) released a report “*Higher education in India at a glance*. Dr. Pravin Ransure S.P. College, Pune.
- Vrat, Prem (2006), “*Indian Institutes of Technology*”, *Encyclopaedia of India* (vol 2) edited by Stanley Wolpert, 229-231.

## CONSTRUCTIVIST APPROACH IN TEACHING OF MATHEMATICS

**Ms. Angelina Nunes**, Associate Professors, Pushpanjali College of Education, Papdy, Vasai  
.Pin- 401207 Email: ak\_nunes@yahoo.com

**Introduction:** Mathematics is pure science with which each subject is connected and interrelated. Being abstract in nature, learning of mathematics needs high cognitive abilities, mathematical language and correlation with existing world. Understanding mathematics requires development of thinking and reasoning capabilities of the students and following a logical approach towards solution of a particular problem. Mathematics involves individual's cognitive powers and it helps in drawing conclusions and interpreting various ideas and themes. Mathematics is responsible for giving us insight, organization and necessary abilities for leading a happy and enriched life. The study of Mathematics is helpful in having constructive discipline.. The teaching of Mathematics is aimed at developing appropriate abilities, right appreciation and correct attitude. There is a need for switching over to appropriate learning strategies so as to achieve the desired objectives of teaching mathematics to students; which will be of immense benefit to the society. Constructivism is a creation of new knowledge which is built on the previous knowledge of the students. Students learn through exploration where the ultimate responsibility of learning lies with them. There is an emphasis on learners' active participation, involvement and exploration. Teacher motivates the learning process as students are considered to be original creator. This research has investigated the effect of both conventional and constructivist teaching on the achievement of mathematics.

### **Constructivist Learning Strategies:**

1. The 5 E Approach
2. Web Quests
3. Constructivist Games
4. Co-operative Learning Strategies
5. Blended Learning
6. Constructivist learning through stories
7. Use of Multiple Intelligences in Learning

**5E Approach** of learning is one of the constructivist approach models. It consists of five phases; Engagement, Exploration, Explanation, Elaboration and Evaluation.

**Engagement:** The learners' prior knowledge is accessed by the teacher and a connection was made between past and present knowledge.

**Exploration:** Students are provided with a common base of activities by exploration experiences..

**Explanation:** In the explanation phase the students show their conceptual understanding,

**Elaboration:** In this phase students implement their understanding by doing additional activities.

**Evaluation:** By the evaluation phase the students progress is monitored by teachers.

**Title of the study:**

**Effect of Constructivist approach on achievement of mathematics of secondary school students.**

**Operational definitions:**

**1. Effect:** The difference between pretest and post test score.

**2. Constructivist Approach:** 5E Approach

**3. Achievement of mathematics:** It refers to students scores obtained from mathematics achievement test.

**4. Mathematics:** It is an abstract science which investigates special and numerical relation through problem solving activity. In present study mathematics stands for the content of the std. VIII mathematics text book of S.S.C. board.

**5. Secondary school student: Std. VIII student**

**Students:** Students are persons studying in school or college or a school pupil. For the present study, students studying in standard VIII of the SSC Board are considered.

**Methodology of the Study:** The study adopted a pre test – post test two group design (expert and control group) in a Quasi – experimental setting and focused on establishing the cause-effect relationship between the independent variable and the dependent variable. The cause, independent variable is 5-E learning and the effect, dependent variable is the scores obtained in the mathematical achievement test.

**Sampling:** In the sampling frame, 70 students of std. VIII from St. Joseph High School Virar (west) were selected for the purpose of the study. This sample was selected in order to confine the study to a specific age group and educational level.

**Variables for the present study:** Following are the variables for the present study.

**Independent Variables:**

- Lesson plans prepared based on 5-E Approach
- Conventional Method of teaching mathematics

**Dependent Variables:**

- Learning of mathematics as reflected in the scores on Achievement test in mathematics.

**The objectives for this research are:**

**1.** To prepare lesson plans using 5- E Approach on selected topics of Mathematics of Std. VIII

**2.** To compare the effect of teaching through constructivist approach and the conventional method on achievement in mathematics.

**Hypothesis:** The following hypothesis in the null form is formulated with respect to the above objectives.

**1.** There is no significant difference between the achievements of students in mathematics taught through constructivist approach and conventional method

**Scope and Limitations:** This study covered Std. VIII students studying in S.S. C. Board schools. The findings of the study can be useful for students of other type of schools and standards. Due to limitation of time and resources the study was confined to the following:

1. The study is limited to S.S. C. Board schools only.
2. The study is limited to Semi English Medium schools only.
3. The study is limited to Std. VIII students only.
4. The study is limited to the specific topics selected from the syllabus of std. VIII text book of mathematics as states below,
  - a) Cubes and Cube Roots.
  - b) Indices.
  - c) The Circle and the Arc of a Circle.
  - d) Joint Bar Graphs.

**Tools:**

**Achievement Test:** An achievement test in mathematics with references to the syllabus of Std. VIII of S.S.C. board was prepared by the researcher.

**Treatment:** Throughout the instruction based on 5E learning, the activities were carried out on Standard VIII students. First Pre-test was given to both the Experimental group and the control group. The lesson plans were prepared based on 5E Approach. The duration of the teaching learning session was 60-minutes per day. During the treatment, students participated in a number of diverse instructional activities. Teacher also utilized various materials such as posters, photographs, colored cartoons, work-sheets, games, graphs, and colored sheets. Moreover, teachers also gave examples from daily life and made students active in the class. The stages of 5 E Approach are Engage, Explore, Explain, Elaborate, Evaluate. When students' follow these five stages will support mathematical understanding and support the learning to reach its goal. On the 11<sup>th</sup> day post test was given to both the groups -experimental and control group. Their test results were compared and evaluated..

**Analysis of the data:** Analysis of the data has done using descriptive and inferential statistics. Data analysis is carried out in two ways:

**Descriptive Analysis:** In the present study statistical measures of mean, standard deviation, graphical representations are used for descriptive analysis.

**Inferential analysis:** Inferential analysis is used to make judgments of the probability that an observed difference between groups is a dependable one or that might have happened by chance in the study. Thus we use inferential statistics to make inferential from our data to more conditions. For making the inferences about various parameters the researcher makes use of parametric and non parametric tests. In the present study the researchers has used parametric tests. A t-test is used to compare the mean scores obtained by two groups on a single variable. The formula used by the researcher is given below:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

X<sub>1</sub> = mean of group 1

N<sub>1</sub> = sample size of group 1

X<sub>2</sub> = mean of group 2

N<sub>2</sub> = sample size of group 2

SD<sub>1</sub> = SD of group 1

SD<sub>2</sub> = SD of group 2

The level of significance was tested at 0.01 level

**Testing of Hypothesis:**

Hypothesis testing refers to the process of using statistical analysis to determine whether the observed differences in the samples are due to random chance.

**Main Hypothesis:**

**There is no significant difference between the achievement of the students in mathematics taught through constructive approach and conventional method.**

**Hypothesis- A**

**There is no significant difference between the Pre-test Scores of Experimental Group and Controlled Group.**

**Table 4.1 showing t<sup>r</sup> Ratio of Pre-Test score of Experimental Group and Controlled Group**

STD	Groups	N	Mean	SD	t-ratio	Significant Level
VIII	Experimental	35	7.38	1.21	1.95	NS
	Controlled	35	8.75	2.96		

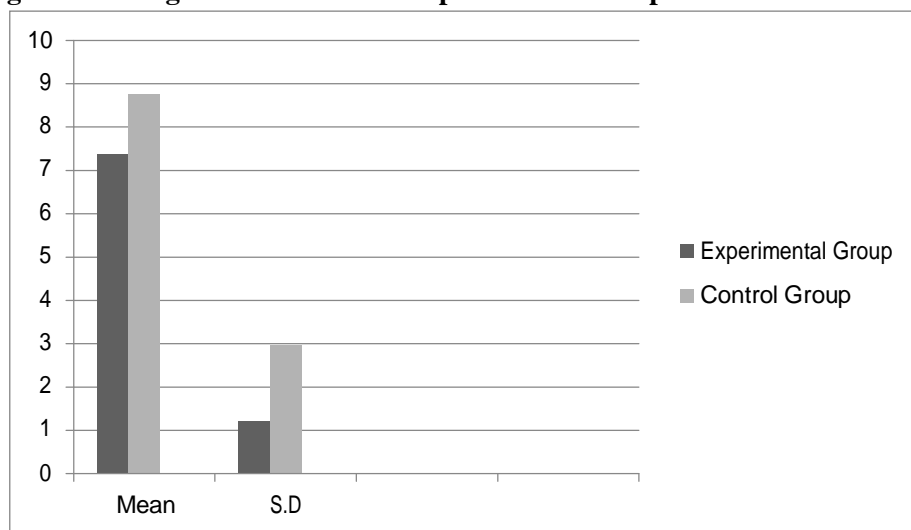
**INTERPRETATION:**

It reveals that t<sup>r</sup> value (t=1.95) it is not significant .

Hence, the null hypothesis is accepted.

Hence there is no significant difference between the Pre-test Scores of Experimental Group and Controlled Group.

**Fig 4.1 Showing Pre Test score of Experimental Group and Controlled Group**



**Hypothesis- B**

**There is no significant difference between the Pre-test and Post-test Scores of Experimental Group.**

**Table 4.2 Showing Pre Test score and post test score of Experimental Group.**

STD	Experimental Group	N	Mean	SD	t-ratio	Significant Level
VIII	Pre-Test	35	7.05	1.49	10.89	S
	Post-Test	35	14.45	3.73		

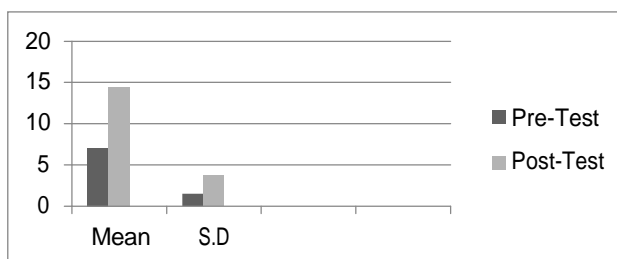
**INTERPRETATION:**

It reveals that „t“ value (t=10.89) it is significant at 0.01 level .

Hence, the null hypothesis is not accepted.

Hence there is significant difference between the Pre-test Scores and Post-test scores of Experimental Group.

**Fig 4.2 Showing Pre Test score of Experimental Group**



**Hypothesis- C**

**There is no significant difference between the Pre-test and Post-test Scores of Controlled Group.**

**Table 4.3 Showing Pre Test score and post test score of Controlled Group**

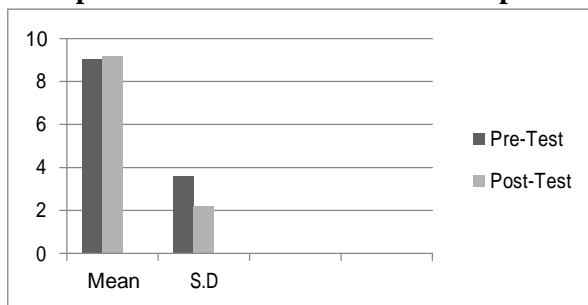
STD	Controlled Group	N	Mean	SD	t-ratio	Significant Level
VIII	Pre-Test	35	9.02	3.58	0.21	NS
	Post-Test	35	9.17	2.20		

**INTERPRETATION:**

It reveals that  $t'$  value ( $t=0.21$ ) is not significant . This shows that there is no significant difference in achievement of students of control groups.

Hence, the Null hypothesis is accepted.

**Fig 4.3 Pre Test score and post test score of Controlled Group**



**Hypothesis- D**

**There is no significant difference between the Post-test Scores of Experimental and controlled Group.**

**Table 4.4 Showing t-ratio of Post-test Scores of Experimental and Controlled Group.**

STD	Groups	N	Mean	SD	t-ratio	Significant Level
VIII	Experimental	35	14.28	4.33	3.40	S
	Controlled	35	9.86	2.28		

**INTERPRETATION:**

It reveals that  $t'$  value ( $t=3.40$ ) is significant at 0.01 level which shows that significant differences in achievement of student of experimental & control groups exist.

Hence, the null hypothesis is accepted.

**Fig 4.4 Pre Test score and post test score of Controlled Group**



**Conclusion:** There is significant difference in the in the achievement of students in mathematics taught using 5 E approach.

**Main findings of the study:**

1. Experimental group and control group showed no significant difference in the pre test scores in mathematics.
2. Experimental group showed significant difference in the pre test and post test scores in mathematics.
3. Control group showed no significant difference in the pre test and post test score in mathematics.
4. Experimental group and control group showed significant difference in the post test scores in mathematics.

**Discussion and Results:** The present experimental study has helped in the realization of the objectives with which it was started and following conclusions were drawn on the basis of analysis of data.

1. A careful examination of the results in Table 4.2 showed that 5 E approach is effective in improving the achievement of students in mathematics.

This means that the group taught with 5 E approach exhibited better performance as compared to group taught with conventional method. So 5 E approach of learning mathematics had positive effect on achievement of students in mathematics.

2. Teaching with 5 E approach has made significant differences in achievement in mathematics as compared to teaching with conventional methods. It means that 5 E approach strengthen the cognitive structure by providing deep routed understanding of the concept and the relations. So it can be used effectively to teach mathematics.

Based upon the above findings it can be concluded that Constructivist Approach is an effective strategy to learn mathematics. Hence, it is suggested that teachers should use constructivist approach in teaching mathematics.



**Bibliography**

- Classroom-based factors that support and inhibit high-level mathematical thinking and reasoning, Journal for Research in Mathematics Education, 28(5) ( 1997), 24-549.*
- D.F. Steele, A construct! Visit approach to mathematics teaching and learning by fourth-grade teachers, Unpublished Phd Dissertation, (1995), University of Florida.*
- Dr. Cynthia D"Costa, Prof. Pushpanjali College Of Education ( „A call for Constructive Classroom")*
- E.K. Katic, Hmelo-Silver and K.H. Weber, Material mediation: Tools and representations supporting collaborative problem-solving discourse, International Journal of Teaching and Learning in Higher Education, 21(1) (2009), 13-24.*
- Educational Broadcasting Corporation, Constructivism as a Paradigm for Teaching and Learning, (2004), Retrieved on April 12 from New York: Teachers College Press.*
- Hausfather, Where is the content? The role of content in constructivist teacher education, Educational Horizons, 80(1) (2001), 15-19.*
- M. Henningsen and M.R. Stein, Mathematical tasks and student cognition: M. Simon, Reconstructing mathematics pedagogy from a constructivist perspective, Journal for Research in Mathematics Education, 26(2) (1995), 114-145.*
- M.K. Stein, M.S. Smith, M.A. Henningsen and E.A. Silver, Implementing standards-*
- Nayak Rajendra Kumar, A Study on Effect of Constructivist Pedagogy on Students" Achievement in Mathematics at Elementary Level, pdf*
- P. Freire, Pedagogy of the Oppressed, (1970), New York: Herder and Herder.*
- R. DeVries, B. Zan, C. Hildebrandt, R. Edmiaston and C. Sales, Developing Constructivist Early Childhood Curriculum, (2002), New York: Teacher"s College Press.*
- S. Hmelo, E. Cindy, R.G. Duncan and C.A. Chinn, Scaffolding and achievement in problem based and inquiry learning: A response to Kirscher, Sweller and Clark (2006), Educational Psychologist, 42(2) (2007), 99-107.*
- T. Cobb, Applying constructivism: A test for the learner as scientist, Educational Technology Research and Development, 47(3) (1999), 15-31.*

**Websites**

- <http://www.thirteen.org/edonline/concept2class/constructivism/index.html>*
- M.M. Kennedy, Defining an ideal teacher education program, Paper prepared for the National Council for Accreditation of Teacher Education, (March 1997), from [http://www.msu.edu/~mkennedy/publications/Kennedy %20 to%20NCATE.pdf](http://www.msu.edu/~mkennedy/publications/Kennedy%20to%20NCATE.pdf)*

## INNOVATIONS IN TEACHER EDUCATION

**Dr. Vincent Kaitan D'Mello**, *Head of History Department, St. Joseph College, Virar.*  
*demellovincent@gmail.com.*

**Introduction:** Education is a process of human enlightenment and empowerment for achieving a better and high quality of life. A sound and effective system of education can unfold the learner's capabilities, potentialities and can transform their interests, values and attitudes. An important area of higher education system of today, is teacher education. The destiny of the nation is being shaped in him/her classroom (edu. Commission). The role of a Teacher is a big one. It has many dimensions. Subject teaching is only but one. -He/she is no longer a subject teacher only. By implication, he /she is a longer a subject teacher only. By implication, he is a practical psychologist, a hygienist, a guidance expert and what not. The failure of our teachers to inculcate, maintain and promote right sense of discipline among our students is in fact, a failure of our teacher education. Programme of our teacher education fails to cultivate in prospective teachers all those personal qualities, attitudes, values, skills and consciousness which are needed to make him/her a self disciplined individual and discipline inspiring teacher.

**Innovations:-** In the present context of our qualitative improvement of teacher education, we need strengthening both pre-service and in-service training programmes. It is just because teaching is known as an art and teacher is an artists. To know the art of teaching requires a lot of knowledge, a wide variety of interests and skills and also a keen positive attitude on the part of a teacher. To attain this perfection teacher education should continue as long as teacher is in profession. Teacher education of a person for his self- culture and self- improvement is the process that will go on to the end of one's life because teacher education is continuous growth in the capacity to teach. In this connection the programmes of in service education in our country are organized by the college of Teacher Education SCERT, DIET and NCERT. Some of these programmers are as :

1. **Seminars-** Which provides friendly and informed atmosphere to discuss and exchange views.
2. **Workshops-** These are conducted to think over more practical problems of education such as lesson planning, curriculum construction, question paper setting, etc.
3. **Refresher Course-** These courses enable the teachers to keep pace with the latest development in their subject as well as in theory and practice of teaching.
4. **Conferences-** These are organized for the discussion of educational subjects like curriculum, selection of text books, new teaching methods, special education for handicapped children.

There all the programmes would give opportunities for improving their professional skill during their period of service. At present, we have entered the Information Age. Urgent need of knowledge explosion has compelled the teacher educators to revise and update the curriculum and develop new transmission strategies. Computers and multimedia system, make it possible to design individual learning paths along which each pupil can move at his/her own pace; they also make it easier for teachers to organize acquisition in mixed ability classes. (UNESCO 1996). This act is need of today. The physical expansion and spatial contraction of the world necessitates a corresponding change in our pre-existing values, operations and approaches. The impact of technological achievements and scientific methodology has outdated to old trodden traditional techniques in educational process consequently technology in education is influencing significantly the entire paraphernalia of education. So the teacher education cannot be an exception to this. Delivering a few assigned stereotype lectures which is not enough on the part of teachers because this passive lecture method makes the students maladjusted and this leaves sufficient room for indiscipline among them. Inconsistency in the medium of instruction and medium of examination develops a sense of insecurity and fear of failure leading to frustration. The absence of individual attention intensifies the pattern of problems of students, depriving them of facilities now available in the college for guidance and counseling. This certainly makes the identification of problem pupils and of their peculiar problematic behavior pattern difficult and non- communicative. Maladjustment and lack of coordination and co-operation among the teachers and student would retard the educational process. There psycho- pedagogical shortcomings can hardly be observed that college teaching and testing has hardly undergone any change with the change of wants and goals of the individuals and society. Reorientation of teaching and testing techniques would inculcate value orientation in college teaching and promote motivation and learning among students. Lively teaching would automatically discipline the students. The Training in the technique of class management and knowledge of adolescent psychology would help them in maintaining classroom discipline. Capacity for good expression irrespective of course content in the examination develops hopes of success; however, sound knowledge of course content, too, is essential for higher academic achievement. The shortcomings in the assessment of examinations because of the fond choice of rhetoric languages of the examination papers create frustration and underestimating among students. In the college of the west even the first class recruits joining the teaching profession and placed under veteran professors who have put in a considerable portion of their lives in teaching and research. Now this period of training as apprentices whether tutors, junior or senior lecturers or lecturers helps them to master the technique of their profession the minimum qualification of taking master's degree in second or first class should not entitle the individual, to be appointed as a college teacher over and above his academic achievements must undergo training in the following professional techniques in order to discharge his/her duties properly, to reduce wastage in education to a minimum and to do justice to their profession and students.

1. Training in linguistics (elements of language with special reference to English or Regional language as the medium of instructions.)
2. Training in pedagogy
3. Training in adolescent psychology.
4. Training in evaluation techniques.

Training will eliminate the whims and prejudices of individual examiners and make them more reasonable and rational in their attitude, in their approach to their subject matter and their students. Trained teachers are like positive catalytic agents, and hence, in the cause of effective and efficient teaching and testing, in the cause of giving real training of preparation for life to the living resources of the nation, the college teaching personnel must be trained for their profession. According to Thackeray, —There are thousand thoughts lying within a man that he does not know till he takes up his pen to write.¶ Thus it can be concluded that teacher education is facing various challenges in the present social context under the impact of global needs. The NCTE has contributed a lot in this respect. The NAAC, set up in 1994, has been given the responsibility to assess and accredit institutions of higher education and it involves preparation of self- study report by an institution, its validation by peers and final decision of the council. Teacher education institution should come forward for such evaluation by the NAAC and this will prove to be positive, constructive and evaluative re-enforce to better performing quality institutions. In the end we can conclude that the work done by individuals, universities, advanced centers and bodies such as C.A.S.E, N.C.E.R.T., N.C.T.E. and S.I.E. etc., give enough confidence to forecast that in future steady steps of all these will prove improvement in teacher education.

### **References**

- Brown, F.J.: Educational Sociology, Prentice Hall, New York, 1955.*  
*Dewey, J. Democracy and Education, MacMillan & C., New York, 1916.*  
*Lindley, J. Stiles.. "Instruction" in the Encyclopedia of Educational Research, 3<sup>rd</sup> ed., Macmillan, New York, 1961.*  
*Mathew B. Miles, "Innovation in Education Bureau of Publication", Teachers College, Columbia University, New York, 1964.*  
*Nurul Hasan, S: Challenges in Education, Culture and Social Welfare, Allied Publisher, Bombay, 1977.*  
*Pre Kripal: A Decade of Education in India, Indian Book Company, Delhi, 1968.*  
*Reghunath Safaya: Innovations and latest Trends in educations, Associated publishers, Ambala, Cantt. 1976.*  
*S.N. Mukherjee, Education in India Today and Tomorrow, Baroda: Acharya Book Depot, 1957.*  
*Apte, ., "Our Educational Heritage" Baroda: Acharya Book Depot, Baroda, 1961.*  
*Rao, V.K.R.V. ., Education and Human Resource Development, "Allied Publishers, India 1966.*

### **Journals**

- Journal, Educational India Vol. 37 Oct, 1971.*  
*Teacher Education in India; Resource Book, N.C.E.R.T, New Delhi, 1990.*

## EDUCATION FOR GLOBAL PEACE AND SUSTAINABLE DEVELOPMENT

N. Swaminathan, Principal, OPS, Karaikal

**“A nation is advanced in proportion to education and intelligence spread among the masses”**

Swami Vivekananda

### *Abstract*

*The present world is more materialistic than spiritual, only a country with educated people can bring a change by spreading the message of peace. Young people have an enormous stake in present and future in India, where one third of its population is youth. Thus it becomes necessary to provide quality education, political support, resources and skill to youth. Education plays a vital role in changing, promoting the nation, creating peace, eradicating poverty, equality and bringing sustainable development. A holistic understanding of peace is needed for the youth to be educated on the different facets of life as peace is the sign of development and prosperity. Thus peace is indispensable for achieving ethical awareness, values and attitudes. Education for sustainable development plays a key role in promoting values for peace and engaging responsible Indians in co-operative actions. Futuristic Education should be based on interface between ethics, civics, peace education, human rights education etc. Only Quality Education will shape the people's mind and bring the change in their attitude and behaviour.*

**Introduction:** The present world scenario is more of materialistic than spiritual which has resulted in the formation of terrorist groups in some pockets of the world and are challenging the peace and prosperity of the whole world. Any country will become developed only when the citizens of that country are well educated and spread the message of peace which ultimately results in the sustainable development and establish a good inter-personal relationship with the neighbouring countries. Education is the only device which can fulfil good thought, good word and good deed as claimed by Swami Vivekananda.

**Indian Youth and Education:** Young people have an enormous stake in the present and future in India. Almost half of the human population is between 18 to 35 years of age. Civilization will be at stake if young people's resources of energy, time, and knowledge are misdirected towards violence, terrorism, socially-isolating technologies, and unsustainable consumption. Yet, there is a powerful opportunity for society if young people can participate positively in all aspects of sustainable development. In order to do so, young people need education, political support, resources, skills, and hope. A holistic understanding of peace is needed for the youth to be educated on the different facets of peace. It is in human nature to 'strive' for harmony and peace. Education for sustainable development plays a key role in promoting values for peace and commitment to engage in responsible individual and cooperative actions. In this new age of limited resources, we need to nurture the boundless energy and creativity of young women and men to tackle complex new challenges.

### **What Is Education?**

Mark K Smith explores the meaning of education and suggests it is a process of inviting truth and possibility. It can be defined as the wise, hopeful and respectful cultivation of learning

undertaken in the belief that all should have the chance to share in life. It is learning we set out to make happen in the belief that people can 'be more' informed, respectful and wise. It is a cooperative and inclusive activity that looks to help people to live their lives as well as they can. According to UNESCO, Education is the single most powerful tool to promote peace, human development, equality, eradication of poverty and to achieve sustainable development. Peace can be defined, most simply, as 'the absence of conflict. A state of harmony.' Educational systems need to be revamped by having a set of activities to build the capacity of individuals to transform information to knowledge and action by embedding psychological, convictional and behavioural aspects for developing a society where peace and harmony prevail. Education should be undertaken in the belief that all should have the chance to share in life. This commitment to the good of all and of each individual is central to the vision of education explored here, but it could be argued that it is possible to be involved in education without this. We could take out concern for others. We could just focus on process – the wise, hopeful and respectful cultivation of learning – and not state to whom this applies and the direction it takes. Holistic View Education (both formal and non-formal) is indispensable to changing people's attitudes. It is critical for achieving ethical awareness, values and attitudes, skills and behaviour consistent with peace and sustainable development and meeting out present environmental, societal and economic challenges. Hence, the role of Education is an essential tool in creating peace and Sustainable Development.

***Quality education should therefore take into consideration several important factors:***

- ❖ the pre-learning world-view and psychology of the learner (e.g. a child's home conditions),
- ❖ the competence of the teacher,
- ❖ interactions with various social actors (namely individuals, groups, the community and society),
- ❖ the learning environment and educational setting,
- ❖ the content of the learning materials and types of teaching/learning processes,
- ❖ knowledge construction dynamics and its relevant application,
- ❖ the mode(s) of learning/teaching assessment,
- ❖ the dynamism of culture and languages, and
- ❖ Individuals' values in relation to sustainable lifestyles that promote equality.

### **What Is Peace?**

Peace is the sign of development and prosperity. It is the state of being free from any kind of human conflict and violence. The power of love by nature always overcomes and transcends the love of power. When the power of love overtakes the love of power, then and only then can there be Peace. Peace is not a condition but it is a state of being like truth, freedom, love and happiness. It is not described or defined although it can certainly be experienced. Peace already exists - within us. It is always there-in everyone, no matter who you are, where you live or what you believe. We only need to be aware of it. Sometimes however, we are so caught up in distractions that we are totally oblivious of this amazing, profound peace within.

**Global Peace and Education:** Education is the necessary apparatus to make a balance between the present and future generations. It can only strengthen the coordination between different levels for creating peace and to mitigate information and knowledge gaps between different parts of the world. Futuristic education should be based on interface between ethics, civics, peace education, human rights education, critical thinking, skills for cooperation and global citizenship education. The five pillars of education are -learning to know, learning to be, learning to live together, learning to do and learning to transform oneself and society. Learning to live together and learning to be, are directly related to peaceful living. Peace building and sustainable development is a global responsibility and solidarity between generations, gender, different cultures and countries.

**Education for Sustainable Development (Esd)** Sustainable development implies using renewable natural resources in a manner which does not eliminate or degrade them, or otherwise diminish their usefulness for future generations. Educating people toward becoming peace agents is central to the task of peace building. Peace building refers generally to the long-term period of building peaceful communities, a desirable goal. Peace Building and Sustainable Development is viewing the world with respect of natural laws, with understanding of diversity and with affection and determination to do whatever possible to secure a better future for people, the environment and the natural resources upon they live.

Sustainable development seems to be the rational goal we should be pursuing on a finite planet. But when we were growing in the early years, global population was small, resources seemingly boundless and the prospects for growth unstoppable. Education for Sustainable Development (ESD) is largely synonymous with quality education but requires far-reaching changes to the way education functions in modern society. How to structure and implement quality education for sustainable development is a key challenge. Another challenge is that systematically assessing the effectiveness of learning performance from ESD practices remains elusive, especially how effective learning performance contributes to sustainability.

**A schematic representation of the proposed relationship between ESD and Quality Education**



**Conclusion:** In this materialistic world, education is the only weapon available to bring about global peace and sustainable development. Where there is peace, there is development. Where there is chaos there is no development. Providing good quality education only can shape the peoples' mind and to bring about change in their attitude; behaviour and thereby establish a society where sharing is the norm; give and take is the policy. Peace will prevail in a global society where education is taking a prime position for development which is sustainable and durable for long period of time. I would like to end this article with two Thirukkural by Tamil Saint Thiruvalluvar and I quote:

*“Who know not with the world in harmony to dwell,  
May many things have learned, but nothing well?”  
“Those who know not how to act agreeably to the world,  
Though they have learnt many things, are still ignorant”*



**LIFE SKILLS FOR EDUCATION AND DEVELOPMENT**

**Shalini Devi**, Vice-Principal, Pratap college of education, Jundla Karnal, India

**Abstract**

*In any society rapid change in social, moral, ethical and religious values demand changes in the life style of individuals. Such changes are unavoidable and adolescents are most affected by these changes. Moreover, these changes get involved with physical, psychological and social health of adolescents, resulting in exposure to high risk behaviors. To overcome such difficulties the adolescents need to acquire life skills. Indian youth represent a significant proportion of the worldwide population. The stress faced by the adolescents in current situation is gigantic. Research studies show that various psychosocial factors and life skills deficits are the mediating factors resulting in behavioral, psychological and health related problems among adolescents how self esteem, poor communication skills, poor problem skills, poor decision making skills and lack of assertiveness were found to be linked with delinquency. This article is helpful to provide a set of skills for today children and adolescents. The adolescents need to learn how to set goals, prioritize their needs and balance their lives. Life Skills are psychosocial abilities that enable individuals to translate knowledge, attitudes and values regarding their concerns into well informed and healthy behaviors.*

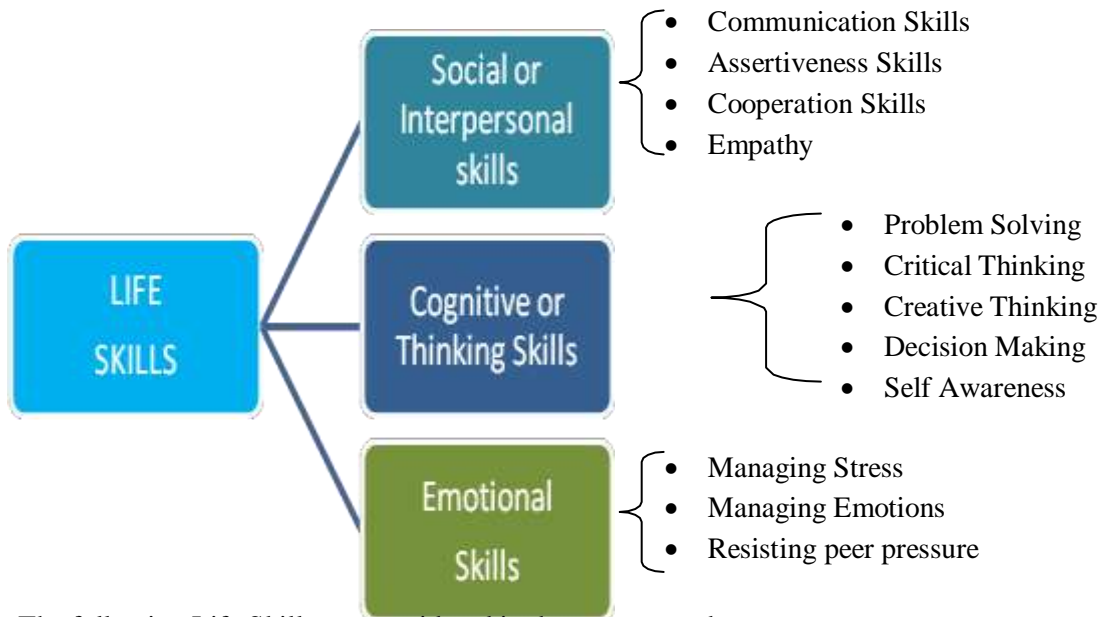
**Introduction:** Life Skills are psychosocial abilities that enable individuals to translate knowledge, attitudes and values regarding their concerns into well informed and healthy behaviors. Empowered with such skills, young people are able to take decisions based on a logical process of —what to do, how to do, why to do and when to do. The term ‘Life Skills’ refers to the skills usually associated with managing and living a better quality of life, they help us to achieve our ambitions and live to our full potential. There is no definite list of life skills; certain skills may be more or less relevant to you depending on your life circumstances, your culture, beliefs, age, geographic location etc. Perhaps the most important life skill is the ability to learn. By learning new skills we increase our understanding of the world around us and equip ourselves with the tools we need to live a more productive and fulfilling life. Life skills are not always taught directly but often learned indirectly through experiences and practices. Life skills include Interpersonal skills and psychosocial competencies that help people make decisions to solve problems, communicate effectively, build healthy relationships, think critically and creatively, and cope with managing their lives in a productive and healthy manner. Essentially there are two types of skills those related to thinking termed as –thinking skills and skills related to dealing with others term as –social skills, while thinking skills related to personal level. Social skills include interpersonal skills and do not depend on logical thinking. It is the combination of these two types of skills that is needed for achieving confident behavior and negotiating effectively. Emotions can be perceived as a skill not only in making logical decisions but also in being able to make others agree to one’s point of view. To do that, coming to term first with one self is required. Thus, self management is a major skill including managing with stress, feelings, emotions and resisting peer and family pressure. Young people need both social and thinking skills for consensus building and issues of concern. Life skills are abilities for positive and adaptive behavior that enables individuals to deal effectively with the challenges and demands of everyday life. They are loosely grouped

into three broad categories of skills- cognitive skills for analyzing and using information, personal skills for developing personal agency and managing oneself and inter-personal skills for communicating and interacting effectively with others. UNICEF and WHO agree that life skills are generally applied in various aspects of life. Such as in the context of social and health events like human relationships, learning about social influences on behavior and learning about rights and responsibilities, as well as being taught in the context of health problems. Life skills enable individuals to translate attitudes, knowledge and values into actual abilities i.e. how to do and what to do it. Life skills are abilities that enable individuals to behave in healthy ways, given the motivation to do so and given the scope and opportunity to do so. The International Bureau of Education (IBE) derives its understanding from the Delor's four pillars of learning – learning to know, learning to do, learning to be and learning to live together and defines life skills as personal management and social skills which are necessary for adequate functioning on an independent basis. **WHO** defines Life Skills as —the abilities for adaptive and positive behavior that enable the individuals to deal effectively with the demands and challenges of everyday life. Here 'adaptive' means that a person is flexible in approach and is able to adjust in different circumstances and 'positive behavior' implies that a person is forward looking and even in challenging situations, can find a ray of hope. **UNICEF** has defined life skills as psychosocial and interpersonal skills and generally considered important. The choice of, and emphasis on different skills will vary according to the topic, for example decision making may feature strongly in HIV/AIDS prevention whereas conflict management may be more prominent in a peace education program. According to **UNICEF**, it is ultimately the interrelations between the skills that produce powerful behavioral outcomes, especially where this approach is supported by other strategies such as media, policies and health services. Described in this way skills that can be said to be life skills are innumerable and the nature and definitions of the life skills are likely to differ across culture and settings. However analysis of the life skills field suggests that there is a core set of skills based initiatives for the promotion of the health and well-being of children and adolescents.

**Life Skills fall into three basic categories which compliment, supplement and reinforce each other:**



These three **basic categories** further include the following skills.



The following Life Skills are considered in the present study :-

- Decision Making
- Problem Solving
- Empathy
- Self Awareness
- Communication Skill
- Interpersonal Relationship
- Coping With Emotions
- Coping With Stress
- Creative Thinking
- Critical Thinking

**Decision Making** helps us to deal constructively with decisions about our lives. This can have consequences for health .It can teach people how to actively make decisions are likely to have.

**Problem Solving** enables us to deal constructively with problems in our lives. Significant problems that are left unresolved can cause mental stress and give rise to accompanying physical stress.

**Empathy** to have a successful relationship with our loved ones and society at large, we need to understand and care about other people needs, desires, and feelings. Empathy is the ability to imagine what life is like for another person. Without empathy, our communication with others will amount to one - way traffic. Worst we will be acting and behaving according to our self – interest and are bound to run into problems. No man is on an island only, no woman either! We grow up in relationships with many people – parents, brothers and sisters, cousins,

uncles and aunts, classmates, friends and neighbors.

When we understand ourselves as well as others, we are better prepared to communicate our needs and desires. We will be more equipped to say what we want people to know, present our thoughts and ideas and tackle delicate issues without offending other people. At the same time, we will be able to elicit support from others, and win their understanding.

**Self - Awareness** includes our recognition of ourselves, of our character, of our strength and weaknesses, desires and dislikes. Developing self- awareness can help us to recognize when we are stressed or feel under pressure. It is also a prerequisite for effective communication and interpersonal relations, as well as for developing empathy for other human beings.

**Effective Communication** means that we are able to express ourselves, both verbally and non- verbally, in ways that are appropriate our cultures and situations. This means being able to express opinions and desires, and also needs and fears, and it may mean being able to ask for advice and help in a time of need.

**Interpersonal Relationship** skills help us to relate in positive ways with the people we interact with. This may being able to make and keep friendly relationships, which can be of great importance our mental and social well- being. It may mean keeping good relations with family members, which are an important source of social support. It may also mean being able to end relationships constructively.

**Coping with Emotions** means involving recognizing emotions within us and others, being aware of how emotions influence behavior and being able to respond to emotions appropriately. Intense emotions like anger or sadness can have negative effects on our health if we do not respond appropriately.

**Coping with Stress** means recognizing the sources of stress in our lives, recognizing how this affects us and acting in ways that help us control our levels of stress, by changing our environment of life styles and learning how to relax.

**Critical Thinking** is an ability to analyze information and experiences in an objective manner. Critical thinking can contribute to health by helping us to recognize and assess the factors that influence attitudes and behavior, such as values, peer pressure and media.

**Creative Thinking** is a novel way of seeing or doing things that is characteristics of four components – fluency (generating new ideas) flexibility (shifting perspective easily), originality (conceiving of something new), and elaboration (building on other ideas)

All these skills are interrelated and reinforce each other. Together, they are responsible for our psychosocial competence; build our self-esteem and self efficacy and nurture holistic development.

#### **Criteria For Using Life Skills**

UNICEF identifies the following criteria to ensure a successful life skills based education:

- It should not only address knowledge and attitude change, but, more importantly, behavior change.
- Traditional "information-based" approaches are generally not sufficient to yield changes in attitudes and behaviors. For example, a lecture on —safe behaviorl will not necessarily

lead to the practice of safe behavior. Therefore, the lecture should be substantiated with exercises and situations where participants can practice safe behavior and experience its effects. The adult learning theory emphasizes that adults learn best that which they can associate with their experience and practice.

- It will work best when augmented or reinforced. If a message is given once, the brain remembers only 10 percent of it one day later, and when the same message is given six times a day, the brain remembers 90 percent of it. Hence there is need to repeat, recap, reinforce and review.
- It will work best if combined with policy development, access to appropriate health services, community development and media.

**Promoting the Teaching of Life Skills:** In promoting the teaching of life skills, the WHO is promoting the teaching of abilities that are often taken for granted. However, there is growing recognition that with changes in lifestyles, many young people are not sufficiently equipped with life skills to help them deal with the increased demands and stresses they experience. They seem to lack the support required to acquire and reinforce life skills. It may be that traditional mechanisms for passing on life skills (e.g. family and cultural factors) are no longer adequate considering the influences that shape young people's development. These include media influence and the effects of growing up in situations of cultural and ethnic diversity. Also the rapid rate of social change, witnessed in many countries, makes the lives of young people, their expectations, values, and opportunities very different from that of their parents. Life skills for psychosocial competence need to be distinguished from other important skills that we hope young people will acquire as they grow up, such as numeracy, reading, technical and practical "livelihood" skills. These and other skills are usually recognized as abilities that young people should learn, either in schools, at home or in their communities. Life skills are being promoted so that they can gain recognition as essential skills that should be included in the education of young people.

**Life Skills Education:** For health promotion, life skills education is based on the teaching of generic life skills and includes the practice of skills in relation to major health and social problems. Life skills lessons should be integrated with health information and may also be integrated with other approaches, such as programmed designed to effect changes in social and environmental factors which influence the health and development of young people. In Life Skills education, children are actively involved in a dynamic teaching and learning process. The methods used to facilitate this active involvement include working in small groups and pairs, role playing, gaming, brainstorming and debates. A Life Skills lesson may start with a teacher exploring with the students what their ideas or knowledge is about a particular situation in which a particular Life Skill can be used. The children may be asked to discuss the issues raised in more detail in small groups or with a partner. They may then engage in short role play scenarios and take part in activities that allow them to practice the skills in different situations. Actual practice of skills is a vital component of Life Skills education. Finally, the teacher will assign homework to encourage the children to further discuss and practice the

skills with their families and friends. Life skills have already been taught in many schools around the world. Some initiatives are in use in just a few schools, whilst in other countries, Life Skills programmes have been introduced in a large proportion of schools and for different age groups. In some countries, there are several important Life Skills initiatives, originating in different groups in the country e.g. Non-governmental organizations, education authorities, and religious groups.

The school is an appropriate place for the introduction of Life Skills education because of the following reasons:-

- The role of schools in the socialization of young people;
- Access to children and adolescents on a large scale;
- Economic efficiencies (uses existing infrastructure);
- Experienced teachers already in place;
- High credibility with parents and community members;
- Possibilities for short and long term evaluation.

**Conclusions:** Even in countries where a significant proportion of children do not complete schooling, the introduction of Life Skills education in schools should be a priority. Life skills education is highly relevant to the daily needs of young people. When it is part of the school curriculum, the indications are that it helps to prevent school drop-out. Furthermore, once experience has been gained in the development and implementation of a Life Skills programmes for schools, this may help with the creation and administration of programmes for other settings.

### **References**

- Aparna & Raakhee (2011). *Life skill education for adolescents: its relevance and importance GESJ: Education Science and Psychology*, 2(19) 12-19.
- Best, J. W., & Kahn, J. V. (2005). *Research in education (9th ed.)*. New Delhi: Prentice Hall of India.
- Friesenhahn, K. (1999). *An analysis of leadership life skills development at the 1998 Texas 4- H Congress*. Kingsville, TX: Texas A&M University.
- Vashishtha KC and Bhardwaj S (2006). *An empirical exploration of life skills relevant to science and technology*. *Indian Education Review* 42(2) 26-50.
- Vernosfaderani, "The Effectiveness of Life Skills Training on Enhancing the Self-Esteem of Hearing Impaired Students in Inclusive Schools," *Open Journal of Medical Psychology*, Vol. 3 No. 1, 2014, pp. 94-99. doi: [10.4236/ojmp.2014.31012](https://doi.org/10.4236/ojmp.2014.31012).
- World Health Organization (WHO). (1997a). *Life skills education for children and adolescents in schools: Introduction and guidelines to facilitate the development and implementation of life skills programmes*. Geneva, Switzerland: WHO Programme on Mental Health.
- World Health Organization (WHO). (1997b). *Promoting health through schools. Report of a WHO Expert Committee on Comprehensive School Health Education and Promotion*. WHO Technical Report No. 870. Geneva, Switzerland: Author.
- Zollinger, T.W., Commings, S.F., & Caine, V. (2003). "Impact of the life skills training curriculum on middle school student's tobacco use in Marion County, Indiana".

**EDUCATION FOR P EACE AND SUSTAINABLE DEVELOPMENT**

**Dr. Manju Bala**, Principal A.C. Kakkar College of education, Shahbad Markanda,  
Kurukshetra India

**Abstract**

*This article examines the role of education for Peace and Sustainable Development. Education is the only means to empower children and adults alike to become active participant in the transformation of the society by equipping children with spiritual, moral and material knowledge. The article presents the intersection of the two disciplines and explore the role of the Education in promoting and empowering individuals with the values to advance the goals of peace and sustainable development. Education for Peace (EFP) creates a civilization of peace by assisting individuals, families, schools, communities and groups to prevent conflicts strengthen inter-group cooperation and apply the principles of unity-in-diversity, equality and justice. Most disputes between people are solved without violence – but not all. If we are to move away from violence as a way of solving disputes at home and abroad we must work together to help young people learn how deal with conflict creatively and nonviolently. To prevent continued cycles of violence, education must promote peace, tolerance and understanding to help, create a better society for all. Disputes and conflicts may be inevitable but violence is not. To prevent continued cycles of violence, education must seek to promote peace and tolerance, not fuel hatred and suspicion.*

**Introduction:** Education is the only means to empower children and adults alike to become active participant in the transformation of the society by equipping children with spiritual, moral and material knowledge. The children are pressurized by schools as well as family to excel in the academics. The pressure leads to Academic anxiety. This is reason that more and more children seem to be succumbing to anxiety or other types of disorders. Education for sustainable development is the use of education as a tool to transform our societies to achieve sustainability.

**Education is necessary for peace and sustainable development because it is helpful for;**

- Improving access to quality basic education,
- Reorienting existing education,
- Improving public understanding and awareness, and
- Providing training and maintaining peace.

Education is necessary for a sustainable future. By taking on the important task of implementing ESD you are bringing the possibility of a more sustainable future to your community and nation. Communities and school systems should work together to achieve community sustainability goals. As defined by the Brundtland Commission, "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The Brundtland Commission, formerly also known as the World Commission on Environment and Development was formed in 1983. The rationale was to have an organization independent of the UN to formulate —a global agenda for change" that would bring together industrialized and developing nations on a common platform to chart out a course of development that would take into consideration the interrelatedness of people, resources, development and planet. Education encompasses

teaching and learning specific skills, imparting of knowledge, positive judgment and well developed wisdom. It has one of its fundamental aspects of imparting culture from one generation to another generation. It is an application of pedagogy, a body of theoretical and applied research related to teaching and learning. The basic aim of the education system for sustainable development is 'education of a new man', 'a man of a sustainable type of thinking' a man of Cosmo-planetary consciousness with a holistic world outlook, who has a culture of sustainability, high socio-cultural needs and deep moral ethical values, who is capable to solve global tasks facing by the mankind and to promote the forming of sustainable society. Education in its contemporary development should be aimed at the future, should foresee and form in a certain way and satisfy needs of future generations of people. That means that education should be anticipatory to social, economic and cultural life, it should form desirable sustainable future. But such ideas could not be realized in old organizational forms of education system. We need new organizational forms and educational institutions mobile, synergetic, creative, future-oriented- which could provide the implementation of new objectives and new historical functions of education. For that it is necessary that all spheres of life of society be incorporated whenever possible upon the principles of sustainable development. —Education is critical for promoting sustainable development and improving the capacity of people to address environment and development issue. It is critical for achieving environmental and ethical awareness, values and attitudes, skills and behavior consistent with sustainable development and for effective public participation in decision making (Chapter 36 of Agenda 21, Rio Declaration 1992).

**Objectives:** By 2030, ensure that all learners acquire knowledge and skills needed to promote sustainable development, including, among others, In August 2015, 193 countries agreed on the following 17 goals:

- No to poverty.** End poverty in all its forms everywhere.
- Not for hunger.** Ending hunger, achieving food security, improving nutrition and promoting sustainable agriculture.
- Good health.** Ensure healthy living and promote well-being for all ages.
- Quality education.** Ensure universal and equal quality education and enhance lifelong learning opportunities for all.
- Gender equality.** Achieve gender equality and empower all women and girls.
- Clean and healthy water.** Ensure abundance and sustainable water and health management for all.
- Renewable and affordable energy.** Ensure affordable, reliable and sustainable energy access for all.
- Good jobs and economy economics.** Promote sustainable, comprehensive and sustainable economic growth, full and productive employment, and decent work for all.
- Innovative and good infrastructure.** Build a flexible infrastructure and promote comprehensive, sustainable manufacturing and innovation promotion.
- Reduce inequality.** Reducing inequality within States and between States and each other.



- **Cities and sustainable communities.** Make cities and human settlements inclusive, secure, flexible and sustainable.
- **Responsible use of resources.** Ensure sustainable consumption and production patterns.
- **Climate move.** Action to combat climate change and its impacts.
- **Sustainable oceans.** Sustainable and sustainable use of oceans, seas and marine resources for sustainable development.
- **Sustainable use of land.** Protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and restore land degradation and halt loss of biodiversity.
- **Peace and justice.** Promoting peaceful and inclusive societies for sustainable development, providing access to justice for all and building effective, accountable and inclusive institutions at all levels.
- **Partnership for Sustainable Development.** Strengthening the means to implement and revitalize the global partnership for sustainable development.

**Need of Education for Peace and Sustainable Development:** Sustainable Development is a complex concept with its origin in the natural and social Sciences that has been developed through international dialogue in response to the challenges facing the world today. According to Brundtland Commission (1987), Sustainable Development is —development which meets the needs of the present without compromising the ability of future generations to meet their own needs. A core principle behind sustainable development is the idea that economic, social and environmental conditions play a major role. ESD has five components; knowledge, skills, perspectives, values and teaching issues which are to be addressed in a formal curriculum for sustainable development. The principles that were identified in the Tsibili conference (1977) stated that Environmental education should consider the environment in its totality, be a continuous life-long process, beginning at the pre-school level and continuing through all formal and non-formal stages; Be inter-disciplinary in approach; Examine major environmental issues for local, national, regional and international points of view, so that students receive insights into environmental conditions in other geographical areas, Focus on current and potential environmental situations while taking into account the historical perspective; Promote the value and necessity of local, national and international co-operation in prevention and solution of environmental problems; Enable learners to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting their consequences; Relate environmental sensitivity, knowledge, problem solving skills and value clarification to every age but with special emphasis on environmental sensitivity to the learner's own community in early years; Help learners discover the symptoms and real cause of environmental problems; Emphasize the complexity of environmental problems and thus the need to develop critical thinking and problem solving skills; Utilize diverse learning environments.

**Education for Peace and Sustainable Development in School Curriculum:** In India, since the mid 1980s efforts have been on to bring Environmental education (EE) in formal education

at all levels. In 2003, the Honorable Supreme court of India directed that EE should be a compulsory subject at all levels of education. It further directed that the NCERT should prepare a model syllabus for class I to XII, which shall be adopted by every state in their respective schools. If government officials or school district administrators are unaware of the linkage between Education for peace and Sustainable development, re-orienting education to attain sustainable development will not occur. When people realize that education can improve the likelihood of implementing national policies, regional land and resource management programs, then education is in a position to be reoriented to help achieve sustainability. This awareness forms the first step in the reorienting process. Thus the importance of ESD must reach beyond the delegations and permeate the educational community and general public for maintaining peace.

**Education directly affects the peace and sustainability plans in the following three areas:**

**Implementation.** An educated citizenry is vital to implementing informed and sustainable development. In fact, a national sustainability plan can be enhanced or limited by the level of education attained by the nation's citizens. Nations with high illiteracy rates and unskilled workforces have fewer development options. For the most part, these nations are forced to buy energy and manufactured goods on the international market with hard currency. To acquire hard currency, these countries need international trade; usually this leads to exploitation of natural resources or conversion of lands from self-sufficient family-based farming to cash-crop agriculture. An educated workforce is necessary for moving beyond an extractive and agricultural economy and maintaining peace.

**Decision making.** Good community-based decisions - which will affect social, economic, and environmental well-being - also depend on educated citizens.

**Quality of life.** Education is also central to improving quality of life. Education raises the economic status of families; it improves life conditions, lowers infant mortality, and improves the educational attainment of the next generation, maintaining peace thereby raising the next generation's chances for economic and social well-being. Improved education holds both individual and national implications.

**Conclusions:** Education encompasses teaching and learning specific skills, imparting of knowledge, positive judgment and well developed wisdom. It has one of its fundamental aspects of imparting culture from generation to generation. It is an application of pedagogy, a body of theoretical and applied research related to teaching and learning. The basic aim of the education system for peace and sustainable development is 'education of a new man', 'a man of a sustainable type of thinking' a man of Cosmo-planetary consciousness with a holistic world outlook, who has a culture of sustainability, high socio-cultural needs, helpful in maintaining peace and deep moral ethical values, who is capable to solve global tasks facing by the mankind and to promote the forming of sustainable society.

**References**

- Centre for Science and Environment; www.cseindia.org*  
*Centre for Environment Education; www.ceeindia.org*  
*http://unesdoc.unesco.org/images/0012/001271/127100e.pdf*  
*http://www.worldmapper.org/display.php?http://www.un-documents.net/wced-ocf.htm*  
*Education for Sustainability-From Rio to Johannesburg: Lessons learnt fhp? selected=11 Ministry of Environment & Forests, Government of India; www.envfor.nic.in*  
*Ministry of Human Resources Development; www.education.nic.in*  
*The Energy and Resources Institute; www.teriin.org*  
*World Wide Fund for Nature in India; www.wwfindia.org*  
*Toxics Link; www.toxicslink.org*  
*Centre for Environmental Research and Education; www.cere-india.org*  
*Final Report of the World Conference on Education for All: Meeting Basic Learning Needs, Jomtien, Thailand, 5-9 March 1990 (New York, Inter-Agency Commission (UNDP, UNESCO, UNICEF, World Bank) for the World Conference on Education for All, 1990).*  
*Intergovernmental Conference on Environmental Education: Final Report (Paris, UNESCO, 1978), chap. III.*

## ATTITUDE TOWARDS RESEARCH: INVESTING FOR CHANGE

**Dr. Mrs. Radhika Samar Vakharia**, *Principal, Rizvi College of Education, Mumbai.* Email: [radhikasamar22@gmail.com](mailto:radhikasamar22@gmail.com)

The relationship between teaching and research is often assumed and ignored. This disposition is very clearly seen during the teacher training course where the trainee teachers usually tend to view research work/courses negatively. Therefore an understanding of their attitude is necessary to help teacher educators facilitate and create a more positive attitude towards research work. Formally, Action Research is the only way through which trainee teachers are introduced to formal research. However, it is noticed that their approach to it is rather casual and they don't see the significance of it at that stage. It is also seen that most research work at the B.Ed undergraduate course is redundant, uninteresting, replicas of previous research works with minor changes and highly plagiarized. *Clearly this is a failure of mentoring as much as anything.*

**Teachers as Researchers:** Teachers are expected to be keen researchers and not merely knowledge distributors. Research should and does influence teaching (and vice versa), but the gap between the two can at times seem large. The ultimate goal of research in education is to enable teachers, teacher educators, and institutions to make sound decisions about the educational activities and experiences that will best serve students. It is imperative that research can stimulate discussion, challenge assumptions, reaffirm convictions, and raise new questions. Thus, it is crucial for teachers to be researchers in the best interest of their fraternity. Hence the need to mould teachers into researchers is what the need of the hour is.

**Research Environment:** The very fact that there are some inhibitions to research work that the trainee teachers undertake at the B.Ed course, manifests itself into them not considering research as a way of reinventing their teaching practices as full time teachers. Research is also made available to trainee teachers as a special field called Action Research by the University of Mumbai. But over the years, there have been few takers for this course. The need of hour is to look at how to be teachers think of research work and to suggest ways and measures to encourage research and avoid mediocre output through it. Trainee teachers having negative attitude towards research are less likely to employ research methods in their regular teaching learning and in their professional life. Thus it is important to know their pre-dispositions towards research.

**Statement of Aim:** A Study of Attitude towards Research of Pre-Service Teachers of Rizvi College of Education

### **Objectives of the Study**

1. To study the attitude of pre-service teachers of Rizvi College of Education towards Research on the factors mentioned below:-

F1: Research Usefulness

- F2: Research Anxiety
- F3: Positive Attitude
- F4: Relevance to Life
- F5: Difficulty of Research

**Research Question**

1. What is it that trainee-teachers feel about research work?
2. How do they perceive research work and its place in their professional life?
3. Does the attitude towards research affect the output of research?
4. What best can teacher educators do to encourage positive attitude towards research work in trainee-teachers?
5. What practices should be encouraged to promote research mindedness in trainee teachers?

**Approach of the Study:** The study implements ‘\_Action Research Approach’. Action research is either research initiated to solve an immediate problem or a reflective process of progressive problem solving. Action research is known by many other names, including participatory research, collaborative inquiry, emancipatory research, action learning, and contextual action research, but all are variations on a theme. Action research is used in real situations, rather than in contrived, experimental studies, as its primary focus is on solving real problems. So, in relation to the statement of aim of the study, the concern is the attitude of trainee teachers towards research work. Action Research is more of a holistic approach to problem-solving, rather than a single method for collecting and analyzing data. With reference to the present study, the steps are explained as follows:-

**Observe:** The Researcher observed over the years as a guide of action research projects that trainee teachers are not interested in research and often their work is mediocre and does not inform in improving school practices.

**Plan:** The Researcher plans to take adequate measures so as to encourage trainee teachers to take up research work on daily basis, integrate a more reflective and research based approach to their daily teaching learning concerns and others issues that they may encounter in their practical life as teachers.

**Act:** The Researcher plans to take positive measures based on the results of the study in terms of encouraging on field research, practical action research and research for enhancing school practices.

**Reflect:** Relection- in -action, on-action will be pursued to give a more holistic view of trainee teachers’ attitude towards Research.

**Sample and Sampling Technique:** Purposive Sampling Technique is used. Purposive sampling is a non-probability sampling method and it occurs when elements selected for the sample are chosen by the judgment of the researcher and based on a belief that they can obtain a representative sample by using a sound judgment. Sample size is 40, consisting of only female trainee teachers with no exposure to formal Research.

**Tool for Data Collection:** The Researcher used ‘\_Attitude towards Research Scale’ (ATR) by Elena Papanastasiou and is a valid and reliable tool. It is a 30-item, 7 point likert type scale analyzing five factors related to research attitude. They are:-

- F1: Research Usefulness**
- F2: Research Anxiety**
- F3: Positive Attitude**
- F4: Relevance to Life**
- F5: Difficulty of Research**

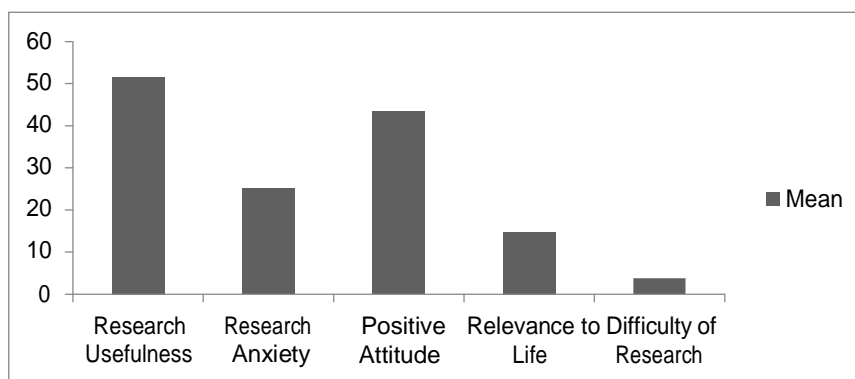
**Analysis of Data:** The data is analyzed using measures of central tendency viz: Mean, Mode and Measures of variability viz: Standard Deviation. The following table states values of Mean, Mode and Standard Deviation:-

**Table: 1.1 Mean Mode and Standard Deviation on 5-Factors on Attitude towards Research Scale**

<b>Attitude Towards Research</b>	<b>Mean</b>	<b>Mode</b>	<b>Standard Deviation</b>
Research Usefulness	51.54	63	9.6
Research Anxiety	25.11	33	7.5
Positive Attitude	43.41	46	8.8
Relevance to Life	14.77	16	2.4
Difficulty of Research	3.83	4	1.6

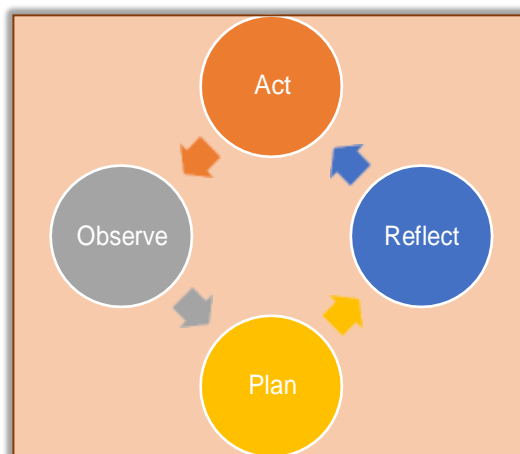
From Table: 1.1, it can be stated that the value of mean and mode for Research Usefulness is highest and Difficulty of Research is lowest. Basically, a small standard deviation means that the values in a statistical data set are close to the mean of the data set, on average, and a large standard deviation means that the values in the data set are farther away from the mean, on average. Thus, in the light of this statement, S.D for Research Usefulness is highest and lowest for Difficulty of Research.

**Fig: 1.1 Mean values on 5-Factors on Attitude towards Research Scale**



From Fig: 1.1, It can be stated that the mean for the Research Usefulness is the highest followed by Positive Attitude, Research Anxiety, Relevance to Life and Difficulty in Research.

**Findings and Conclusion:** The empirical data states show that the trainee teachers' attitude towards Research Usefulness is positive and is appreciated. However, the relevance to their life is a factor that needs to be worked upon. The trainee teachers may not be finding it relevant to their life for many reasons such as their view that professional



life only consist of teaching and research cannot be used for informing the daily practices. The trainee teachers also show favorable attitude to research work. Research anxiety is something to be worked upon in terms of making research work more pleasurable by teacher educators. Difficulty of Research can also be taken care by the teacher educators by employing techniques and methods that the trainee teacher and teacher educator find useful and relevant. Mentoring for research is an area that needs to be taken up positively.

#### **Plan of Action Ahead**

With reference to the action research approach and cycle of action research, the researcher recommends following measures to be acted upon:-

1. Observe: The Researcher will observe actual attitudes of students on field while conducting research and take descriptive notes to corroborate the empirical findings.
2. Reflect: Reflective writing exercises will be given to trainee teachers during their on-field research activities to infer upon their attitude and learnings through research.
3. Plan and Act: Based on reflections and observations during the process of research work (Action Research Project), recommendations stated ahead will be followed and encouraged.

#### **Recommendations**

1. For Research to be a pleasurable experience, pre-dispositions by teacher educators towards the area needs to be dealt with strongly. Inhibitions of teacher educators are passed to the trainee teachers and hence, their attitude towards research changes.
2. Research may not always be formal and structured; it can be spontaneous, flexible and informal as well. The trainee teachers need to be oriented towards making use of research skills in the most unplanned situations as well.
3. Encourage partnership with schools; undertake minor researches with school teachers to transit what trainee teachers have learnt as part of research.
4. Give simple issues/concerns at the beginning of their journey into the world of research.
5. Always ask what the trainee teacher wants to take up research on and not what the teacher educator wants them to take up.

6. Encourage positive student involvement and motivation during research. When encouraging independent undergraduate research (B.Ed-Regarded as undergraduate course), start small.
7. Encourage trainee teachers to publish a small article on their research work through a magazine or a newsletter.



### **References**

- Creswell, J. W. (2008). *Educational Research: Planning, conducting, and evaluating quantitative and qualitative research (3rd ed.)*. Upper Saddle River: Pearson.**
- McNiff, J. (2013) *Action Research: Principles and practice*. New York: Routledge.**  
[https://www.researchgate.net/publication/263290402\\_Rasch\\_rating\\_scale\\_analysis\\_of\\_the\\_Attitudes\\_Toward\\_Research\\_Scale](https://www.researchgate.net/publication/263290402_Rasch_rating_scale_analysis_of_the_Attitudes_Toward_Research_Scale).
- <http://www.ascd.org/publications/books/100047/chapters/What-Is-Action-Research%C2%A2.aspx>.
- [https://gse.gmu.edu › GSE › Research › Teacher Research › What is Action Research?](https://gse.gmu.edu/GSE/Research/Teacher_Research/What_is_Action_Research/)
- <http://www.nctm.org/Research-and-Advocacy/Linking-Research-and-Practice/>



SUB-EDUCATION AND DEVELOPMENT  
मराठी माध्यमिक शाळांतील अभ्यासक्रमांतून विद्यार्थ्यांमध्ये जीवन कौशल्यांच्या  
अंतर्गतसामाजिक कौशल्य विकास-एक विश्लेषणात्मक अभ्यास

मार्गदर्शिका - डॉ. स्नेहल दोंडे, *Principal –Halari Visa Oswal College Of Commerce,Bhiwandi*  
श्रीमती जयश्री रामनाथ काळे., *पद्मिधर शिक्षिका, अंबरनाथ शिक्षण मंडळ, जिल्हा ठाणे, महाराष्ट्र.*  
*M.A.(मराठी), M.A.(Eco.) B.Ed,M.Ed(Mum. Uni.), D.S.M. (Y.C.M.O.U.)*

प्रस्तावना -

शक्तिमन्तं यथावर्णं विद्यामध्यापयेत् ततः ।

अनुशिष्यात् सदा चैनं धर्माय विनयाय च ॥

यथा नेन्द्रियदुष्टाश्चैः न्हियते यौवनागमे ॥

जेव्हा मूल शारीरिक, बौद्धिक व मानसिकदृष्ट्या विद्याध्ययनासाठी समर्थ होईल तेव्हा त्याच्या क्षमता, आवड आणि बुद्धिकानुसार (I.Q.) विद्याध्ययनाची सोय करावी. विद्याध्ययनाद्वारे त्याला धर्म अर्थात कर्तव्य व विनय आणि सदाचाराची शिकवण द्यावी, ज्यामुळे तो तारुण्यात इंद्रियरूपी दुष्ट अश्र्वांच्या कक्षात जाणार नाही. उलट त्यांच्यावर नियंत्रण मिळवून स्वतःचा उत्कर्ष साधू शकेल.राष्ट्रीय अभ्यासक्रम आराखडा २००५ नुसार विद्यार्थ्यांच्या आरोग्यावर अधिक लक्ष केंद्रित केले. ओझ्याविना अध्ययन हे या आराखड्याचे वैशिष्ट्य आहे. क्षणाक्षणाला निर्माण होणारे अध्ययावत ज्ञान व तंत्रज्ञानाचा परिचय संपूर्ण समाजाला सातत्याने होत रहावा यासाठी शिक्षण क्षेत्र सातत्याने प्रयत्नशील असते हे ज्ञान विद्यार्थ्यांपर्यंत प्रभावीपणे पोहचवे व वर्तमान काळात त्यांच्या अंतर्गत क्षमतांचा पूर्णतःहा विकास होऊन प्रगत मानव निर्माण व्हावा या दृष्टीने शिक्षण क्षेत्रात विशिष्ट कालावधीनंतर अभ्यासक्रमात बदल केला जातो. त्याचअनुषंगाने वर्तमानकाळात जगाची शैक्षणिक, आर्थिक, तांत्रिक, बौद्धिक प्रगती पहात आपल्या देशात शिक्षण क्षेत्रात आमूलाग्र बदल अपेक्षित आहे.त्याचा सखोल मागोवा घेवून अभ्यासक्रमाची ध्येय निश्चित केले जातात.ध्येयपूर्तीच्या दृष्टीने विविध उद्दिष्टे समोर ठेवली जातात. त्याचप्रमाणे वर्तमानकाळाची गरज, राष्ट्र व राज्य अभ्यासक्रम मंडळाने ओळखून जीवन कौशल्यांचा समावेश अभ्यासक्रमाद्वारे पाठयक्रमात प्रभावीपणे केला.

अध्यापनाची उद्दिष्टे व जीवन कौशल्यांची योग्य सांगड घातल्यास जीवन कौशल्यांचा परिपोष योग्य प्रकारे कसा होईल यावर भर दिला आहे.

**Life skills -**

"Life skills are defined as psychosocial abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life".

They are loosely grouped into three broad categories of skills: cognitive skills for analyzing and using information, personal skills for developing personal agency and managing oneself, and inter-personal skills for communicating and

Interacting effectively with others.

-

UNICEF

**जीवन कौशल्य -**

जीवन जास्तीत जास्त कार्यक्षमतेने व यशस्वीपणे जगता येण्यासाठी व्यक्तिअंतर्गत असणाऱ्या क्षमता म्हणजे जीवन कौशल्य होय.

**Life skills-based education**

A term which came into use to describe life skills education addressing specific content or undertaken to achieve specific goals, e.g., life skills-based peace education or life skills-based HIV & AIDS education. The term makes it clear that a life skills approach will be used to teach the subject matter, meaning that participatory teaching/learning methods will be used to help learners develop not only knowledge, but also the psycho-social life skills they may need to use knowledge to inform and carry out behaviour-

- UNICEF

सध्यस्थितीत संपूर्ण जग ज्ञानाकडून आर्थिक विकासाकडे झेपावत आहे. अशा परिस्थितीत तळागळातील मनुष्य संसाधनामधील अंतर्गत क्षमतांचा कसून शोध घेणे व योग्य शैक्षणिक वातावरण पुरविणे आज शिक्षण क्षेत्राची मोठी

जबाबदारी आहे. शिक्षण क्षेत्राने अभ्यासक्रम रचना करते वेळी ठरविलेली ध्येय, उद्दिष्ट योग्यप्रकारे व सातत्याने विकसित होतात किंवा नाही याचा पाठपुरावा करणे अतिशय गरजेचे आहे. जुटी आढळल्यास योग्य ते बदल करणे अत्यावश्यक आहे. संशोधिका स्वतः शिक्षण क्षेत्रात १३ वर्षे ज्ञानदानाचे कार्य करत आहे. अनुभवाने वर्तमान काळातील शिक्षण क्षेत्रातील उलाढालींचा व जागतिक प्रगतीच्या तुलनेत आपल्या देशातील शिक्षण क्षेत्राचा विचार केला. आपल्या देशाला शिक्षण क्षेत्रात प्रभावी व नियोजनबद्ध पध्दतीने प्रचंड बदल करणे व सतत प्रगतीच्या दृष्टीने मागोवा घेणे वर्तमानकाळाची गरज आहे. सध्या ज्ञानाकडून आर्थिक विकासाकडे शिक्षण क्षेत्राचा प्रवास चालू आहे. अश्या परिस्थितीत अभ्यासक्रमाद्वारे व्यक्तिअंतर्गत संपूर्ण क्षमतांचा शोध व विकास करत संपूर्ण जीवन कौशल्यांच्या विकासावर अधिक लक्ष केंद्रीत केले आहे. त्या अनुरूप नानाविध उपक्रमांचा अंतर्भाव अभ्यासक्रमात केला आहे. जीवन कौशल्यांचे अनन्यसाधारण महत्त्व लक्षात घेतले असता मराठी माध्यमिक शाळांतील अभ्यासक्रमांतून विद्यार्थ्यांमध्ये जीवन कौशल्यांच्या विकासाचा एक विश्लेषणात्मक अभ्यास करण्याचे ठरवले आहे.

**संशोधनाचे विधान -**

मराठी माध्यमिक शाळांतील अभ्यासक्रमांतून विद्यार्थ्यांमध्ये जीवन कौशल्यांच्या अंतर्गतसामाजिक कौशल्य विकास-एक विश्लेषणात्मक अभ्यास.

**संशोधनाचे ध्येय -**

१. मराठी माध्यमिक शाळांतील विद्यार्थ्यांची जीवन कौशल्य विकास अभ्यासणे.
२. शाळा प्रकारानुसार अभ्यासक्रमातून विद्यार्थ्यांमध्ये सामाजिक कौशल्य विकासात तफावत अभ्यासणे.
३. मराठी माध्यमिक शाळांतील अभ्यासक्रमातून विद्यार्थ्यांमध्ये सामाजिक कौशल्य विकासाचा विश्लेषणात्मक अभ्यास करणे

**संशोधनातील चले –**

सदर संशोधनासाठी पुढील चलांचा वापर करणार आहे –

१) स्वाश्रीत चल

अ) जीवन कौशल्य

२) आश्रीत चल

ब) सामाजिक कौशल्य

**संशोधनातील चलांच्या कार्यात्मक व्याख्या -**

**जीवन कौशल्य -**

जीवन जास्तीत जास्त कार्यक्षमतेने व यशस्वीपणे जगता येण्यासाठी व्यक्तिअंतर्गत असणाऱ्या क्षमता म्हणजे जीवन कौशल्य होय.

**सामाजिक कौशल्य -**

दुसऱ्यांच्या भूमिकेत शिरून विचार करणे, दैनंदिन जीवनात सतत संपर्कात असलेल्यांबरोबरचे संबंध ओळखून निर्भेळ व स्नेहपूर्व संबंध राखणे, आपले विचार शाब्दिक किंवा अशाब्दिक माध्यमातून प्रभावीपणे व्यक्त करण्याचे कौशल्य म्हणजे सामाजिक कौशल्य होय.

**मराठी माध्यमिक शाळा –**

ज्या शाळांमध्ये माध्यमिक शालांत प्रमाणपत्र मंडळाच्या परीक्षेसाठी इयत्ता ८ वी ते इयत्ता १० वी पर्यंतचे वर्ग आहेत, राज्य अभ्यासक्रम संशोधन मंडळाने मराठी भाषेमध्ये अभ्यासक्रम उपलब्ध करून दिला आहे व अध्ययन-अध्यापनासाठी मराठी भाषेचाच वापर केला जातो अशा शासकीय, अनुदानित व विनाअनुदानित शाळा म्हणजे मराठी माध्यमिक शाळा होय.

**विद्यार्थी—**

चालू शैक्षणिक वर्षामध्ये माध्यमिक शालांत प्रमाणपत्र मंडळाच्या अंतर्गत शासकीय, अनुदानित व विनाअनुदानित मराठी माध्यमिक शाळांतील इयत्ता ८ वी व इयत्ता ९ वी मध्ये शिक्षण घेत असणारे अध्ययनार्थी मुले व मूली म्हणजेच माध्यमिक शाळांतील विद्यार्थी होय.

**अभ्यासक्रम –**

शिक्षणाच्या ध्येयपूर्तीसाठी संपुर्ण शैक्षणिक वर्षामध्ये इयत्ता ८ वी व इयत्ता ९ वी साठी शिकविला जाणार संपुर्ण पाठ्यक्रम, सहशालेय कार्यक्रम, परीक्षा व मुल्यापन, विविध उपक्रम व प्रकल्प म्हणजे अभ्यासक्रम होय.

**संशाधनाची उद्दिष्टे –**

१. मराठी माध्यमिक शाळांतील अभ्यासक्रमातून विद्यार्थ्यांमध्ये होणऱ्या जीवन कौशल्यांच्या विकासाचा सामाजिक

कौशल्य घटका संदर्भात खालील गटांमध्ये तुलना करणे-

अ) लिंगभेद (मुले व मुली)

ब) इयत्ता निहाय (इयत्ता ८वी व ९वी)

क) शालेय प्रकार (शासकीय, अनुदानीत व विनाअनुदानीत)

२. शालेय प्रकार (शासकीय, अनुदानीत व विनाअनुदानीत) मराठी माध्यमिक शाळांतील अभ्यासक्रमातून

विद्यार्थ्यांमध्ये होणऱ्या जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटक संदर्भात शिक्षकांच्या मताचा

खालील गटांमध्ये तुलना करणे-

अ) लिंगभेद (स्त्री शिक्षक व पुरुष शिक्षक)

ब) अध्यापन कालावधी (० ते ५ वर्षे व ५ वर्षांपेक्षा अधिक अध्यापन अनुभव असणारे शिक्षक)

क) विज्ञान शिक्षक व विज्ञानेतर शिक्षक

ड) शालेय प्रकार (शासकीय, अनुदानीत व विनाअनुदानीत)

**संशोधनातील परिकल्पना -**

१. मराठी माध्यमिक शाळांतील अभ्यासक्रमातून विद्यार्थ्यांमध्ये होणऱ्या जीवन कौशल्यांच्या विकासाचा

सामाजिक कौशल्य घटका संदर्भात खालील गटांमध्ये लक्षणीय फरक नाही-

अ) लिंगभेद (मुले व मुली)

ब) इयत्ता निहाय (इयत्ता ८वी व ९वी)

क) शालेय प्रकार (शासकीय, अनुदानीत व विनाअनुदानीत)

२. शालेय प्रकार (शासकीय, अनुदानीत व विनाअनुदानीत) मराठी माध्यमिक शाळांतील अभ्यासक्रमातून

विद्यार्थ्यांमध्ये होणऱ्या जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटका संदर्भात शिक्षकांच्या मतांचा

खालील लक्षणीय फरक नाही-

अ) लिंगभेद (स्त्री शिक्षक व पुरुष शिक्षक)

ब) अध्यापन कालावधी (० ते ५ वर्षे व ५ वर्षांपेक्षा अधिक अध्यापन अनुभव असणारे शिक्षक)

क)विज्ञान शिक्षक व विज्ञानेतर शिक्षक

ड) शालेय प्रकार (शासकीय, अनुदानीत व विनाअनुदानीत)

**संशोधन पध्दती –**

प्रस्तुत संशोधन हे वर्तमान काळाशी संबंधित असून प्राथमिक स्तरावरील सामान्य शिक्षकांचा व विशेष शिक्षकांचा समावेशक शिक्षणातील मानसिक विकलांग बालकांप्रतीच्या अवबोधाचा तुलनात्मक अभ्यास सदर संशोधनाच्या माध्यमातून केला जाणार असल्यामुळे सदर संशोधनासाठी सर्वेक्षण पध्दतीचा अवलंब केला आहे.

**संशोधनाची साधने –** प्रस्तुत संशोधनासाठी तथ्यांचे संकलन करण्यासाठी खाली साधनाची पूर्तता करण्यात आली.

- १) अनुदानित शाळा, विनाअनुदानित शाळा, शासकीय शाळांतील शिक्षकांसाठी संशोधक निर्मित प्रश्नावली.
- २) अनुदानित शाळा, विनाअनुदानित शाळा, शासकीय शाळांतील विद्यार्थ्यांसाठी संशोधक निर्मित प्रश्नावली.

**न्यादर्शनिवड -**

प्रस्तुत संशोधनाकरीता इयत्ता आठवी व इयत्ता नववी ला शिकवणाऱ्या शिक्षकांची सहेतुक नमुना निवड पध्दतीचा वापर करून निवड करण्यात आली.

अनुदानीत शाळा, विनाअनुदानीत शाळा, शासकीय शाळांची निवड नमुना निवडीच्या संभाव्यतेवर आधारित यादृच्छिक नमुना निवड पध्दतीने निवड करण्यात आली.

अशा प्रकारे मराठी माध्यमाच्या माध्यमिक शाळांतील शाळाप्रकारानुसार एकूण २४० शिक्षक तर विद्यार्थी शाळाप्रकारानुसार एकूण ६०० विद्यार्थ्यांची निवड केली आहे. एकूण नमुना आकार – विद्यार्थी ६०० तर शिक्षक २४० असा आहे.

**संशोधनाची फलिते –**

१)उद्दिष्टे १.क.परिकल्पना १.

(एकूण विद्यार्थी संख्या ६००)

प्रसरण स्रोत)	वर्ग बेरीज	स्वा. मात्रा	वर्ग मध्यमान	'एफ' परीक्षिकेचे गुणोत्तर	'पी' सार्थकता स्तर
आंतरसमुह	१२१.७४३३	२	६०.८७१७	६.१४	०.०१
समुहांतर्गत	५९१६.०५५	५९७	९.९०९६		
एकूण	६०३७.७९८३	५९९			

या शुन्य परिकल्पनेच्या परिक्षणासाठी अॅनोव्हा (एकमार्गी प्रसरण) या तंत्राचा वापर करण्यात आला आहे.जीवन कौशल्याच्या सामाजिक कौशल्य या घटकासंदर्भात शासकीय शाळा, अनुदानीत शाळा व विना अनुदानीत शाळांतील सर्व विद्यार्थ्यांच्या अनुशंगाने तुलना केली आहे. प्राप्त 'एफ' मूल्य ६.१४ असे आहे.प्राप्त 'एफ' मूल्य ६.१४ हे सारणी 'एफ' मूल्य ०.०५ = ३.०० व ०.०१ = ४.६१ या पेक्षा जास्त आहे.त्यामुळे ही शुन्य परिकल्पना त्याज्य केली आहे.

म्हणजेच मराठी माध्यमिक शाळांतील अभ्यासक्रमातून विद्यार्थ्यांमध्ये होणाऱ्या जीवन कौशल्याच्या सामाजिक कौशल्य घटका संदर्भात शासकीय शाळा, अनुदानीत शाळा व विना अनुदानीत शाळेतील विद्यार्थ्यांच्या गटात ०.०१ या स्तरावर लक्षणीय फरक आहे.

२) उद्दिष्टे २,ड. परिकल्पना २,ड.

(एकूण शिक्षक संख्या २४०)

प्रसरण स्रोत	वर्ग बेरीज	स्वा. मात्रा	वर्ग मध्यमान	'एफ' परीक्षिकेचे गुणोत्तर	'पी' सार्थकता स्तर
आंतरसमुह	१२१.८७	२	५६.४३५	०.६९	सार्थकता नाही
समुहांतर्गत	४८९८१.८७	५९७	८२.०४६७		
एकूण	४९०९४.७४	५९९			

या शुन्य परिकल्पनेच्या परिक्षणासाठी अॅनोव्हा (एकमार्गी प्रसरण) या तंत्राचा वापर करण्यात आला आहे.जीवन कौशल्याच्या सामाजिक कौशल्य या घटकासंदर्भात शासकीय शाळा, अनुदानीत शाळा व विना अनुदानीत शाळांतील सर्व शिक्षकांच्या मतांच्या अनुशंगाने तुलना केली आहे. प्राप्त 'एफ' मूल्य ०.६१ असे आहे.प्राप्त 'एफ' मूल्य ०.६१ हे सारणी 'एफ' मूल्य ०.०५ = ३.०० व ०.०१ = ४.६१ या पेक्षा कमी आहे.त्यामुळे या शुन्य परिकल्पनेचा स्विकार केला आहे.

म्हणजेच मराठी माध्यमिक शाळांतील अभ्यासक्रमातून विद्यार्थ्यांमध्ये होणाऱ्या जीवन कौशल्याच्या सामाजिक कौशल्य घटका संदर्भात शासकीय शाळा, अनुदानीत शाळा व विना अनुदानीत शाळेतील विद्यार्थ्यांच्या गटात लक्षणीय फरक नाही.

उद्दिष्टे १अ).परिकल्पना १ अ)-

(एकूण विद्यार्थी संख्या ६००)

चल	गट	नमुना संख्या	मध्यमान	प्रमाण विचलन	स्वाधीनता मात्रा	'टी' कोष्टक मूल्य		प्राप्त 'टी'	सार्थकता स्तर
विद्यार्थी लिंग	मुले	३००	९१.७९	२.९९	५९८	१.९६	२.५९	०.५८	लक्षणीय फरक नाही
	मुली	३००	९१.६४	३.३५					

या शुन्य परिकल्पनेच्या परिक्षणासाठी 'टी' परीक्षिका या तंत्राचा वापर करण्यात आला.जीवन कौशल्याच्या सामाजिक कौशल्य या घटकासंदर्भात लिंग निहाय म्हणजेच एकूण मुलेव एकूण मुलींची तुलना केली असता प्राप्त 'टी' मूल्य ०.५८असे आहे. प्राप्त 'टी' मूल्य ०.५८ हे सारणी मूल्य ०.०५ स्तरावर १.९६ व ०.०१ स्तरावर २.५९ या पेक्षा कमी आहे. त्यामुळे या शुन्य परिकल्पनेचा स्वीकार केला आहे

म्हणजेच मराठी माध्यमिक शाळांतील अभ्यासक्रमातुन विद्यार्थ्यांमध्ये होणाऱ्या जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटकासंदर्भात लिंग निहाय म्हणजेच एकूण मुलेव एकूण मुलींची तुलना केली असता लक्षणीय फरक नाही.

उद्दिष्टे १ ब).परिकल्पना १ ब)-

(एकूण विद्यार्थी संख्या ६००)

चल	गट	नमुना संख्या	मध्यमान	प्रमाण विचलन	स्वाधीनता मात्रा	'टी' कोष्टक मूल्य		प्राप्त 'टी'	सार्थकता स्तर
विद्यार्थी इयत्ता	८वी	३००	९१.६७	३.४२	५९८	१.९६	२.५९	०.४६	लक्षणीय फरक नाही
	९वी	३००	९१.७९	२.९९					

या शुन्य परिकल्पनेच्या परिक्षणासाठी 'टी' परीक्षिका या तंत्राचा वापर करण्यात आला.जीवन कौशल्याच्या सामाजिक कौशल्य या घटकासंदर्भात इयत्ता निहाय म्हणजेच इयत्ता ८वी व इयत्ता ९वी च्या एकूण विद्यार्थ्यांची तुलना केली असता प्राप्त 'टी' मूल्य ०.४६ असे आहे. प्राप्त 'टी' मूल्य ०.४६ हे सारणी मूल्य ०.०५ स्तरावर १.९६ व ०.०१ स्तरावर २.५९ या पेक्षा कमी आहे. त्यामुळे या शुन्य परिकल्पनेचा स्वीकार केला आहे



म्हणजेच मराठी माध्यमिक शाळांतील अभ्यासक्रमातून विद्यार्थ्यांमध्ये होणाऱ्या जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटकासंदर्भात इयत्ता निहाय इयत्ता ८वी व इयत्ता ९वी च्या विद्यार्थ्यांमध्ये लक्षणीय फरक नाही.

५) उद्दिष्टे २अ..परिकल्पना २ अ.-

(एकूण शिक्षक संख्या २४०)

चल	गट	नमुना संख्या	मध्यमान	प्रमाण विचलन	स्वाधीनता मात्रा	'टी' कोष्टक मूल्य		प्राप्त 'टी'	सार्थकता स्तर
शिक्षक लिंग	पुरूष शिक्षक	१२०	११२.०७	५.३८	२३८	१.९७	२.६०	१.७३	लक्षणीय फरक नाही
	पुरूष शिक्षक	१२०	१११.१	२.९४					

या शुन्य परिकल्पनेच्या परिक्षणासाठी 'टी' परीक्षिका या तंत्राचा वापर करण्यात आला.जीवन कौशल्याच्या सामाजिक कौशल्य घटका संदर्भात लिंग निहायशिक्षकांच्या मतामध्ये पुरूष शिक्षक व स्त्री शिक्षिका गटांमध्ये तुलना केली असता प्राप्त 'टी' मूल्य १.७३ असे आहे. प्राप्त 'टी' मूल्य १.७३ हे सारणी मूल्य ०.०५ स्तरावर १.९७ व ०.०१ स्तरावर २.६० या पेक्षा कमी आहे.त्यामुळे या शुन्य परिकल्पनेचा स्वीकार केला आहे.

मराठी माध्यमिक शाळांतील अभ्यासक्रमातून विद्यार्थ्यांमध्ये होणाऱ्या जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटका संदर्भातशिक्षकांच्या मतामध्ये पुरूष शिक्षक व स्त्री शिक्षिका गटांमध्ये लक्षणीय फरक नाही

६) उद्दिष्टे २ ब. परिकल्पना २ ब.

(एकूण शिक्षक संख्या २४०)

चल	गट	नमुना संख्या	मध्यमान	प्रमाण विचलन	स्वाधीनता मात्रा	'टी' कोष्टक मूल्य		प्राप्त 'टी'	सार्थकता स्तर
शिक्षक विषय	विज्ञान शिक्षक	१२०	१११.६३	५.४०	२३८	१.९७	२.६०	०.५९	लक्षणीय फरक नाही
	विज्ञानेतर शिक्षक	१२०	१११.३	३.०३					

या शुन्य परिकल्पनेच्या परिक्षणासाठी 'टी' परीक्षिका या तंत्राचा वापर करण्यात आला. जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटका संदर्भात शिक्षकांच्या मतांमध्ये विज्ञान शिक्षक व विज्ञानेतर शिक्षक या गटांमध्ये तुलना केली असता प्राप्त 'टी' मूल्य ०.५९ असे आहे. प्राप्त 'टी' मूल्य ०.५९ हे सारणी मूल्य ०.०५ स्तरावर १.९६ व ०.०१ स्तरावर २.५९ या पेक्षा कमी आहे. त्यामुळे या शुन्य परिकल्पनेचा स्वीकार केला आहे.

मराठी माध्यमिक शाळांतील अभ्यासक्रमातून विद्यार्थ्यांमध्ये होणाऱ्या जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटका संदर्भात शिक्षकांच्या मतांमध्ये विज्ञान शिक्षक व विज्ञानेतर शिक्षक या गटांमध्ये लक्षणीय फरक नाही

७) उद्दिष्टे २ क. परिकल्पना २ क.-

(एकूण शिक्षक संख्या २४०)

चल	गट	नमुना संख्या	मध्यमान	प्रमाण विचलन	स्वाधीनता मात्रा	'टी' कोष्टक मूल्य		प्राप्त 'टी'	सार्थकता स्तर
अध्यापन अनुभव	० ते ५ वर्षे	१२०	११२.१२	५.४८	२३८	१.९७	२.६०	२.००	लक्षणीय फरक आहे.
	५ वर्षांपेक्षा अधिक	१२०	१११.०	२.७२					

या शुन्य परिकल्पनेच्या परिक्षणासाठी 'टी' परीक्षिका या तंत्राचा वापर करण्यात आला. जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटका संदर्भात शिक्षकांच्या मतांमध्ये ० ते ५ वर्षे अध्यापन अनुभव असणारे व ५ वर्षांपेक्षा अधिक अध्यापन अनुभव असणारे शिक्षकांच्या गटांमध्ये तुलना केली असता प्राप्त 'टी' मूल्य २.०० असे आहे. प्राप्त 'टी' मूल्य २.०० हे सारणी मूल्य ०.०५ स्तरावर १.९६ व ०.०१ स्तरावर २.५९ या पेक्षा जास्त आहे. त्यामुळे ही शुन्य परिकल्पना त्याज्य केली आहे

मराठी माध्यमिक शाळांतील अभ्यासक्रमातून विद्यार्थ्यांमध्ये होणाऱ्या जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटका संदर्भात शिक्षकांच्या मतांमध्ये ० ते ५ वर्षे अध्यापन अनुभव असणारे व ५ वर्षांपेक्षा अधिक अध्यापन अनुभव असणारे शिक्षक गटांमध्ये ०.०५ या स्तरावर लक्षणीय फरक आहे

**निष्कर्ष व चर्चा -**

उद्दिष्टे १.क. परिकल्पना १. क.

मराठी माध्यमाच्या माध्यमिक शाळांतील अभ्यासक्रमात विद्यार्थ्यांमध्ये होणाऱ्या जीवन कौशल्यांचा विकासाचा सामाजिक कौशल्य घटका संदर्भात तुलनात्मक अभ्यास केला असता शासकीय, अनुदानित व विना-अनुदानित या गटात लक्षणीय फरक दिसून आला. मागील कारणांचा मागोवा घेतला असता अनुदानित शाळांमध्ये येणारे विद्यार्थी सधन कुटुंबातील असून आर्थिक दृष्ट्या कोणत्या समस्या नाहीत तसेच शाळेला अनुदान उपलब्ध असल्याने शालेय स्तरावर राबविले जाणाऱ्या असंख्य उपक्रम व प्रकल्पांमध्ये सर्व साहित्य मुबलक प्रमाणात उपलब्ध आहे. परिणामी क्षेत्रभेटी, उपक्रम, प्रकल्प प्रभाविपणे राबवले जातात. मात्र शासकीय व अनुदानित शाळांमध्ये उलट परिस्थिती दिसून येते. परिणामी विद्यार्थ्यांच्या सामाजिक विकासात शाळा प्रकारानुसार तफावत आढळली असे निरीक्षणांती लक्षात आले.

#### **उद्दिष्टे २ क.परिकल्पना २ क.-**

जीवन कौशल्य विकासाच्या सामाजिक कौशल्य घटका संदर्भात शिक्षकांच्या मतांचा तुलनात्मक अभ्यास केला असता, विज्ञान शिक्षकांतर्गत गणित व विज्ञान विषयाचे अध्यापन करणारे शिक्षक व इतर सर्व विषयांना अध्यापन करणारे शिक्षक म्हणजेच विज्ञानेतर शिक्षक ह्यांच्या (अध्यापन अनुभवानुसार) मतांमध्ये लक्षणीय फरक आढळतो. शिक्षकांच्या मतांचा मागोवा घेतला असता अध्यापन अनुभवानुसार शासकीय शाळांतील विद्यार्थी तुलनेत अनुदानित व विना अनुदानित शाळांतील विद्यार्थी विविध उपक्रमांमध्ये सहभागी होतात. कौटुंबिक व सामाजिक वातावरणाचा अधिक परिणाम मुलांच्या सामाजिक विकासावर होतो. शासकीय शाळांतील विद्यार्थी सहशालेय उपक्रमांतर्गत राबविल्या जाणाऱ्या उपक्रमांबाबत उदासिन दृष्टिकोन ठेवत असले तरी दैनंदिन जीवनात जगताना छोट्या, छोट्या व्यवसाय करत असतात. परिणामी समाजात वावरतानाचा व्यवहारी दृष्टिकोन वर्तन अनुदानित व विना अनुदानित विद्यार्थ्यांच्या तुलनेत अधिक चांगले असते. आत्मविश्वासपूर्ण असते. त्यांच्या सामाजिक वर्तनात नियमबद्धता नसते मात्र सहजतेने समाजात वावरण्याची क्षमता अनुदानित व विना अनुदानितच्या तुलनेत अधिक असते.

#### **संशोधनाचे महत्त्व -**

सदर संशोधनामुळे प्रत्येक व्यक्तीच्या जीवनात विद्यार्थीदशेतील शिक्षणाचे योगदान किती प्रभावी असते व त्यांचे दूरगामी परिणाम व्यक्तिबरोबरच संपूर्ण देशावर कसे पडतता हे समजणार आहे. सदरील संशोधनामध्ये

शासकीय, अनुदानित व विनाअनुदानित मराठी माध्यमाच्या माध्यमिक शाळांतील विद्यार्थी व शिक्षकांच्या मतांचा विचार केला असल्याने प्रत्यक्ष विद्यार्थ्यांचे व शिक्षकांचे अनुभवावरून आलेली मते समजणार आहे.

व्यक्तिच्या व्यक्तिमत्व विकासातील सामाजिक कौशल्य विकासात शाळेचे कर्तव्य समजणार आहेत. शासकीय, अनुदानित व विनाअनुदानित शाळांमध्ये सामाजिक कौशल्य विकासावर कशा प्रकारे लक्ष पुरविले जाते हे समजणार आहे. जीवन कौशल्य शिक्षणाचे विद्यार्थीदशेतील महत्त्व लक्षात येणार आहे. विद्यार्थ्यांमध्ये जीवन कौशल्य विकास कसा होतो याबाबत शिक्षकांची मते समजणार आहेत.

शाळांच्या प्रकारानुरूप सामाजिक कौशल्य शिक्षणात काही तफावत आढळते का? त्या मागची कारणे कोणती? त्यासाठी काय प्रभावी उपाययोजना राबविता येतील हे समजणार आहे. शिक्षकांच्या दृष्टीकोनातून जीवन कौशल्य शिक्षणावर शाळांमध्ये किती भर दिला जातो हे समजणार आहे. तसेच शाळांमध्ये राबविल्या जाणाऱ्या विविध उपक्रमांची व अभ्यासक्रमांतर्गत राबविल्या जाणाऱ्या उपक्रमांचे महत्त्व व परिणामकारकता समजणार आहे. शासकीय व विनाअनुदानित शाळांमध्ये जीवन कौशल्य विकासामध्ये तफावत आढळते का? आढळत असल्यास का? या प्रश्नांची उत्तरे लक्षात येणार आहेत.

सामाजिक कौशल्य विकासामध्ये नकारात्मक तफावत आढळल्यास ती दूर करण्यासाठी प्रभावी उपाययोजना करता येतील. तसेच एम.एस.ई.आर.टी., एन.सी.ई.आर.टी. द्वारे अभ्यासक्रमात अधिक प्रभावीपणे सामाजिक कौशल्य शिक्षणाला प्राधान्य देण्यास दिशा मिळू शकेल. विविध प्रशिक्षणांचे आयोजन करून जीवन कौशल्य विकासासाठी नाविन्यपूर्ण प्रभावी उपक्रम राबविण्यासाठी शिक्षकांना प्रोत्साहन देण्यास सहकार्य होईल. पालक, विद्यार्थी, शिक्षक, समाज सर्वानाच जीवनातील जीवन कौशल्य शिक्षणाचे प्रभावी, योग्यवेळी व सातत्यपूर्ण विकासाचे महत्त्व लक्षात येईल. एक प्रभावी व संपूर्ण विकसित, आत्मविश्वास पूर्ण नागरीक देशाला मिळवून देण्यातील शिक्षणक्षेत्राचा हिस्सा व शिक्षकांची भूमिका व कर्तव्ये अधिक प्रभावीपणे समजतील.

सदरील संशोधन अंबरनाथ तालुक्यापुरते मर्यादित असले तरी संपूर्ण जिल्हा व राज्यातील विविध प्रकारच्या शाळांतील विद्यार्थ्यांच्या सामाजिक कौशल्य विकासाला मदत करणारे ठरू शकते. विद्यार्थ्यांमध्ये योग्य वेळी योग्य प्रकारे, सातत्यपूर्ण जीवन कौशल्य विकासावर भर देवून संपूर्ण राज्यात विद्यार्थ्यांच्या सामाजिक कौशल्य विकासाला

प्रभावी मदत होऊ शकते. सामाजिक कौशल्य शिक्षणाला अधिक गती मिळू शकते. जी वर्तमानकाळातील प्रत्येक विद्यार्थ्यांसाठी व राष्ट्र विकासासाठी काळाची गरज आहे.

### **संदर्भग्रंथसुची -**

- पारसनीस हेमलता, (२००९). शैक्षणिक संशोधन माहिती संकलन तंत्रे व साधने, नित्यनुतन प्रकाशन, पान नं. ७७  
भितांडे, वि.रा., (१९९९). शैक्षणिक संशोधन पद्धती, नुतन प्रकाश, पुणे, (द्वितीय आवृत्ती), पान नं. १, २, ३  
घोरमोडे.के.यु, (२००८). "शैक्षणिक संशोधनाची मुलतत्वे", विद्या प्रकाशन, नागपुर, प्रथम आवृत्ती, पान नं. ६८  
पंडीत. वं.बि, (१९९७). "शिक्षणातील संशोधन अभिकल्प", नुतन प्रकाशन, पुणे, द्वितीय आवृत्ती, पान नं. ७८  
भितांडे वि.स, (२००७). "शैक्षणिक संशोधन पद्धती", नित्य नुतन प्रकाशन, पुणे, चौथी आवृत्ती.  
करंदीकर सुरेश, (१९९५). "शिक्षण आणि भारतीय समाज", फडके प्रकाशन, कोल्हापुर.  
बी.पी.माळी, (डिसेंबर २००४). "जिवन शिक्षण", बृह-मुंबई उत्तर विभाग.  
कुंडले म.बा.,(१९७७). "शैक्षणिक तत्वज्ञान आणि समाजशास्त्र",आनंद मुद्रनालाय, सदाशिव पेठ, पुणे.  
Abbas I (2005) , 'A Relationship Between Emotional Intelligence And Self-esteem: Study In Universities Of Pakistan, Govt College University Pakistan  
वेबसाईट

<http://www.ugc.ac.in>  
<http://ber.org/papers/w/8/2/>  
<http://eric.ed.gov>

## INDEX

SR. NO.	TITLE & AUTHOR (S) NAME	PAGE NO
49	<b>A STUDY OF THE PEACE EDUCATION PROGRAMMES ORGANISED IN SECONDARY SCHOOLS OF MUMBAI</b> <i>Dr. Frances Vaidya</i>	285-292
50	<b>STUDENT PERSPECTIVES ON THE CONTRIBUTION OF ICT TO TEACHING AND LEARNING IN THE MIDDLE SCHOOL</b> <i>Dr. Hemantkumar Y.Deore &amp; Prof. Prakash Ahire</i>	294-300
51	<b>EDUCATION 3.0: A SURVEY OF THE USE OF DIGITAL TECHNOLOGY, SOCIAL NETWORKING SITES AND EDUCATIONAL APPS IN TEACHING-LEARNING PROCESS BY THE SECONDARY SCHOOL TEACHERS IN MUMBAI – INDIA</b> <i>Ms. Ummadisingu Vani Achari</i>	301-308
52	<b>TO STUDY THE EFFECTIVENESS OF THE INSTRUCTIONAL MODULE BASED ON CONSTRUCTIVIST APPROACH IN CLASSROOM TEACHING FOR THE SCHOOL TEACHERS IN SEMI RURAL AREAS OF PUNE CITY</b> <i>Dr. Asawari Bhawe- Gudipudi &amp; Virendra Bawaskar</i>	309 - 315
53	<b>EFFECT ON GROWTH OF PLANTS UNDER “PHYTORID TECHNOLOGY BASED” TREATED WATER AT EDUCATION INSTITUTE: R.D. NATIONAL COLLEGE</b> <i>Dr. Mona Kejariwal, Abhishekh Tiwari, Sunil Sahani, Abrar Momaya, Kushbu Chouhan &amp; Hetavi Modha</i>	316- 327
54	<b>A COMPARATIVE STUDY TO INVESTIGATE THE LIFE SKILLS AMONG THE SECONDARY STUDENTS” OF URBAN SCHOOLS AND RURAL SCHOOLS</b> <i>Asst.Prof. Ms. Sheetal Kadam</i>	328- 335
55	<b>A STUDY OF CONFLICT RESOLUTION ABILITY OF DEGREE COLLEGE STUDENTS</b> <i>Dr. Pratima Pradhan</i>	336-341
56	<b>CORRELATIONAL STUDY OF ECOLOGICAL FOOTPRINT OF STUDENT TEACHERS WITH THEIR EMOTIONAL QUOTIENT</b> <i>Ms. Geeta S. Thakur</i>	342-346
57	<b>„THE META-STUDIO” -A META-MODELLING APPROACH TO DEVELOP METACOGNITION</b> <i>Dr. Mary George Varghese</i>	347-350

58	<b>REVISITING TEACHING LEARNING IN CLASSROOMS: PATHWAYS TO DEVELOPING REFLECTIVE THINKING</b> <i>Ms Vinita Desai &amp; Dr. Karuna Gupta</i>	351-357
----	--	---------

**A STUDY OF THE PEACE EDUCATION PROGRAMMES ORGANISED IN  
SECONDARY SCHOOLS OF MUMBAI**

**Dr. Frances Vaidya**, Assistant Professor, Gandhi Shikshan Bhavan's, Smt. Surajba College of Education Juhu, Mumbai- India

**Abstract**

***"Nobody can bring you peace but yourself"- Ralph Waldo Emerson***

*Peace is the most sought commodity by the whole human race presently. The world today is facing a lot of trails and turmoil's- hatred, envy, jealousy, intolerance and non-violence. The only answer to stop these catastrophes is Peace Education. UNICEF defines peace education as —the process of promoting the knowledge, skills, attitudes and values needed to bring about behaviour changes that will enable children, youth and adults to prevent conflict and violence, both overt and structural; to resolve conflict peacefully; and to create the conditions conducive to peace, whether at an intrapersonal, interpersonal, intergroup, national or international level. Peace education is a right of all children, programmes irrespective of being victims of conflict or not. Education for peace is a hypothetical skeleton from which schools may generate programmes encompassing the spread of universal values and continuing attitudes and the development of skills which allow students to become global citizens. Education for global peace thus becomes paramount. The paper centres on the programmes for peace education namely children/human rights education, gender training and life skills organised in secondary schools for dissemination of peace through the numerous activities conducted for the students both in and off the campus. The differences in the peace education programmes organised in secondary schools on the basis of age and gender is examined. The sample consisted of 180 secondary students which were selected randomly. It was found that there is no significant difference in the peace education programmes organised in secondary schools on the basis of age and gender.*

**Keywords:** *peace, peace education, peace programmes, global peace*

Peace is the most sort commodity sought by the whole human race presently. The world today is facing a lot of struggles, trails and turmoil's, hatred, envy, jealousy, non-violence between countries, nation and the world at large. The only answer to stop these tragedies is Peace education. Education for global peace is very important to experience peace and harmony in the world we live in. Peace education is an indispensable element of quality basic education. UNICEF defines peace education as "the process of promoting the knowledge, skills, attitudes and values needed to bring about behaviour changes that will enable children, youth and adults to prevent conflict and violence, both overt and structural; to resolve conflict peacefully; and to create the conditions conducive to peace, whether at an intrapersonal, interpersonal, intergroup, national or international level."

**Article 29 of the Convention on the Rights of the Child (1989) states:** "... the education of the child shall be directed to...the preparation of the child for responsible life in a free society, in the spirit of understanding, peace, tolerance, equality of sexes, and friendship among all peoples..."



Peace education is a right of all children, programmes irrespective of being victims of conflict or not. Education for peace is a hypothetical skeleton from which schools may generate programmes encompassing the spread of universal values and continuing attitudes and the development of skills which allow students to become global citizens. Education for global peace thus becomes paramount. The paper centres on the varied programmes for peace education organised in secondary schools for dissemination of peace through the numerous activities conducted for the students both in and off the campus. The differences in the peace education programmes organised in secondary schools on the basis of age, gender is examined. Such programmes are crucial for the existence and sustainable development of the children and for the achievement of Global Peace. It also aids in the fortification of children and their effective participation in society and to the contribution towards global peace. Initiatives from educational institutions along with involvement of the community and countries, helps in creation of a harmonious and rights-respectful society, sustainable development and thus rendering world peace. Peace education includes children's rights/human rights education, education for development, gender training, global education, life skills education, landmine awareness, and psychosocial rehabilitation. Life skills can include cooperation, negotiation, communication, decision-making, problem-solving, coping with emotions, self-awareness, empathy, critical and creative thinking, dealing with peer pressure and awareness of risk, assertiveness, and preparation for the world of work. It also includes skills as the use of interactive and participatory teaching methods, organising cooperative group work, and facilitating group discussions. Mahatma Gandhi believed in Basic education. The use of these types of teaching methods is essential to quality basic education, and enables teachers to convey values of cooperation, respect for the opinions of the child, and appreciation of differences. Participatory teaching and learning strategies can be used throughout the curriculum, and are an essential component of efforts to promote peace through education. Active and participatory approaches are particularly valuable in assuring learning acquisition and allowing learner to reach their fullest potential." Encouraging the use of interactive, learner-centred methods is a priority in the promotion of quality basic education. These methods should be used deliberately to support learning aims that relate to the knowledge, skills, and attitudes of peace education. Research supports the idea that cooperative and interactive learning methods promote values and behaviours that are conducive to peace.

UNICEF peace education programmes include cooperative group work, peer teaching, discussion in pairs and small groups, collaborative games, brainstorming, priority-setting exercises, decision-making and consensus-building exercises, negotiations, role plays and simulations. Families do play a very important role in contributing to peace. The unhealthy atmosphere in the family during the formative growth of childhood only contributes to unrest among the children. Once in schools they spend most of their time with their peers. So, school contribution to bringing about peace is dominant.

The peace education programme must be planned through curricular and co-curricular activities. It also includes cross curricular and trans -curricular activities. The different activities may be broadly classified within the school activities and outside the school activities.

If schools conduct the peace education programmes for the students they will be well trained and will be able to handle situation of life better. This will help in the attainment of Global peace, thus fostering a sustainable development. The researcher thus wishes to find out and compare the peace education programmes organised in secondary schools on the basis of age and gender that helps fostering peace in oneself, society, nation and the world at large.

The researcher wishes to consider the following peace education programmes in terms of children/ human rights education gender training and life skills.

**Research Questions:**

1. Is peace education programmes conducted in educational institutions?
2. Is there any difference in the peace education programmes conducted in educational institution on the basis of age and gender?

**Statement of the Problem:** The problem is stated as „**A Study of The Peace Education Programmes Organised In Secondary Schools of Mumbai**".

**Operational Definitions of the Term**

**Children/Human rights education:** It includes activities that creates awareness and responsibilities about children and human rights, peace and conflict issues

**Gender training:** It includes activities that address the prevention of violence against women, alternative ways in which gender conflicts may be handled.

**Life skills:** It includes the skills that enable children to translate knowledge, attitude and values into action which helps children to cope effectively with the challenges of everyday life.

**Aim of the study:**

To study the Peace Education Programme organised in Secondary Schools of Mumbai.

**Objectives of the study**

To prepare a tool that measures peace education programmes in terms of children/human rights education, global training and life skills

- To find out the differences in the peace education programmes organised in secondary schools on the basis of age
- To find out the differences in the peace education programmes organised in secondary schools on the basis of gender.

**Hypothesis of the study**

The researcher has formulated the following hypothesis for the purpose of the research.

- There is no significant difference between the peace education programmes organised in secondary schools on the basis of age.
- There is no significant difference between the peace education programmes organised in secondary schools on the basis of gender.

### **Need and Significance of the Study**

The study is significant to the field of education in that it builds upon the available body of knowledge relating peace education programmes organised in schools for educational institutions. The study highlighted the need and importance of peace education programmes organised in the school for secondary students in an educational institution. It will enlighten and create awareness of the role of educational institution in organising such peace education programmes that are needed for creating and sustaining a peaceful society and global peace.

It is significant that educational heads, teachers must view the promotion of understanding, peace and tolerance through education as a fundamental right of all children, not an optional extra-curricular activity. The study will help in creating better and stronger individuals capable of handling demanding situation and make them peace makers rather than peace breakers.

**Methodology of the study:** The study of investigation is a descriptive research study. The researcher will also compare the peace education programmes in educational institutions on the age and gender. Hence the descriptive method of the comparative type will be used.

**The Sample – Its size and nature:** For the present study 180 secondary students were selected Mumbai. The sampling technique used was simple random sampling.

### **Tools used for data collection**

For the present study, a rating scale and will be prepared and used by the researcher to collect data on the following variables. The following tools were used to collect data

1. Personal data sheet: This tool has been used to collect information about the name, gender, level of education and age.
2. A rating scale to find out the peace education programme through curricular and co-curricular activities was prepared by the researcher. It includes aspect of children/human rights education, gender training and life skills. It was a two-point rating scale with rating points- Yes and No. It had 30 items. The tool helps to assess the programmes organised in educational institution for dissemination of peace through its activities. The range of scores was tabulated

**Data Collection:** The tool was distributed to 180 secondary school students of Mumbai.

**Analysis of the data:** The data was analysed descriptively wherein mean median, mode and standard deviation and kurtosis was computed. Their responses were also analysed and their percentage was taken into account.

**Descriptive Analysis**

**Table 1.1 Peace Education Programmes Organised In Secondary Schools Of Mumbai For The Total Sample**

Total Sample	Mean	Median	Mode	SD	SK	K
180	53.92	55	58	4.92	-1.18204	2.27

Tor the total sample the mean, median and mode of peace education programmes organised in educational institutions are in the ascending order. The skewness is negative which is -1.18 and the kurtosis is 2.27 which is more than 0.263. Hence the distribution is said to be platykurtic.

**Testing of Hypothesis 1**

The null hypothesis states that there is no significant difference in the peace education programmes organised in secondary schools on the basis of gender.

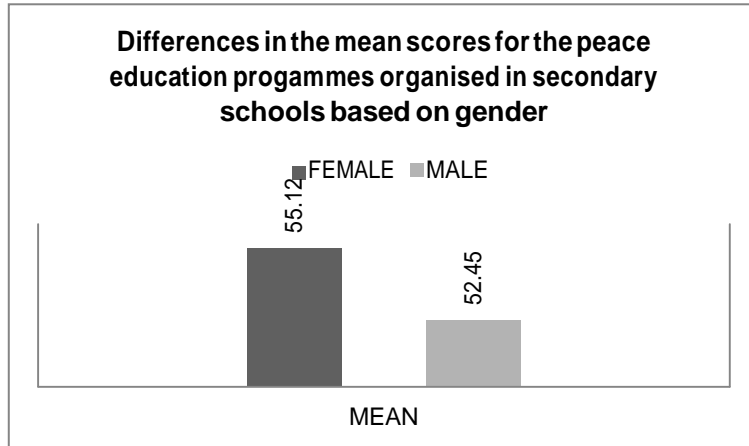
The technique used for this hypothesis is the „t“test

**Table 1.2 Differences In The Mean Scores For Peace Education Programmes Organised In Secondary Schools On The Basis Of Gender**

Gender	Mean	Median	Mode	SD	SK	k	t	los
Female	55.12	56	60	4.52	-1.03	0.62	0.00029	NS
Male	52.45	53	55	5.02	-1.41	3.57		

**Conclusion:** It was found that there is no significant difference in the peace education programmes in secondary schools on the basis of gender. The mean scores indicate that on the basis of gender, the female is better perceptive to peace than the male. They are better than the males with regard to life skills, gender sensitivity and aware of the children/human right education.

**Table 1.3 Graphical Representation Of The Differences In The Mean Scores For Peace Education Programmes Organised In Secondary Schools On The Basis Of Gender**



**Testing of Hypothesis 2**

The null hypothesis states that there is no significant difference in the peace education programmes organised in secondary schools on the basis of age.

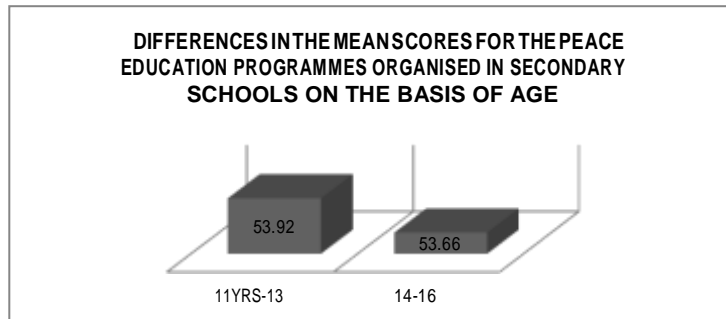
The technique used for this hypothesis is the „t“test

**Table 1.2 Differences In The Mean Scores For Peace Education Programmes Organised In Secondary Schools On The Basis Of Age**

AGE	Mean	Median	Mode	SD	SK	k	T	los
11-13	53.02	54	60	4.83	-1.46	3.68	0.66	NS
14-16	53.66	54	60	5.18	-0.57	-0.26		

**Conclusion:** It was found that there is no significant difference in the peace education programmes in the educational institutions on the basis of age. The mean scores indicate that on the basis of age, both the age group are the same. This means that on the basis of age, all the students are receptive to life skills, gender sensitivity and aware of the children/human right education.

**Table 1.2(a) Graphical Representation Of The Differences In The Mean Scores For Peace Education Programmes Organised In Secondary Schools On The Basis Of Age**



**Table 1.4 Analysis Of The Responses To The Statement Of The Rating Scale**

<b>NO.</b>	<b>STATEMENTS</b>	<b>YE S%</b>	<b>NO %</b>
	<b>LIFE SKILLS</b>		
1.	Teaches us about alternative ways of handling conflict.	<b>89</b>	<b>11</b>
2.	Makes us aware of non-violent alternatives in conflict situations.	<b>91</b>	<b>9</b>
3.	Improves our decision-making skills of using non-violence means of resolving conflicts.	<b>86</b>	<b>14</b>
4.	Emphasizes on trying out new behaviour such as negotiating in a cooperative manner in a conflict with a peer.	<b>74</b>	<b>26</b>
5.	Continuously emphasize the use of non-violent methods of handling conflict.	<b>71</b>	<b>29</b>
6	Promotes participation, cooperation, problem-solving and respect for differences in the teaching and learning methods.	<b>93</b>	<b>7</b>
7	Promotes the development of a wide range of skills that help students to cope effectively with the challenges of everyday life.	<b>84</b>	<b>16</b>
8	Enables us to effectively communicate with superiors in the school/colleges.	<b>88</b>	<b>12</b>
9	Encourages us to think critically.	<b>73</b>	<b>27</b>
10.	Enables us to handle peer pressure.	<b>72</b>	<b>28</b>
11.	Prepares students to face challenges for life.	<b>91</b>	<b>9</b>
12.	Focuses on tackling peer pressure in a non-violent manner.	<b>74</b>	<b>26</b>
13	Allow opportunities to put peace-making into practice, both in the educational setting and in the wider community.	<b>84</b>	<b>16</b>
14	Organises camps to bring together young people of different ethnic groups for recreational and community service activities.	<b>84</b>	<b>16</b>
15.	Provides students with the opportunity to engage in constructive, peace-building activities in their school, community and the world at large.	<b>89</b>	<b>11</b>
	<b>CHILDREN'S RIGHTS/HUMAN RIGHTS EDUCATION</b>		
16.	Organizes contests and exhibitions that can build awareness of world peace and conflict issues.	<b>88</b>	<b>12</b>
17.	Demonstrate the principles of equality and non-discrimination in administrative policies and practices.	<b>81</b>	<b>19</b>
18.	Integrate an understanding of peace, human rights, social justice and global issues throughout the curriculum whenever possible.	<b>89</b>	<b>11</b>
19.	Encourages understanding the impact of rights violations, both at home and world.	<b>79</b>	<b>21</b>
20.	Encourages the development of skills that will enable children to act in ways that uphold and promote rights, both their own and others.	<b>81</b>	<b>19</b>
21.	Addresses the responsibilities that come with rights.	<b>88</b>	<b>12</b>
22.	Creates awareness to respect rights and responsibilities of children and parents.	<b>89</b>	<b>11</b>
	<b>GENDER TRAINING</b>		
23.	Encourages developing empathy and solidarity with those whose rights have been denied.	<b>81</b>	<b>19</b>

24.	Promotes attitudes and values that emphasizes the rights of girls and women to safety.	<b>87</b>	<b>13</b>
25.	Ensures gender and cultural sensitivity in programme.	<b>86</b>	<b>14</b>
26.	Promotes empowerment of girls and women.	<b>87</b>	<b>13</b>
27.	Focuses on boys, helping them better understand their relationship to girls through different programmes.	<b>63</b>	<b>37</b>
28.	Lays emphasis on boy's roles and responsibilities in family life.	<b>76</b>	<b>24</b>
29.	Enhance Gender equity.	<b>79</b>	<b>21</b>
30.	Fosters decision making among women.	<b>81</b>	<b>19</b>

**Conclusion of the study:** From the above, 82.4% of students agreed that peace education programmes organised in secondary school cater to life skills. This helps to handle conflict situation through non-violent manner. It also helps them to think critically, prepares them to face the challenges of life. The different methodologies organised in the educational institution promotes participation, co-operation, problem-solving attitude. The community service activities bind them with peers of different ethnic groups and promote peace-building activities. From the programmes organised in secondary schools for fostering life skills helps the students to be prepared for facing the challenges in life.

84.92% agree that educational institutions provide children/human right education. The activities organised creates awareness on peace, conflicts issues, human rights, social justice and global issues. These activities enable them to act in ways that uphold and promote rights both their own and others. 79.72% agree that gender sensitivity programme is being organised in school. This helps them to enhance gender equity, develop empathy and solidarity with those whose rights have been denied, decision making ability and promotes empowerment of girls and women

**Suggestions:** Peace education is a long-term, ongoing and ever-lasting process that can take place in any learning environment. The educational institutions must lay more emphasis on boy's roles and responsibilities in family life. Programmes organised must cater more to women empowerment and involvement of girls and women in the decision making. Human rights education also needs to be catered to more in-depth. Peace education must not be a distinct „subject“ in the curriculum, nor as an initiative separate from basic education, but as process to be mainstreamed into all quality educational experiences. Peace education must address the prevention and resolution of all forms of conflict and violence, whether overt or structural, from the interpersonal level to the societal and global level.

**“Peace is not just the absence of war or violence but also a pathway to expand human potential without harming others both in the immediate community and in the larger ecosystem.” - Mahatma Gandhi**

**Bibliography**

- AVP Education Committee. Alternative to violence project manual [Second Level Course.] 15, Rutherford Place, New York. 1003.*
- Balasooriya, A.S.(1995) Peace education. Learning activities. National Institute of Education, Maharagama Sri Lanka.*
- Balasooriya, A.S.( 1994) Teaching peace to children. National Institute of Education, Maharagama Sri Lanka.*
- Balasooriya, A.S. (1994) Management of conflict in schools. National Institute of Education, Maharagama.*
- Balasooriya, A.S. (1997) Values education. 1674/1C 2nd Lane Malambe Road, Kottawa. Pannipitiya, Sri Lanka.*
- Balasooriya, A.S. (1998) New methods of teaching values. 1674/1C 2nd Lane Malambe Road, Kottawa. Pannipitiya. Sri Lanka.*
- Balasooriya, A.S. (2000) World peace through school.(Script) National Institute of Education, Maharagama.*
- Biggs, D., 1995. In Our Own Backyard: A teaching guide for the rights of the child. Toronto: UNICEF Canada.*
- Cremin, P., 1993. \_Promoting education for peace. ' In Cremin, P., ed., 1993, Education for Peace. Educational Studies Association of Ireland and the Irish Peace Institute.*

**Webliography:**

- en.wikipedia.org/wiki/Peace\_education*
- teacherswithoutborders.org/programs/core.../peace-education*



**STUDENT PERSPECTIVES ON THE CONTRIBUTION OF ICT TO TEACHING  
AND LEARNING IN THE MIDDLE SCHOOL**

**Dr. Hemantkumar Y. Deore**  
**Prof. Prakash Ahire**

***Abstract***

*This study explores student' views of the use of information and communication technology (ICT) within subject teaching and learning. The students of three year namely (std 6, 7 and 8) in three English medium schools took part in focus group interviews during the second half of 2016 and first half of 2017. The views brought about in the course of the interviews are summarized in terms of three themes. Students saw computer-based tools and resources as helping not just to impact tasks and improve presentation, but also to enhance work and test options. They associated the use of such tools and resources with changes in working environment and classroom relations, as well as with raised interest and increased motivation on their part. Finally, while students received opportunities for independent working refereed by ICT in which they could engage more directly with appropriately challenging tasks, they were concerned that this reforming of knowledge might be displacing valued teaching.*

**Keywords:** *ICT ; Computer uses in education; Learner characteristics; Middle education*

**Introduction:** Over the past two decades, Information Technology (IT) has broadened to become Information and Communication Technology (ICT), and has become better established within schools (Abbott, 2001). Many claims have been made about its potential contribution to pupils' learning (Pachler, 1999) and official rhetoric has presented it as set to „transform education" (Blair, 1997). Much current policy and practice reflects a technocratic determinism in which technology is seen unproblematically as providing relatively immediate tools for teachers and students, and its use as calling primarily for development of technical skills. However, others see successful educational applications of the computer as involving a complex interplay of context, people, activities, machines and available software within specific settings (Noss & Pachler, 1999, Leach & Moon, 2000). While quality and level of ICT resource continue to improve in many schools, provision of equipment alone is likely to be of limited value unless more is understood about the interactions and processes engendered by using technology in different settings, and how pedagogical strategies to enhance students' learning might be developed effectively through them. Students constitute a significant group within this social system, and their perspectives play an important part in framing the activity that takes place in school settings. Indeed, it has been argued that young people should be seen as active participants in shaping social and educational processes rather than viewed as passive recipients of them (Pollard & Tann, 1993). Research has demonstrated that, from an early age, young people are capable of insightful and constructive analysis of their experience of learning in school and are able to comment on teaching approaches and contexts that are helpful in their learning (Brown & McIntyre, 1993; Harris et al., 1995; McCallum et al., 2000; Rudduck & Flutter, 2000). A key component in acquiring such understanding may be attention to the „pupil voice" (Keys & Fernandes, 1993; Blatchford, 1996; Rudduck et al., 1996). Rudduck and

Flutter (*op cit*) maintain that „we need to tune in to what pupils can tell us about their experiences and what they think will make a difference to their commitment to learning and, in turn, to their progress” (p. 75). Recent research on pupils’ perspectives in the UK has been linked either to the development of school-based strategies based on consultation with pupils on effective classroom practice, or to aspects of curricular evaluation (see Lord and Harland (2000) for a review) but few studies have focused specifically on secondary pupils’ views on their current classroom use of ICT in teaching and learning. Where students’ perspectives have provided the focus for such inquiry in other educational settings (for example the Canadian technology-enhanced Secondary Science instruction (TESSI) project), pupils’ enhanced participation in learning activities and their development of successful learning strategies were attributed to the combined influences of – and interactions between – the technologies employed and the pedagogical and social milieu of the classroom (Pedretti et al., 1998). The popular image of young people – the „screenagers” referred to by Rushkoff, (1997) – growing up in an increasingly technology-dependent society, connected by sophisticated telecommunication networks in a culture mediated by television and computer, is that of natural computer users from a „digital generation”. Recent studies (Holloway & Valentine, 1999; Becta, 2001; Facer et al., 2001; Wellington, 2001) have begun to examine the nature and extent of young people’s use of ICT outside school and the influence that it may have upon their learning with ICT in school. Whilst results indicate that some children (often those who use computers extensively at home) are capable of integrating their use of ICT in balanced and sophisticated ways (Furlong *et al.*, 2000), the indications are that this further accentuates inequities between such young people and their peers who lack similar access to these technologies. Findings also show that whilst boundaries between home knowledge and school knowledge are being eroded, learners’ experience of ICT takes on a different character depending upon the context of its use. Furlong et al (*op cit*) found that at home, young people tend to control their own time, how they use technology and the content of what they do. In school, however, the locus of control lies elsewhere; emphasis is on learning activities managed by the teacher, metered by timetable constraints, designed to meet curriculum criteria and attainment targets and incorporate the mandatory use of ICTs.

**Context and Design of the Study:** In this study, we examine the perspectives of students in three English secondary schools on the contribution of ICT to teaching and learning. In this particular study, we draw on interviews conducted with students during the first half of 2017, to explore their experience of ICT in teaching and learning.

**Participating schools:** All these maintained middle schools were located within Nashik. Basic information about each School collected . Further relevant data have been extracted from official performance tables (dated 2017) and inspection reports on individual schools (dated between 2016 and 2017) observed. Against national norms, then, the schools in this opportunity sample were relatively socially advantaged and academically successful. There was considerable variation in ICT provision amongst the Francis School and Universal School were the most highly resourced –providing, for example, dedicated departmental ICT rooms for Mathematics and Science. In all of the schools, however, ICT use within most subject teaching and learning was greatly dependent upon opportunistic access to computer rooms that

were already heavily scheduled for specialist ICT courses or vocational options. Consequently, although some planned and effective use of ICT was evident within the teaching and learning of core and foundation subjects, recent inspection reports indicated that such development was uneven within all three schools.

**Investigative strategy:** Group interviews were conducted by researcher. Questions were devised to produce examples of where ICT had helped – or could in future help – to make learning more successful, to draw on experiences of ICT use – both in and out of the classroom – and to explore how learning is – or might be – changed by ICT. The group interviews that took place, one was lost due to unviability of Students. All group interviews were noted on separate sheets.

### **Perceptions of the Contribution of ICT**

The Main Analysis Of The Transcripts Focused On What Students Had To Say About The Contribution – Actual Or Potential – Of Ict To Teaching And Learning.

1. The contribution of ICT use to effecting tasks encountered within academic work. students in all year groups and schools reported how use of ICT tools enabled them to carry out such tasks with ease, quickly and reliably, and to a high standard.
2. At a more sophisticated level, a comment on function graphing in Mathematics indicated how saving time could permit a more expansive and sophisticated approach to tasks:
3. All year groups alluded to the way in which ICT could facilitate quality of written presentation:
4. Pupils in most schools emphasised the practical functionality of templates and wizards:
5. Equally, there were comments on how computer-generated work – however accomplished – lacked the personalised qualities of hand-crafted material:
6. ICT applications remain largely dependent upon keyboard input. Older pupils reported the benefits of having good keyboard skills:
7. However, some younger students felt hampered by lack of such proficiency:
8. Pupils suggested a need for more sustained training in this area. Indeed members of two groups reported that they were so slow they sometimes resorted to parental help:
9. Similarly, pupils felt that additional training would enable them to take better advantage of the technology:
10. The majority of pupils interviewed had computers at home – and used them for game-playing, homework and the Internet (although the latter was often restricted by cost). Some felt that IT skills gained in this context supported their use of technology in school:
11. Searching the Internet was frequently compared with book-based research. Access to information on the Internet was represented by some pupils as more direct

Students valued ICT tools as enabling them to carry out academic tasks easily, rapidly and reliably, yielding results of high quality. Nevertheless, they experienced situations where they

were hampered in exploiting this potential because of lack of proficiency in using the tools. This might be seen as a predictable consequence of their largely occasional and irregular opportunities to make use of ICT in many subject areas. Although students generally welcomed the way in which ICT tools effected tasks, some were concerned to retain control over their work. Equally, although the high quality achievable when using ICT tools was generally appreciated, this also accentuated what some pupils saw as the more personalised character of hand-crafted material.

Students appreciated the way in which working with ICT facilitated various forms of correction and revision, experimentation and exploration, supporting the refinement of artefacts and ideas. Such ideas were prominent in relation to writing with computers, extending beyond the polishing of texts to their reworking. Students perceived lessons where technology was in use as having distinctive features. Where interaction with a computer replaced customary routines – notably involving listening to the teacher and writing by hand – classwork was seen as more exciting and fun. Nevertheless, pupils recognised that as its novelty faded, such computer use might itself come to seem routine. Relations with teachers were seen as more relaxed although this could trigger misconduct. While working in pairs at a computer was common, this was largely a matter of expediency.

**Motivation changed:** In summary, pupils associated ICT use with raised interest and increased motivation on their part. Interactive courseware was popular amongst pupils – particularly games and simulations seen as combining practical challenges with learning opportunities. Some comments suggested that such interest and motivation led not just to harder work on the part of pupils but to a changed quality of engagement. Pupils also saw ICT tools as helping to overcome difficulties they experienced in producing work to a good standard – notably where this involved scribing by hand – so also reducing scope for criticism by teachers. Equally however, without the capacities required, ineffective use of ICT tools could be highly demotivating to pupils. For some pupils, too, use of ICT tools could diminish the sense of capability and accomplishment they gained from carrying out tasks without assistance.

**Discussion:** Looking across the three year groups in the three schools represented in our study, we gained a broad picture of the kinds of contribution that students saw the use of ICT as making to teaching and learning, and also of some of their reservations about such use. The first observation illustrated how pupils viewed ICT tools as enabling them to carry out tasks easily, rapidly and reliably and to present neat and attractive products. The second observation, emphasised the ways in which these tools facilitated the progressive editing and revision of written work and exploratory development of ideas and designs. The third observation, revealed that many students regarded computer use in school as typically distinct from regular classroom activity in terms of novelty, location, layout and interactions between

themselves and their teachers. Elements from these three observations were also closely intertwined with the motivation changed. Whilst students associated using ICT with difference, fun, enjoyment, challenge and the removal of constraints associated with manual tasks, they also pointed to attenuated personal satisfaction when automated processes removed the opportunity for their active involvement with the task in hand. Much of what the students had to say is consistent with findings of other studies undertaken in secondary schools (such as those cited earlier in this paper) – and mirrors views expressed by other groups with a concern for this issue. However, little research has engaged directly with pupils in a way that enables them to express – individually and collectively – their perceptions of the impact of ICT on subject teaching and learning. Focus group interviews allowed us to gather a substantial body of such data. The views emerging within – and across – these groups serve to indicate issues of common agreement and concern; and it is these that we have presented here. What they reveal may offer important insights for the schools themselves, for other schools like them, and inform professional thinking more generally. Students enthusiasm for using ICT at school was tempered by three major considerations: firstly, that wider skills are needed in order to make effective use of the tools available; secondly, that the power of technology must be strategically focussed if it is to enhance subject teaching and learning; and thirdly, that as familiar patterns of classroom interaction are shifted by the introduction of technology, teachers remain central to the provision of structure and support. A great diversity of technical skill levels existed amongst students. Whilst some picked up technical knowledge in an 'ad hoc' fashion by 'tinkering' at home, others lacked such interest or opportunity; but students across all groups felt it was important to extend their current skills – not only to facilitate present computer use but to prepare for future working life. Many wished that regular ICT lessons could be provided – and given equal status with other core subjects such as English and Maths; some recognised the need to acquire wider information-handling skills – especially relating to Internet research; others thought that better working knowledge of software and equipment (eg graphic calculators and spreadsheets) would enable them to apply technology more effectively in their studies. It is the pursuit and achievement of these motivational rewards that can energise pupil development and progress – and it is here, we suggest, that technology may offer the greatest potential to empower advancement. The teachers' role is therefore crucial in carefully devising strategies which harness the properties of technology to match and support learning goals and objectives eg releasing learners from constraints of manual operations – in order to focus on specific aspects of the topic under consideration; enabling development of ideas by trialling and model building; providing vivid, dynamic – and interactive – simulations and illustrations to aid critical analysis and understanding of objects or phenomena; enabling learners to pace and consolidate their learning eg by purposeful use of designated courseware and revision sites; introducing electronic sources of information and helping learners to select and use material appropriately. A recent report by Ofsted (2002) concludes that it is „the effective application of ICT across

subjects that needs to improve most". It also urges schools to „develop a curriculum that builds on pupils' ICT experiences outside school that contribute to their ICT competence". Cooper & McIntyre (1996) observed that learning opportunities are heightened when teaching strategies are transactional – when pupil and teacher concerns and interests are integrated, subject knowledge is integrated with other knowledge and made accessible by a variety of means. Technology has added considerably to possible strategies for learning out of school – and supporting learning in school (OECD, 2001) and pupils' increasing use of home computers for games, research, homework and communication – within friendship circles and beyond – may indeed offer promising avenues for the development of motivating and authentic learning activities. However, students in our study were concerned about the extent to which, in future, teaching might become devolved from classroom settings by the adoption of more remote, digitally-based modes of delivery. They signified how work on technology-based tasks often resulted in reduced interactions with their teachers (eg more individualised patterns of activity) and how 'norms' of classroom society were altered when pupils with good technical skills became expert advisers – to teacher and peers alike. The diversity of technical experience pupils now bring to the classroom poses considerable challenge for teachers in designing and supporting technology-enhanced activities, particularly where teachers themselves lack confidence in using ICT. Enlisting technically-skilled pupils as peer tutors may provide a useful solution. However, pupils in our study clearly valued personal assistance from their teachers when needed – and importantly, felt that teachers should be competent and confident in both technical and subject knowledge if technology was to be used effectively in lessons. Technology has the potential to both enhance and disturb the social interactions upon which the processes of learning primarily depend ; accounts provided by pupils in our study are illustrative of the opportunities and tensions that ICT presents – and further serve to highlight the teacher's essential role in adaptively managing its use. Many of the subject teachers whom we interviewed during the first phase of our study were well-disposed towards using ICT in their teaching – and were exploring, albeit cautiously, ways of utilising various forms of technology within their lessons (Hennessy et al, submitted). Analysis of data from group interviews in Mathematics departments has provided a tentative model of successful use of ICT to support teaching and learning. The process of accommodating ICT into classroom practice may lead teachers towards assuming different – and sometimes unaccustomed – ways of working; interim periods of adjustment may be uncomfortable for teachers and pupils alike. Few teachers would disagree that technology offers a range of powerful tools, which proficient users can employ to achieve an impressive array of outcomes; but attention to the student voice may help us to determine how – and where – judicious pedagogical exploitation of such tools can be most advantageous to the learner.

**References:**

*Bhutak H.R., (2004). —Development and Effectiveness of Multimedia Package for Science Subject of Standard 9\Ph.D., Saurashtra University*

- Khirwadker, A. (1998), —Development of Computer Software for learning chemistry of standard XI Ph.D. (Edu.), M.S. University of Baroda.*
- Mundhe Rajashree (2003) —Developing a Self-Study Package in Computer Education for slow learners, Ph.D. thesis, University of pune.*
- L. H. Karia, (2001). —Effectiveness of Computer-Aided Learning (CAL) Programme as Self-study Technique. Ph.D. (Edu.), Saurashtra University,*
- M.D.Acharya, (2005) —Effectiveness of games, work-card and self-instructional material on English language learning, Ph.D. (Edu.), Saurashtra University.*
- Ahmad, Tufail: The internet economy of India ed. Osama Manjar, Madanmohan Rao and Tufail Ahmad, 10–16, Inomy Media Pvt. Ltd., New Delhi, (2001).*
- T. R. Hirani, (2007). —Development and Try-out of Computer Based Multimedia Package for Instruction in Gujarati Language, Ph.D.(Edu.), Saurashtra University,*
- Prabhakar, S(1995) — Development of Software for Computer Aided Instruction and its Comparison with Traditional Method for Teaching Physics at Plus II level, Ph.D. (Edu.), Devi Ahilya Vishawvidyalaya, 1995.*
- Vij, Sanjana (2003) —A comparative study of the Effectiveness of Computer Assisted Instruction (CAI) and Computer Managed Instruction (CMI) on Pupil's Achievement in Science, their Self - Concept and Study Involvement, Ph.D. Edu. M.S. University,*
- Indani Manisha (2011) —Development of instructional strategies for teaching English Grammar & study their effectiveness in terms of Achievement in English Grammar & reactions towards the instructional Strategies of Class IX students, Ph.D. (Education). North Maharashtra University, Jalgaon.*
- Nalayini, S (1998) —Development and Validation of Computer Assisted Instruction in Physics For High School Students, Ph.D. (Edu.), Bharathia University,*
- Yadav Madhuri Sanjay —Development of Computer –Assisted Instructional Programmes on selected units in Geography for Std. VIII (Ph. D Thesis) S. N. D. T. Women's University, Mumbai.*
- Patel Sunilkumar Chaturbhai (August 2010) —A study of the effect of Computer Assisted Teaching programme on the achievement of the students of standard IX in mathematics, Gujarat University Ahmedabad.*
- B. Devadasa Pai (2007) —To Study the Effectiveness of Instructional Package in Science Teaching Competencies over Teachers' Performance and their Impact over Students' Achievement and Process Skills in Science, Ph.D Thesis, University Of Mysore.*
- Jeyamani P. (1991), —Effectiveness of the simulation model of teaching through Computer Assisted Instruction (CAI), M.Phil degree Avinashilingam Institute of Home Science and Higher Education for Women, Coimbatore*
- D.M.Dadhania (2004) —Development and Effectiveness of Computer Aided Instruction (CAI) Programme for Teaching the Unit 'Pressure' (Gujarati) in Science of Standard VIII, M.Ed., Saurashtra University, 2004.*

**EDUCATION 3.0: A SURVEY OF THE USE OF DIGITAL TECHNOLOGY, SOCIAL NETWORKING SITES AND EDUCATIONAL APPS IN TEACHING-LEARNING PROCESS BY THE SECONDARY SCHOOL TEACHERS IN MUMBAI – INDIA**

**Ms. Ummadisingu Vani Achari**, *Asst. Professor, MES's Pillai College of Education and Research, Chembur Naka, Chembur, Mumbai-400071. vachari3@gmail.com*

***Abstract***

*This paper has made an attempt to survey the use of digital technology, social networking sites and educational apps among the male and female secondary school teachers of Schools in Mumbai. A self-structured questionnaire was distributed among the target population and primary data gathered through questionnaire were analysed and discussed in accordance with the objectives of the study. It was found that majority of the respondents are aware of digital technology and are using digital technology in their daily classroom transactions. It was found that Teachers are making use of Social networking, What Sapp and educational apps in their academic as well as in their daily life for recreation. Majority of teachers are using digital technology, Smart-boards, educational websites, Social networking sites, What Sapp, Educational Apps in their teaching-learning process which is a welcome change to break the traditional conventional method of teaching and learning. Facebook is the most popular Social networking Sites (SNSs) among all the SNSs.*

**Keywords:** *Digital Technology, Social Networking sites, Educational Apps.*

**Introduction:** Education 3.0 adopts latest technological developments and uses it effectively in the classrooms to teaching and learning process for the benefit of students. It has moved from traditional teaching approaches to interactive learning, which is need of the hour. It has successfully customized and personalized learning since the students can learn at their own pace. It has broken the barriers of time, space and encourages for tailor made programmes to suit all types of learning styles and all types of learners. The investigator herself is an assistant professor in College of Education and therefore felt the necessity to find the use of digital technology, smart boards, educational websites, Social networking sites, Educational Apps among the male and female teachers of secondary schools in Mumbai for providing Education to the aspiring Netizens (students) who are going to be our future. The investigator was interested in finding which digital technologies are more in demand, whether today,s teachers are well equipped to take on this Netizen generation. Investigator took up a small survey by administering a self structured questionnaire consisting of questions to the target population and primary data gathered through questionnaire were analysed and discussed in accordance with the objectives of the study. The purpose of the survey was to investigate the use of digital technology at grass root levels in schools how teachers are delivering Education 3.0 in their classrooms. Application of Social networking sites (SNSs), Educational Apps by both male and female teachers in the teaching-learning process.



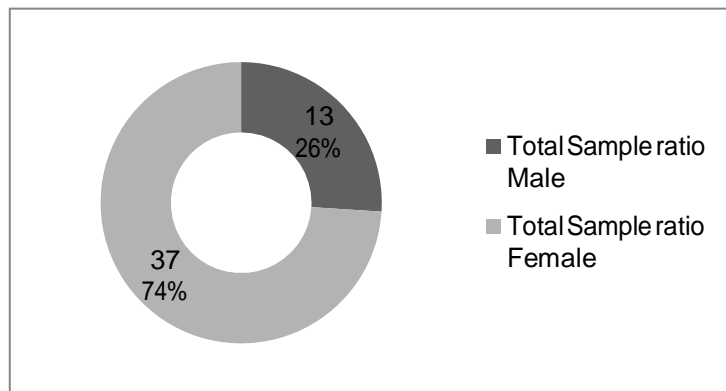
**Objectives:** The specific objectives of the study were

1. To find out the role of Digital technology, Social Networking Sites and Educational Apps in teaching-learning process among the male and female teachers of schools in Mumbai.
2. To find the percentage of teachers using digital technology in teaching-learning process.
3. To find out the most popular SNSs and Educational Apps used by the male and female teachers in Mumbai.
4. To find out the tools used for social networking sites.
5. To find out if the Smart Phone, What Sapp, Social networking sites, etc. are used for educational purposes.
6. To find out if the Social networking sites are used only for recreational purposes.

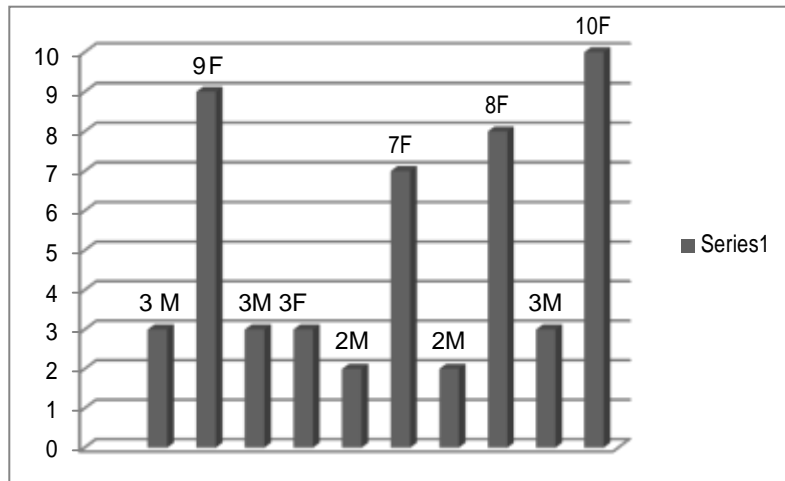
**Scope:** This research is confined to Secondary school teachers of Mumbai.

**Methodology:** For the survey of the primary data, questionnaire method was adopted. For that a questionnaire was prepared on the basis of the objectives of the proposed study and was distributed randomly among the target population under the study.

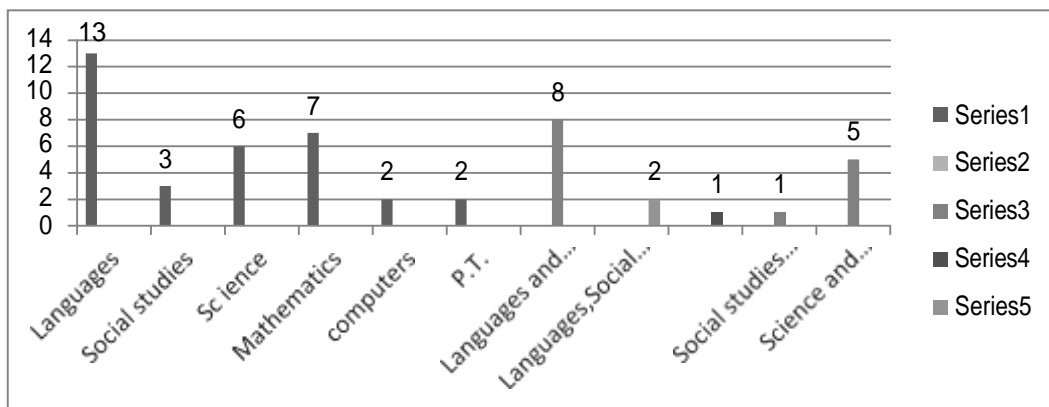
#### **Data Analysis**



**Fig1. Doughnut diagram showing the Male and Female ratio of the total sample for the study.**



**Fig2. Bar diagram showing the Male and Female ratio school- wise of the total sample for the study.**



**Fig3. Bar diagram showing the various subjects taught by the secondary school teachers selected for sample in schools of Mumbai.**

**Major Findings and Discussions:** The sample size of the study data shows that 37 (i.e. 74%) of respondents are Female and 13 (i.e. 26%) of respondents are Male for the survey conducted. The sample size of the study shows that 50 (i.e. 100%) of respondents belong to teaching of different subjects viz. languages, Social studies, Science, Mathematics, computers and Physical Training are using digital technology in their teaching-learning process in one way or other.

1. The sample size of the study shows that 13 male teachers (i.e.26%), 35 female teachers (i.e. 70%) use computers. Whereas 2 female teachers (i.e.4%) do not use computers. This shows that still there is a need to make teachers aware of the use of computer in academics and make them computer savvy.

2. The sample size of the study shows that 13 male teachers (i.e. 26%) and 34 female teachers ( i.e. 68%) agree that their school has computer lab. Whereas 3 female teachers (i.e. 6%) disagree that their school has a computer lab. This shows that still few teachers are not aware that their school having is having a computer lab. This shows they have not used the computer lab for their academic activities.
3. The sample size of the study shows that 11 male teachers (i.e. 22%) and 33 female teachers ( i.e. 66%) agree that they prepare lessons using computers. Whereas 3 male teachers (6%) and 11 female teachers (i.e. 22%) do not use computers to prepare lessons. This shows that teachers need to be motivated to use the computers to prepare lessons.
4. The sample size of the study shows that 10 male teachers (i.e. 20%) and 26 female teachers ( i.e. 52%) agree that they use computer to prepare database of students. Whereas 3 male teachers (6%) and 11 female teachers (i.e. 22%) do not use computers to prepare database of students. This shows that teachers should be encouraged to use the computers in preparing database of students as it would help them in using the data for other academic purposes also.
5. The sample size of the study shows that 7 male teachers (i.e. 14%) and 23 female teachers ( i.e. 46%) agree that they use spread sheet to plot a graph, calculation of marks, report card etc. using computers. Whereas 3 male teachers (6%) and 11 female teachers (i.e. 22%) do not use spread sheet to plot a graph, calculation of marks, report card etc. using computers. This shows that teachers need to be trained to use the computers to plot a graph, calculation of marks, report card etc. which would enable them to use it for action research as well as other academic pursuits.
6. The sample size of the study shows that 0 male teachers (i.e. 0%) and 12 female teachers ( i.e. 24%) post their projects / assignments online. Whereas 13 male teachers (26%) and 25 female teachers (i.e.22%) do not post their projects / assignments online. This shows that teachers need to consider online posting of their projects / assignments online as this would be economical as well accessible anytime, anyplace for assessment.
7. The sample size of the study shows that 3 male teachers (i.e. 6%) and 10 female teachers ( i.e. 20%) assess their projects / assignments online. Whereas 10 male teachers (20%) and 27 female teachers (i.e.54%) do not assess their projects / assignments online. This shows that teachers need to consider online assessment of their projects / assignments online as this would be economical as well accessible anytime, anyplace for assessment.
8. The sample size of the study shows that 10 male teachers (i.e.20%) and 29 female teachers ( i.e. 58%) agreed that they have smart board in their classroom. Whereas 3 male teachers (6%) and 8 female teachers (i.e.16%) disagreed of having smart board in their classroom. This shows that some schools are not equipped with smart boards for teaching-learning process which is the need of the hour.
9. The sample size of the study shows that 11 male teachers (i.e.22%) and 26 female teachers ( i.e. 52%) agreed that they use PPT in their classroom. Whereas 2 male teachers (4%) and

- 11 female teachers (i.e.22%) disagreed of using PPT in their classroom. This shows that some teachers still are not computer savvy and don't use computers in their teaching-learning process which need to be addressed.
10. The sample size of the study shows that 10 male teachers (i.e.20%) and 21 female teachers ( i.e. 42%) agreed that they use simple animation in PPT preparation. Whereas 3 male teachers (6%) and 16 female teachers (i.e.32%) disagreed of using simple animation in PPT preparation. This shows that some teachers still are not computer savvy and don't use computers in their teaching-learning process which need to be addressed.
11. The sample size of the study shows that 12 male teachers (i.e.24%) and 35 female teachers ( i.e. 70%) agreed that they show educational films and videos to students. Whereas 1 male teachers (2%) and 2 female teachers (i.e.4%) disagreed of showing educational films and videos to students. This shows that some teachers still have not adopted digital technology in their teaching-learning process which need to be addressed.
12. The sample size of the study shows that 7 male teachers (i.e.14%) and 18 female teachers ( i.e. 36%) agreed that they have free access to internet/Wi-Fi . Whereas 6 male teachers (12%) and 19 female teachers (i.e.38%) disagreed of having free access to internet/Wi-Fi. This shows that schools need to provide free access to internet/Wi-Fi for academic purposes.
13. The sample size of the study shows that 9 male teachers (i.e.18%) and 36 female teachers ( i.e. 72%) agreed that they visit educational websites. Whereas 4 male teachers (8%) and 1 female teachers (i.e.2%) disagreed of visiting educational websites. This shows that few teachers still need to break the traditional mind set to embrace digital technology.
14. The sample size of the study shows that majority of the male and female teachers do visit National Geographic Kids, Kids Know It, Funbrain etc. Some teachers visited Desmos.com, STEM, www.wikipedia, www.myenglishteacher.edu www.quora .com, www.englishgrammar.org, www.ABCmouse.com, www.TeacherTube.com, www.MathTV.com etc. Those teachers who do not visit these educational websites need to be made aware and motivated and encouraged to do so for the benefit of students.
15. The sample size of the study shows that 8 male teachers (i.e.16%) and 22 female teachers ( i.e. 44%) agreed that student do visit these educational websites. Whereas 5 male teachers (10%) and 15 female teachers (i.e.30%) disagreed of students visiting these educational websites. This shows that teachers need to encourage and motivate students to visit these websites.
16. The sample size of the study shows that 11 male teachers (i.e.22%) and 32 female teachers ( i.e. 64%) agreed that they use smart phone. Whereas 2 male teachers (4%) and 5 female teachers (i.e.10%) disagreed that they use smartphone. This shows that teachers are techno savvy and those who do not use are not so techno savvy about the latest developments in mobile technology.

17. The sample size of the study shows that 6 male teachers (i.e.12%) and 22 female teachers ( i.e. 44%) agreed that they use smart phone in teaching-learning process. Whereas 7 male teachers (14%) and 15 female teachers (i.e.30%) disagreed that they use smartphone in teaching-learning process. This shows that teachers are techno savvy and those who do not use are not so techno savvy about the latest developments in mobile technology to use it in the teaching-learning process.
18. The sample size of the study shows that 8 male teachers (i.e.16%) and 28 female teachers ( i.e. 56%) agreed that they use What Sapp. Whereas 3 male teachers (6%) and 11 female teachers (i.e.22%) disagreed that they use What Sapp. This shows that teachers are updated and use What Sapp, those who do not use are not so techno savvy about the latest developments in mobile technology.
19. The sample size of the study shows that 2 male teachers (i.e.4%) and 12 female teachers ( i.e. 24%) agreed that they use What Sapp in teaching-learning process. Whereas 11 male teachers (22%) and 25 female teachers (i.e.50%) disagreed that they use What Sapp in teaching-learning process. This shows that teachers are techno savvy and those who do not use are not so techno savvy and need to explore various ways of using What Sapp in teaching-learning process.
20. The sample size of the study shows that 10 male teachers (i.e.20%) and 30 female teachers ( i.e. 60%) agreed that they use Social Networking sites. Whereas 3 male teachers (6%) and 7 female teachers (i.e.14%) disagreed that they use Social Networking sites. This shows that some teachers are comfortable using social networking sites and those who do not use have conventional mind-set and are not ready for change which need to be addressed to keep pace with the technological era.
21. The sample size of the study shows that majority of the male and female teachers do visit Social Networking Sites such as Facebook, You Tube, Google+, Snapchat, Twitter, Reddit, Pinterest and Instagram etc. Those teachers who do not visit these Social Networking sites need to cmove out of their comfort zones to explore ways to use these sites for teaching-learning process for the benefit of students.
22. The sample size of the study shows that 2 male teachers (i.e.4%) and 14 female teachers ( i.e. 28%) agreed that they use Social Networking sites in teaching-learning process. Whereas 11 male teachers (22%) and 23 female teachers (i.e.46%) disagreed that they use Social Networking sites in teaching-learning process. This shows that teachers need to come out of their comfort zones and need to explore various ways of using Social Networking sites in teaching-learning process.
23. The sample size of the study shows that 6 male teachers (i.e.12%) and 20 female teachers ( i.e. 40%) agreed that they use Educational Apps in classroom. Whereas 7 male teachers (14%) and 17 female teachers (i.e.34%) disagreed that they use Educational Apps in classroom. This shows that teachers are exploiting technology to use it in classrooms,

those who do not use are not so techno savvy about the latest developments in mobile technology, they need to be motivated to do so.

24. The sample size of the study shows that majority of the male and female teachers do use Evernote, Google drive, Star Chart, Google Earth, Khan Academy, Edublogs, Photomath, Geogebra, Desmos etc. Those teachers who do use these Apps move out of their comfort zones to explore ways to use these Apps in teaching-learning process for the benefit of students.
25. The sample size of the study shows that 9 male teachers (i.e.18%) and 25 female teachers ( i.e. 50%) agreed that the students use Educational Apps. Whereas 4 male teachers (8%) and 12 female teachers (i.e.24%) disagreed that students use Educational Apps. This shows that students are exploiting technology to their benefit, those who do not use are not so techno savvy about the latest developments in mobile technology, they need to be motivated to do so.
26. The sample size of the study shows that 12 male teachers (i.e.24%) and 3 female teachers ( i.e. 6%) agreed that they are satisfied of integrating technology into teaching-learning process. Whereas 1 male teacher (2%) and 6 female teachers (i.e.12%) were not satisfied of the level of integration of technology into their teaching-learning process. This shows that teachers need to come out of their comfort zones and need to explore various ways of using technology in the teaching-learning process.

#### **Educational Implications**

- Teachers of 21<sup>st</sup> century need to venture out of traditional conventional classrooms teaching to create Education 3.0 techno driven classrooms e.g. Educational Apps classrooms in real time.
- SNSs can be used as a learning platform in teaching-learning process.
- Use Synchronous and Asynchronous mode in teaching-learning process by giving online projects, assignments, online evaluation etc. in education.
- Smart Phones, What Sapp, Educational Apps can be effectively used in all spheres of learning.
- SNSs can be used to depict sensitive social issues to sensitize the students and bring about positive outlook towards life and encourage a positive change.
- Internet / Wi-Fi should be provided to teachers and students to access educational websites in the classroom.
- SNSs, Educational Apps can be used for academic purposes such as peer-to-peer knowledge sharing, collaboration, and evaluation.
- Teachers should be encouraged to use Smart Phones, What Sapp, Educational Apps, SNSs in students" academic learning. Teachers can make research efforts to investigate the use of Smart Phones, What Sapp, Educational Apps, SNSs that can inspire students"

efforts in academic learning, design courses that engage students in using existing online resources and networks to promote academic achievement and motivation.

**Websites:**

*[https://en.wikipedia.org/wiki/Education\\_3.0](https://en.wikipedia.org/wiki/Education_3.0)*

*<https://www.education.com>*

*<http://www.tandfonline.com/toc/rett20/current>*

**TO STUDY THE EFFECTIVENESS OF THE INSTRUCTIONAL MODULE BASED ON  
CONSTRUCTIVIST APPROACH IN CLASSROOM TEACHING FOR THE SCHOOL  
TEACHERS IN SEMI-RURAL AREAS OF PUNE CITY**

*Dr Asawari Bhave- Gudipudi, Principal*

*Virendra Bawaskar, Assistant Professor*

*MAEER's MIT Vishwashanti Gurukul Teachers Training Academy B. Ed College Loni-  
Kalbhor*

**Abstract**

***“Do not train children to learn by force or harshness; but direct them to it by what amuses  
their mind, so that you may be better able to discover with accuracy the peculiar bent of the  
genius in each.” – Plato***

Learning is not passive absorption of knowledge but an active process. It is the outcome of interaction between the learner and the environment where he is learning. This „interaction effect” may bring in qualitative and quantitative changes and development in the learner. Learning occurs best when students are actively engaged in the learning process and work in collaboration with other students to accomplish a shared goal.

Knowledge is not attained but constructed (von Glasersfeld, 1989). This statement came from a new challenge to the concept of traditional knowledge. Today, we are facing the challenge from an educational paradigm shift in education. Parents and the general public have criticized the schools and classroom environments, arguing that they are not ready to meet learner's needs and the demands of the industrial society in this 21st century information society. Some complain about current educational practices, raising questions about the inability of the students to perform creative thinking as well as problem solving tasks when compared to other advanced countries

The researchers designed the study to validate constructivist value in relation to student academic achievements. The researchers were plagued by few research questions: Firstly, are there any differences in academic achievement between a teacher - oriented classroom and constructivist classroom? Secondly, are there any differences in instructional strategies between the two classrooms? Thirdly, what is the focus of student feedback in relation to constructivist teaching?.So through research the researchers convey the message that practically the constructivist teaching and learning play very key role in today's educational system.

**Introduction:**

Constructivism has roots in philosophy, psychology, sociology, and education. But while it is important for educators to understand constructivism, it is equally important to understand the implications this view of learning has for teaching and teacher professional development. Constructivism's central idea is that human learning is *constructed*, that learners build new



knowledge upon the foundation of previous learning. This view of learning sharply contrasts with one in which learning is the passive transmission of information from one individual to another, a view in which reception, not construction, is key.

Two important notions orbit around the simple idea of constructed knowledge. The first is that learners construct new understandings using what they already know. There is no *tabula rasa* on which new knowledge is etched. The second notion is that learning is active rather than passive. Learners confront their understanding in light of what they encounter in the new learning situation. If learning is a constructive process, and instruction must be designed to provide opportunities for such construction, then what professional development practices can bring teachers to teach in student-centered ways?

### **Rationale of the study**

In a constructivist setup, the **traditional assessment system will defeat the very purpose of teaching**. Learning means “understanding” and this implies that one is able to explain what one knows. In a constructivist approach, assessment is interwoven with teaching. Students’ activities, their work and portfolios, are all taken into account. It is their understanding and “Knowledge” that is assessed. This research aims to equip teachers especially from semi urban and rural parts of Pune city, Maharashtra with skills needed to use constructivist teaching and assessment methods in their classroom so as to help students learn the concept at their pace.

### **Statement of the problem**

**“To study the effectiveness of the instructional module based on constructivist approach in classroom teaching for the school teachers in semi rural areas of Pune city”.**

#### **Aims of the study**

After identifying and defining the problem, the researcher must arrange his ideas or plan of action in a systematic manner, so as to reorganize the path in which the study is directed. For this the researcher needs to pen down the aims of study undertaken.

#### **The study will be conducted keeping the following broad aims in mind:**

1. To facilitate the school teachers with the knowledge of constructivist approach in classroom teaching – learning process.
2. To develop instructional module based on constructivist approach in teaching – learning process.
3. To train the teachers of the different schools to use constructivist instructional module.
4. To compare the effectiveness of constructivist approach and traditional approach in classroom teaching – learning process.

5. To determine the effectiveness of module based on constructivist approach on the performance of students

### **Objectives of the study**

The aims of the study denote the general direction in which the study is expected to progress. The researcher therefore needs to clearly state the objectives, which tell exactly what is it that the researcher expects to do. With the view to achieving the stated aims of the study, the following objectives have been formulated.

1. To assess the awareness of the constructivist approach in classroom teaching among the school teachers of semi rural areas of Pune city.
2. To develop an instructional module based on constructivist approach
3. To determine the effectiveness of instructional module based on constructivist approach for the school teachers.
4. To compare the school students' achievement by teaching them through constructivist and traditional approaches for teaching at the school level.
5. To find the attitude of the school teachers towards constructivist approach.
6. To find the attitude of the school students towards constructivist approach.

### **Hypotheses of the study:-**

Based on the aims and objectives of the study, the researcher has formulated null hypotheses. The researcher will test these hypotheses using statistics and either accept or reject the hypotheses to obtain findings for the research study.

### ***The following are the null hypotheses of the study:***

1. There is no significant effect of constructivist approach in the achievement level of the school students".
2. There is no significant difference between the mean scores of the pre - test and post - test on implementation of instructional module on constructivist approach.
3. There is no significant difference between the achievement scores of the students" exposed to constructivist approach and those who were taught by traditional method in various subjects.
4. There is no significant difference in achievement scores between female - students" exposed to constructivist approach and those who were taught by traditional teaching.
5. There is no significant difference in achievement scores between male - students" exposed to constructivist approach and those who were taught by traditional teaching.
6. There is no significant difference between achievement scores of students exposed to constructivist approach of teaching studying in semi urban and rural areas of Pune city.
7. There is no significant gender difference in the school teachers" attitude towards constructivist approach.
8. There is no significant gender difference in the school students" attitude towards constructivist approach.

### **Research Methodology**

- Experimental method (Pre test – Post test design) will be used for determining the effectiveness of instructional module based on constructivist approach for school teachers.
- Experimental method (Control group design) will be used for comparing constructivist classroom with traditional classroom
- Survey method will be used for finding the attitude of school teachers towards teaching through constructivist approach.
- Survey method will be used for finding the attitude of school students towards teaching – learning through constructivist approach.

### **Sample:**

- ✓ School teachers working in Schools located in Uruli Kanchan, Loni Kalbhor and Their areas of Pune City will be taken as sample for the implementation of the instructional module on constructivist approach.
- ✓ Students of 6th to 8th STD studying in YCM Education Society, Uruli Kanchan and St. Theresa School, Loni Kalbhor will be considered as sample for the experimental and control group to study the effectiveness of constructivist classroom compared to traditional classroom.
- ✓ All the teachers teaching in schools located in Loni Kalbhor, Uruli Kanchan and Their will be considered as sample for finding out attitude of school teachers towards constructivist approach.

### **Tools for Data Collection**

- Teacher made Pre test and post test based on constructivist approach will be used for determining the effectiveness of instructional module based on constructivist approach.
- Teacher made achievement test based on school subjects will be used for determining the effectiveness constructivist classroom compared to traditional classroom.
- Questionnaire filled by school teachers will be used to get feedback regarding the instructional module based on constructivist approach.
- Feedback sheets filled by school students will be used to find out effectiveness of the constructivist classroom.

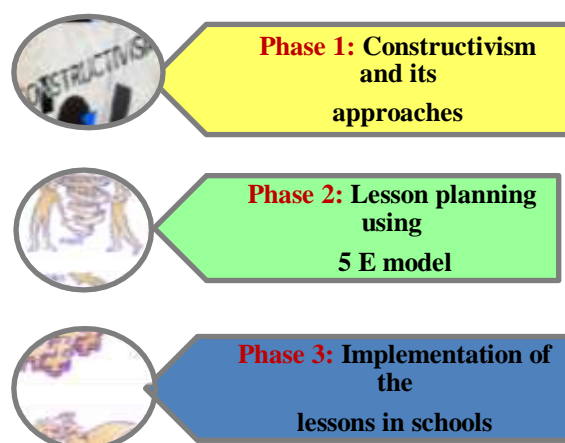
### **Tools for Data Analysis**

- „t“ test will be used to find out difference between the mean scores of pre test and post test for school teachers based on constructivist approach.
- P value (probability value) calculated using excel 2008 will be used to find out difference between the mean scores of experimental and control group of school students.
- Percentage will be used to find out the attitude of school teachers and students towards constructivist approach.

### Module on Constructivism

Details of the module are given as follows

**Fig: 3.2: Phases of Constructivist Module**



### Major Findings of the Study

The null hypotheses have been tested using appropriate non-parametric and parametric statistical techniques. The major findings of the study are as follows:

1. The first null hypothesis was tested using t test. It was observed that the calculated value of t test was 18.31 which is greater than  $t_{tab} = 2$  & 2.66 at 5% & 1% level of significance. Thus, the null hypothesis was rejected.
2. The second and third hypothesis was tested for standards 6<sup>th</sup> to 8<sup>th</sup> of St. Theresa School, Loni Kalbhor and YCM School, Theur. The hypothesis were tested using probability value (p – value) which was calculated with the help of excel 2008 the p value at 1% level of significance was compared with 0.01 if it is less than 0.01 then null hypothesis is rejected.
3. The fourth hypothesis was tested using p value. For which female and male students of experimental group and controlled group studying in St. Theresa School, Loni Kalbhor and YCM School, Theur were compared. The hypothesis were tested using probability value (p – value) which was calculated with the help of excel 2008 the p value at 1% level of significance was compared with 0.01 if it is less than 0.01 then null hypothesis is rejected.
4. The fifth hypothesis was tested using p value for which the scores of students taught through constructivist approach (experimental group) from St. Theresa School, Loni Kalbhor were compared with scores of experimental group from YCM School, Theur. The hypothesis were tested using probability value (p – value) which was calculated with the help of excel 2008 the p value at 1% level of significance was compared with 0.01 if it is

less than 0.01 than null hypothesis is rejected. Following table gives details related to above objective:

5. The sixth hypothesis was tested for teachers of both the schools teaching different subjects across all levels. The hypothesis was tested using probability value (p – value) which was calculated with the help of excel 2008 the p value at 1% level of significance was compared with 0.01 if it is less than 0.01 than null hypothesis is rejected. Calculated p value is 1.806E-09 which is less than 0.01, hence null hypothesis is rejected.
6. The seventh hypothesis was tested for teachers of both the schools teaching different subjects across all levels. The hypothesis was tested using probability value (p – value) which was calculated with the help of excel 2008 the p value at 1% level of significance was compared with 0.01 if it is less than 0.01 than null hypothesis is rejected. Calculated p value is 0.04 which is more than 0.01, hence null hypothesis is accepted
7. The seventh hypothesis was tested for teachers of both the schools teaching different subjects across all levels. The hypothesis was tested using probability value (p – value) which was calculated with the help of excel 2008 the p value at 1% level of significance was compared with 0.01 if it is less than 0.01 than null hypothesis is rejected. Calculated p value is 0.06 which is more than 0.01, hence null hypothesis is accepted.

### **Conclusions of the study**

1. The instructional module on constructivist approach is effective in equipping teachers with knowledge and skills related to constructivist teaching.
2. There is significant association between teaching through constructivist approach and achievement level of the school students compared to teaching using traditional method.
3. There is significant association between achievement scores of female – students after teaching through constructivist approach and those taught by traditional teaching.
4. There is significant association between achievement scores of male – students after teaching through constructivist approach and those taught by traditional teaching.
5. There is no association between the achievement of students studying in semi urban and rural areas of Pune city exposed to constructivist approach.
6. There is significant difference between the attitude of female and male school teachers towards constructivist approach.
7. There is no association between the attitude of female and male school students towards constructivist approach as all students like to learn by constructing their own knowledge.
8. There is no association between the attitude of school students from semi urban and rural areas of Pune city towards constructivist approach.

**References**

- Abbott, Martin L., Jefferey T. and Baker B. Duane. (2003) “Constructivist Teaching and Student Achievement: The Results of a School-Level Classroom Observation Study in Washington. Technical Report”, ERIC Document. ED 481694.
- Bullough, R. V. (1994). Digging at the roots: Discipline, management, and metaphor. *Action in Teacher Education*, 16(1), 1-10.
- Prawat, R.S. (2000). The two faces of Deweyan Pragmatism: Inductionism versus social constructivism. *Teachers College Record*, 102(4), 804-839.
- Qin, Z., Johnson, D. W., & Johnson, & R. T. (1995). Cooperative versus competitive efforts and problem solving. *Review of Educational Research*, 65(2), 129- 143.
- Randolph, C. H., & Evertson, C. M. (1994) Images of management for learner- centered classrooms. *Action in Teacher Education*, 16(1), 55-63.
- Teague, Ryan. “Social Constructivism & Social Studies”, (2000), URL: , Retrieved on: 18.04.2004. TED. (1987) *Social Sciences Instruction and Problems in Secondary Education Institutes*. Turkish Education Association Publications.
- Vygotsky, L. (1994a). The socialist alteration of man. In R. van der Veer & J. Valsiner (Eds.), *The Vygotsky reader* (pp.175-184). Oxford: Blackwell.

**EFFECT ON GROWTH OF PLANTS UNDER “PHYTORID TECHNOLOGY BASED”  
TREATED WATER AT EDUCATION INSTITUTE: R.D. NATIONAL COLLEGE.**

**Dr. Mona Kejariwal**, Assistant professor, department of botany, R.D. & S.H. National College, Bandra (W), Mumbai, [monabansal@gmail.com](mailto:monabansal@gmail.com)

**Abhishek Tiwari**, Department of Biotechnology & Botany, R.D. National College, [abhishekhtiwari21@gmail.com](mailto:abhishekhtiwari21@gmail.com)

**Sunil Sahani**, Department of Biotechnology & Botany, R.D. National College, [sunilsahani110@gmail.com](mailto:sunilsahani110@gmail.com)

**Abrar Momaya**, Department of Biotechnology, R.D. National College, [832momaya@gmail.com](mailto:832momaya@gmail.com)

**Kushbu Chouhan**, Department of Biotechnology, R.D. National College [chouhankushbu@gmail.com](mailto:chouhankushbu@gmail.com)

**Hetavi Modha**, Department of Biotechnology, R.D. National College, [hetavim2007@gmail.com](mailto:hetavim2007@gmail.com)

**Abstract**

India has a large population without access to basic amenities like safe water, basic health and hygiene and minimum electricity. This is high time to work on solution to provide such facilities to masses. NEERI (National Environmental Engineering Research Institute) has developed Phytorid technology to treat waste water. It is very effective and useful for secondary and tertiary treatment of Municipal Water, Management of sludge, Treatment of industrial effluents and also for the treatment of landfill leachates. The present studies aims to understanding the effect on growth of plants of the treated water (TW), untreated water (UTW) from Phytorid plant which is installed in our institution and Municipal water (MW). The studies were carried out in two phases. The first phase involved the use of physical, chemical and biological parameters of safe water (according to the IS: 10500 standards) to check the efficacy of phytorid plant to provide safe water. The second phase involves the use of different growth parameters like Chlorophyll Stability Index, Relative growth rate, pigment content under stress, germination rates etc. to check the growth on plants under three different water conditions. The treated water showed satisfactory germination rate, RGR and pigment content while all these parameter showed remarkable decline under untreated water condition. The ISO parameter to check safe water from phytorid plant showed satisfactory results. The plant is maintained by the institution and water quality parameters are checked time to time by in-house facilities.

**Keywords:** RGR, Germination rate, CSI, Phytorid technology.

**Introduction:**

Wastage of water has been an area of major concern in the world today. As there is tremendous and quick expansion of cities as well as domestic water supply, the quantity of wastewater is increasing day by day with exactly same proportion. The growing industries and populations have constantly increased the proportions of waste water. Hence, it is necessary to decrease the consumption of fresh water or recycle the waste water for other uses for a good effect on environmental stability. Thus, there is an essential need for waste water treatments

projects. Waste water treatment refers to the conversion of contaminated water into a less contaminated or uncontaminated water which can be discharged safely or reused. The wastewater is full of contaminants like bacteria, chemicals, heavy metals as well as various toxins. Waste water treatment reduces the contaminants to that extent where it can be discharged safely into the environment. Though the Earth is called the blue planet, freshwater is a scarce resource. Only 2.5% of all water resources are freshwater out of this nearly 70% is not accessible, because it is bound in snow and ice. Thus only 0.5% of water on earth is accessible for freshwater uses<sup>[13]</sup>. Researches on sewage treatment suggests that the technology used was not much effective which promoted the construction of Phytorid Technology. Phytorid technology is a constructed wetland ecosystem for treatment of wastewater naturally without the addition of chemicals. It is a patented technology by Rakesh Kumar et al., 2004. It accomplishes the use of aquatic and semiaquatic plants with their associated biota. The filterable wetland will be sown with aquatic or semi-aquatic plants where wastewater will flow in through vertical and horizontal specially designed units for better hydraulics and adequate retention period. These units will be designed and evaluated for its efficiencies with regard to removal of BOD/COD, suspended solids, phosphorous, nitrogen and fecal coliforms. It includes various processes like sedimentation, bacterial action, filtration, adsorption, precipitation, decomposition and nutrient uptake<sup>[12]</sup>. The general concept design for the „Phytorid Technology“ is „Advanced Filter Cell (AFC), that supports a permutation of different sizes of stones and gravel wherein anaerobic digestion occurs and Phytorid Treatment Cell (PTC) made up of different layers of life supporting media (Gravel) as in AFC, planted with wetland plants and Final Collection Cell (FCC). The plant was successfully installed in R.D. & S.H. National College and S.W.A. Science College as a waste water treatment plant for biology and biotechnology labs. It is working successfully in the college and treated water is used in watering of garden plants. The treated water is absolutely safe to use on garden plants. In the present study, the effect on growth of plants of the treated water (TW), untreated water (UTW) from Phytorid plant which is installed in our institution and Municipal water (MW) was studied. The studies was carried out in two phases. Both the phases run simultaneously. The first phase involved the use of physical, chemical and biological parameters of safe water (according to the IS: 10500 standards) to check the efficacy of phytorid plant to provide safe water. The second phase involves the use of different growth parameters like Chlorophyll Stability Index, Relative growth rate, pigment content under stress, germination rates etc. to check the growth on plants under three different water conditions.

**Materials and Methods:** The studies were carried out in two phases. Both the phases run simultaneously. The first Phase involved to determined Physical, Chemical and Microbiological parameter of safe water (according to the IS: 10500 standards) to check the efficacy of Phytorid plant to provide safe water<sup>[7]</sup>.

**Sample:** Untreated water samples and Treated water samples was taken from Inlet and Outlet of phytorid plant respectively. Municipal water was taken as a control.



1. **Physical Parameter:** Physical parameters like turbidity, pH, temperature, Odour, color were determined by following methods<sup>[7]</sup>.

**1.1 Turbidity:** It was determined using calorimeter. BaSO<sub>4</sub> dilution was prepared ranging from 1mg to 10 mg of BaSO<sub>4</sub>. Optical density (O.D) of Treated water (TW), untreated water (UTW) and Municipal water was taken along with the standard water sample. Graph of O.D. v/s Concentration was plotted using standard graph.

**pH:** pH meter was used for determining pH of the water samples. Solution of different pH gradient was used as standard.

**Temperature:** Thermometer was used for measuring the temperature of the water sample.

**Color:** Color of the water samples were determined by simple observation.

2. **Chemical Parameter:** Chemical parameter like chloride, alkalinity, fluoride, sulfite, nitrate, calcium, residual chlorine, Total Dissolved Solid and Chemical Oxygen Demands (COD) was determined by following method.

**Chloride:** This test was performed by taking 20mL of each water samples in a conical flask and 2 drops of potassium dichromate indicator were added to each sample. The contents were titrated against silver nitrate solution till color changes to brick red and the burette reading was noted. The chloride concentration was calculated using the following formula:

$$\text{Chloride (mg/L)} = \frac{(V_s - V_b) \times \text{Normality} \times 35.45 \times 1000}{\text{Volume of sample taken}}$$

**Alkalinity:** In this test, 100ml of water sample was added in a conical flask and 2 drops of phenolphthalein indicator was added to each sample. The contents were titrated against sulfuric acid till color changes from purple to colorless then 2 drops of mixed indicator was added and titrated till color changes to red. Alkalinity of the water sample was calculated by the given formula:

$$\text{Alkalinity} = \frac{\text{volume of H}_2\text{SO}_4 (V_1) \times \text{Normality} \times 50 \times 100}{\text{Volume of sample taken}}$$

**Nitrate:** The test was performed by preparing Standard nitrate solution and the blank was set by using distilled water. Absorbance of nitrate solution was obtained by using wavelength of 220nm. The Nitrate concentration was calculated by taking slope of graph between concentration and absorbance.

**Calcium Hardness:** The test was carried out by taking 20mL of each water sample in conical flask followed by addition of 2mL of sodium hydroxide and a pinch of ammonium purpurate. The contents were titrated against EDTA till color changes to purple. Calcium hardness was calculated with the help of the following formula:

$$\text{Total Hardness} = \frac{\text{Volume of EDTA} \times N \times 50 \times 100}{\text{Volume of sample taken}}$$

**Residual Chlorine:** The test was carried out by taking 200mL of each water sample in conical flask followed by addition of 5mL of acetic acid and 1g of potassium iodide in each flask. The solution was mixed thoroughly. The contents were titrated quickly against sodium thiosulfate till color turned straw yellow. Then, 2mL of starch was added to the contents and titrated until the sample turns blue. Residual chlorine was calculated by given formula:

$$\text{Residual Chloride} = \frac{\text{Volume of sodium thiosulphate} \times N \times 35.45 \times 1000}{\text{Volume of sample taken}}$$

**Total Dissolved Solids:** It was performed by taking the initial dry weight of the crucible. 20mL of water sample was added in crucible and placed inside the oven at 103°C. After it dried, it was cooled at room temperature in desiccator. Final dry weight of the crucible was noted. The concentration of Total Dissolved Solids was determined by the calculation of initial and final weight of the crucible.

**COD (Chemical Oxygen Demand):** 10ml of 0.25N  $K_2Cr_2O_7$  solution was taken in a clean round bottom flask. 20ml of diluted water sample was added to the flask. In another round bottom flask, 20ml of municipal water was taken as blank. Now 0.5g of mercuric sulphate powder was added with 5ml of acid reagent. 25ml of acid reagent was added with glass beads to the solution. The contents were heated on hot plate and were refluxed for 2 hours. The flask was cooled and 80ml of cold municipal water was added. 4 drops of phenanthroline indicator was added and it was titrated against 0.1N ferrous ammonium sulphate. COD was calculated by using the following formula:

$$\text{C.O.D. mg/L} = \frac{(B-S) \times N \times 8000 \times \text{dilution factor}}{\text{ml of sample}}$$

Where, B - Reading of blank

S - Reading of the sample.

**Fluoride:** 0, 1, 2, 3, 4, 5 and 6 drops of standard fluoride solution was dispensed in well A1 to A6 and B6 by using a calibrated pipette. The calibrated pipette was washed and dried. 20 drops of distilled water was added in A1 followed by 19 drops of distilled water in A2, 18 drops in A3, 17 drops in A4, 16 drops in A5, 15 drops in A6 and 14 drops in well B6. 20 drops of water sample was added into well D1 using same calibrated Pasteur pipette. 1 drop of sodium arsenite solution was added in all the wells. A drop of Acid-zirconium alizarin reagent was added in all the wells. The solutions were mixed thoroughly. The color developed by water sample in D1 was compared with that in other well which is standard solutions and amount of fluoride was calculated by following formula:

$$\text{Amount of Fluoride (mg.L}^{-1}\text{)} = \frac{\text{(No. of drops of NaF solution)} \times 1}{\text{Total no. of drops of NaF solution} + \text{no. of drops of water}}$$

**BOD (Biological Oxygen Demand):** 800ml of 1:100 diluted water sample was taken in one liter flask. The water samples were aerated by passing the air bubble for 2 hours. The

two BOD bottles were filled completely with aerated sample. Out of two bottles, one bottle was

immediately used for determination of dissolved oxygen, while the other BOD bottle was kept for 5 days. At the end of fifth days of incubation the dissolved oxygen was determined. Dissolved Oxygen (D.O) was determined by adding 2ml of MnSO<sub>4</sub> and alkaline iodide azide solution to the BOD bottle and was mixed thoroughly by inversion. Precipitate was allowed to settle down till two thirds of the solution was clear. 2ml of conc. H<sub>2</sub>SO<sub>4</sub> was added to dissolve the precipitate. Then, content was titrated liberated iodine against N/80 Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> using starch as indicator. Dissolved oxygen and BOD was determined by following formula:

$$\text{D.O (in mg/L)} = \frac{8 \times 1000 \times N \times v}{V}$$

$$\text{B.O.D (mg/L)} = D_1 - D_2 / P$$

Where, D<sub>1</sub> → initial D.O

D<sub>2</sub> → final D.O

P → sample used.

**Sulphate:** A series of standards like 10, 20, 30, 40, 50 a blank and known volume of the sample were added in different flasks. In each flasks, 5ml of conditioning reagent was added. The volume was made to 100ml of all the flasks using distilled water and a pinch of barium chloride was added in each flasks. Turbidity of each standards, blank and sample were tested using UV-Visible spectrometer. The values were obtained and using this values a standard graph was obtained and concentration of sulphate was determined by following formula:

$$\text{Concentration of Sulphate} = X \times 100 / \text{ml of sample taken}$$

Most Probable Number (MPN) = This test is carried out in three stages- for presumptive test, water samples of volume 10 ml, 1 ml, 0.1ml were taken and inoculated in test tubes containing Luyrl tryptose broth of single strength and double strength media tubes were incubated at 37<sup>0</sup> C for 24 hours. After 24 hours, if the test tubes show production of gas then the test is positive, MPN index is calculated and a confirmatory test is performed.

For confirmatory test, a loopful of culture is taken from the test tubes of presumptive test showing positive result and is streaked on Eosin Methylene Blue Agar plate. Plates are incubated at 37<sup>0</sup> C for 24 – 48 hours. Presence of greenish metallic shine indicates presence of coliforms in the water sample (Betty H. Olson, 1978). The pure culturing was done by streaking the culture onto the media like MacConkey agar and then onto Nutrient Agar Slant.<sup>[3]</sup> The second phase involves the use of different metabolite and enzyme testing in growing the plant indicator- *Trigonella foenum-graecum L. Fenugreek* in three different conditions: the untreated water coming from the R. D. National botany and biotechnology lab (UTW), the treated water through phytoid plant installed in college campus for the above mentioned labs (TW) and the municipal supply water (MW). The metabolites and growth parameters which have been tested to check the effect on the growth of plants are:

3. **Carotenoids:** Total carotenoids will be measured according to Jenson (1978).

4. **Chlorophyll:** Extraction and estimation of chlorophyll will be done by Arnon's method (1949).

5. **Germination growth rate, Relative growth rate** By Aldhous 1972, Evans (1972); Causton and Venus (1981).

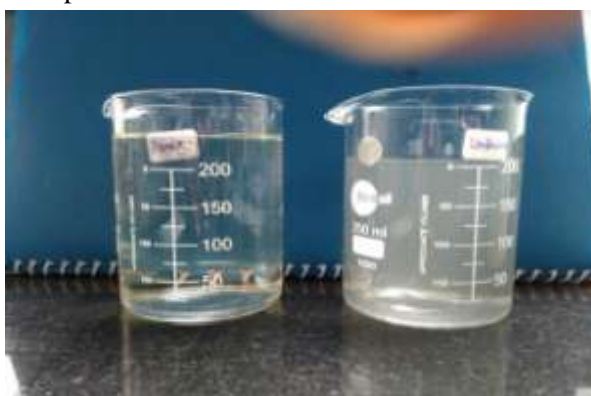
6. **Chlorophyll Stability Index** by Koleyoreas (1958).

Result and Discussion: In the present study we proposed the effect on metabolites and growth of plants where *Trigonella foenum-graecum L. Fenugreek* would be considered as a plant indicator for the growth and metabolites studies. All three water sample were subjected to various physical, chemical and biological testing. The Table no. 1 shows Physical parameters such as pH, Temperature, Turbidity, color as well as odour which were tested for three different water samples showed satisfactory results for treated water and municipal water.

Sample	pH	Temperature (°C)	Turbidity (mg.L <sup>-1</sup> )	Color	Odour
UTW	8.8	27°C	7	Milky White	Stringent
TW	8.4	27°C	4	Colorless	Less Stringent
MW	7	27°C	2	Colorless	Odourless

**Table 1:- Concentration of Physical parameters for different water samples.**

As shown in Table no 1, the pH of Municipal water was 7 which is normal while the treated water and untreated water had slightly alkaline pH which were 8.4 and 8.8 respectively. The test for temperature of all the water samples showed similar temperature which was 27°C. The lowest turbidity was shown by municipal water which is 2mg.L<sup>-1</sup> followed by treated water which showed 4mg.L<sup>-1</sup>. Highest turbidity of 7mg.L<sup>-1</sup> was observed in untreated water. All the concentration of turbidity comes in normal range of 0-15mg.L<sup>-1</sup>[7]. The color of treated water and municipal water was colorless while untreated water was of milky white in color which is shown in Figure 1. The odour of the treated water was much stringent when compared to the treated water, while municipal water was odourless.



**Figure: 1 shows the color of different water samples**

The Table no:- 2 shows chemical parameters like chloride, alkalinity, fluoride, sulphite, nitrate and calcium which was tested for three different water samples.

Sample	Chloride (mg.L <sup>-1</sup> )	Alkalinity (mg.L <sup>-1</sup> )	Fluoride (mg.L <sup>-1</sup> )	Sulphate (mg.L <sup>-1</sup> )	Nitrate (mg.L <sup>-1</sup> )	Calcium (mg.L <sup>-1</sup> )
UTW	25±5	77.5±20.56	0.88±0.24	11.25±2.39	26.25±10.68	38.75±6.25
TW	50±7.07	157.5±11.09	0.5±0.2	11.25±1.25	10±0	0±0
MW	40±7.07	50±11.09	0.5±0.25	10±2.39	10±8.26	15±3.75

**Table 2:- Concentration of chemical parameters for three different samples.**

As shown in Table no 2, the chloride concentration of treated and municipal water was similar that is 50mg.L<sup>-1</sup> and 40mg.L<sup>-1</sup> respectively while untreated water showed low concentration. The chloride content in all the water sample was beyond the normal range of 0.2-1mg.L<sup>-1</sup>[7]. Although there is no effect on plant growth due to high concentration of chloride in water. The alkalinity of all three water samples was under normal range which is 20-200mg.L<sup>-1</sup>. Fluoride concentration was normal (0.88mg.L<sup>-1</sup>) in case of untreated water while it was similar (0.5mg.L<sup>-1</sup>) in both treated water and municipal water. The normal range of fluoride concentration in water is 0.7-1.2mg.L<sup>-1</sup>. Sulphate concentration of untreated water and treated water was similar (11.25mg.L<sup>-1</sup>) whereas in municipal water it was 10mg.L<sup>-1</sup>. The normal concentration for nitrate in water should be less than or equal to 10mg.L<sup>-1</sup>, the concentration of nitrate for untreated water is higher (26.25mg.L<sup>-1</sup>) than normal concentration. The calcium concentration in untreated water sample is much more (38.75mg.L<sup>-1</sup>) than municipal water while treated water shows the absence of calcium. Hence, the calcium from the untreated water was absorbed by the roots of the plant by bioaccumulation.

The Table no. 3 shows the results of chemical parameters like residual chlorine, Total Dissolved Solids (TDS), total hardness and Chemical Oxygen Demand (COD).

Sample	Residual Chlorine (mg.L <sup>-1</sup> )	TDS (mg.L <sup>-1</sup> )	Total Hardness (mg.L <sup>-1</sup> )	COD (mg.L <sup>-1</sup> )
UTW	0.05±0.05	52.72±0.72	100	30.4±5.63
TW	0.15±0.05	40.95±0.02	100	18.6±2.44
MW	1±0.25	41.76±1.26	90	16.2±1.36

**Table no:- 3 Concentration of chemical parameters for three different samples.**

As shown in Table no 3, the concentration of residual chlorine of all three sample was under normal range which is 0.2-0.5mg.L. The contents of Total Dissolved Solid in treated water and municipal water is normal while in case of untreated water it is more than treated and municipal water. All of the three water samples show satisfactory results in total hardness as they showed results in normal range (60-120mg.L<sup>-1</sup>)<sup>[7]</sup>. The COD of untreated water was higher (30.4mg.L<sup>-1</sup>) than treated water (18.6mg.L<sup>-1</sup>) and municipal water (16.2mg.L<sup>-1</sup>) and also higher than normal range which is 40mg.L<sup>-1</sup><sup>[10]</sup>.

Samples	BOD (mg.L <sup>-1</sup> )
UTW	16.5±1.79
TW	3.27±0.08
MW	2.78±0.24

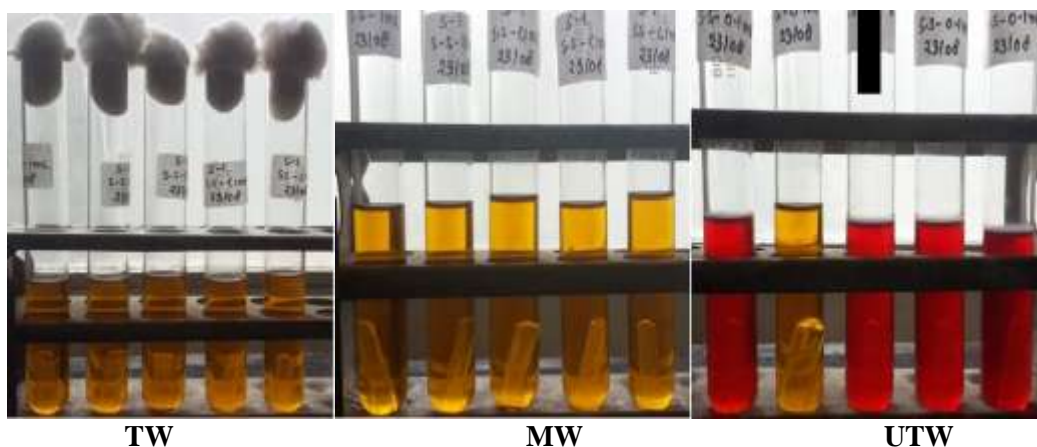
**Table 4:- BOD of water samples**

As shown in Table no 4, the BOD of untreated water is more than treated water and municipal water and which was also more than normal range of 5mg.L<sup>-1</sup>[10]. Treated water and municipal water shows the satisfactory results within normal range.

The Table no 5 and 5.1 shows the Presumptive and confirmatory test respectively of MPN test for three different water sample.

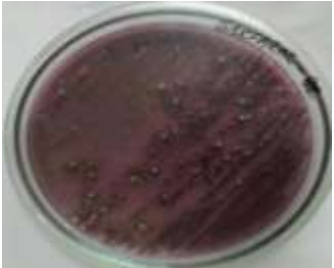
Sr.no	Sample	Tubes			MPN
		Double strength 10ml	Single strength 1ml	Single strength 0.1ml	
1	UTW	5	5	5	1600
2	TW	5	5	5	0
3	MW	5	5	5	0

**Table 5: shows the presumptive results of MPN test in three different water samples.**

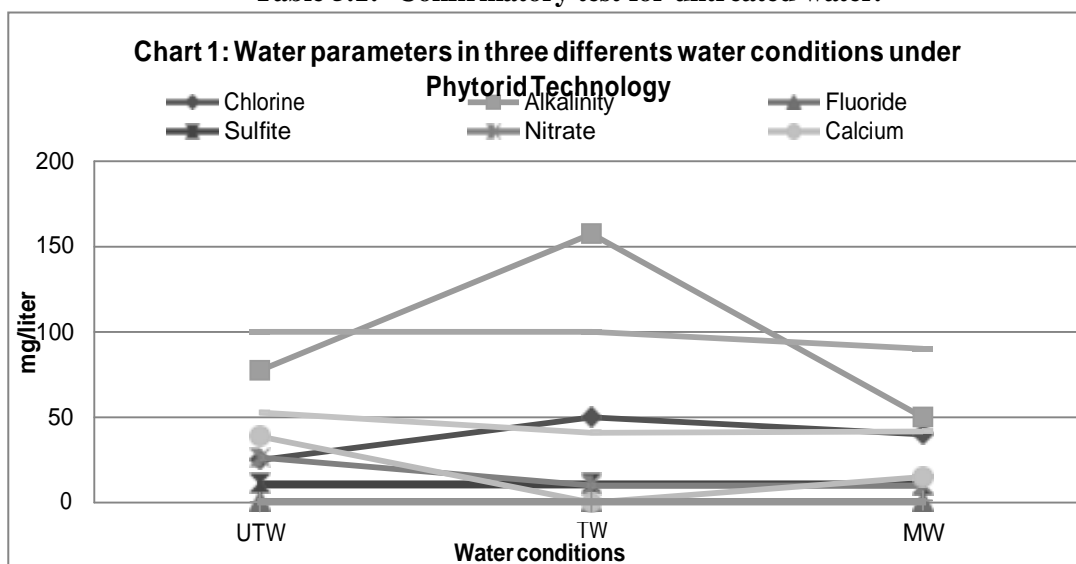


**Figure 2:- Presumptive test of treated, untreated and municipal water.**

As shown in Table no 5, treated water and municipal water doesn't show presence of coliform bacteria as there is no gas production and color change while untreated water shows the presence of bacteria as it shows gas production and change in color of the media to pink due to production of acid from bacteria which was further confirmed by doing confirmatory test. The acid and gas production is due to the fermentation of lactose in the media used in presumptive test.

Sample	Observation	Inference
UTW	<p>Greensih metallic shine</p> 	Coliform present

**Table 5.1:- Confirmatory test for untreated water.**



As per Chart 2, treated water showed decline in all chemicals parameters except alkalinity which showed little increase in treated water. Calcium was fully removed in Phytoid due to which there is no calcium found in treated water.



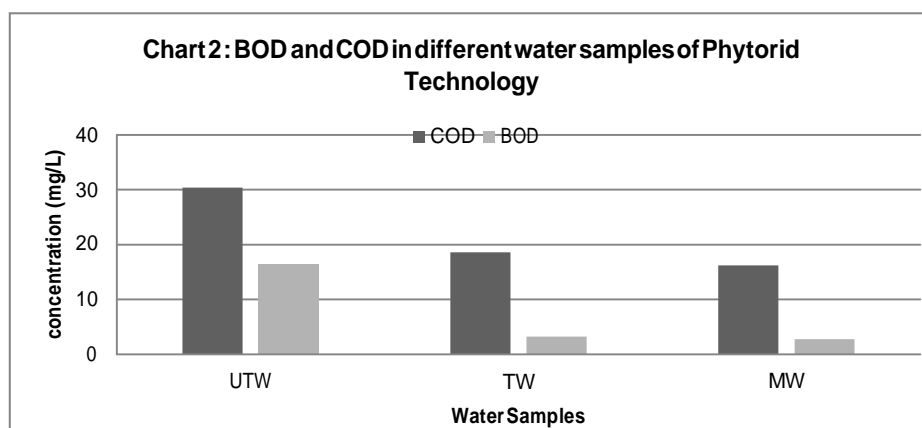


Chart 3 shows the comparison of COD AND BOD in untreated water, treated water and municipal water. Both biological oxygen demand (BOD) and chemical oxygen demand (COD) is reduced significantly from untreated to treated water. In second phase, *Trigonella foenum-graecum L. Fenugreek* plants were exposed to all three water samples and their relative growth were studied for the parameter such as germination growth rate, relative growth rate, photosynthetic pigment and chlorophyll stability index.



**Figure 3: The pots of Fenugreek plants where three different water sample were exposed. Table no:- 6 shows the pigment content like Chlorophyll „a”, Chlorophyll „b”, Total chlorophyll and carotenoids in different representative samples, each values are average of three samples.**

Water samples	Chlorophyll „a” (mg/g f.w)	Chlorophyll „b” (mg/g f.w)	Total chlorophyll (mg/g f.w)	Carotenoids (mg/g f.w)
UTW	0.59±0.13	0.43±0.11	1.02±0.14	57.81±12.71
TW	0.54±0.13	0.66±0.22	1.2±0.35	42.14±12.87
MW	0.77±0.02	4.25±1.98	5.02±1.96	53.56±15.81

**Table 6: Pigment content in different representative samples (each values are average of 3 samples)**

Water samples	Total chlorophyll In normal condition. (mg/g f.w)	Total chlorophyll after heating at 560C temperature. (mg/g f.w)	Difference in total chlorophyll content. (mg/g f.w)
UTW	1.02±0.14	0.189±0.38	1.015683
TW	1.2±0.35	0.567±0.45	0.454967
MW	5.02±1.96	1.4566±0.012	3.559075

**Table 7: Chlorophyll stability index of experimental samples. (Each values are average of 5 samples)**

Table no:-7 shows the Chlorophyll stability index that indicates how well chlorophyll performs under stress conditions. The reading was determined by measuring chlorophyll stability index at different temperature. The satisfactory results was obtained in treated water and municipal water.

Water samples	Germination rate (no of plants germinated/total no of seeds grown)*100
UTW	32.57±5.47
TW	58.29±3.21
MW	54.86±4.28

**Table 8: Germination rate of Fenugreek plant under three different water conditions.**

Water samples	RGR 1DAY	RGR 2DAY	RGR 3DAY
MW	4.767442	2.936047	2.015504
TW	3.975904	3.042169	2.228916
UTW	2.650602	1.987952	1.104418

**Table 9: Relative growth rate (RGR = 1 / W \* dw / dt) of plant under different water conditions.**

As shown in Table no:- 8 and 9, germination rate and relative growth rate of the Fenugreek plant was giving satisfactory results which were exposed with treated water and municipal water while plants with untreated water showed poor or we can say no growth which can be best understood by referring Figure 4.



**Figure 4: Germination rate and relative growth rate of the Fenugreek plant under three different conditions.**

**Conclusion:** The research insights on the effect of plant growth using treated water of Phytorid plant. The treated water showed satisfactory germination rate, Relative growth rate and pigment content while all these parameter showed remarkable decline under untreated water condition. The ISO parameter to check safe water from phytorid plant showed satisfactory results. The Phytorid Plant which was implemented in our college campus is working efficiently, showing progressive results. Further studies can be made on the vegetation of phytorid plant for their anatomical changes occur during the treatment which will help to demonstrate the process of biological treatment with the help of roots via Phytorid Technology.

**Acknowledgment:** We would like to express our gratitude to the Principal of R.D. and S.H. National College and S.W.A. Science College – Mr. Dinesh Panjwani for his continuous support to this research work. We would also like to thank the Department of Biotechnology and the Department of Botany of R.D. and S.H. National College and S.W.A. Science College for providing us the required amenities. We would also like to thank the lab assistants of the Department of Biotechnology and the Department of Botany of R.D. and S.H. National College and S.W.A. Science College for their help as when needed.

**References:**

- Aitchison J, Brown JAC. 1966. *The lognormal distribution with special reference to its use in economics.* Cambridge University Press.
- Arnon DI. 1949. *Copper enzymes in isolated chloroplasts, polyphenoxidase in beta vulgaris.* *Plant physiology* 24: 1-15.
- Betty H. Olson, 1978. *Enhanced Accuracy of Coliform Testing in Seawater by a Modification of Most-Probable-Number Method.* *Applied and Environmental Microbiology*, Vol.36 No.3; p.438-444.
- Bradford, M. 1976. *A Rapid and Sensitive Method for the Quantitation of Microgram Quantities of Protein Utilizing the Principle of Protein-Dye Binding.* *Anal. Biochem.* 72, 248-254.
- Causton D.R., Venus JC. 1981. *The biometry of plant growth.* London: Edward Arnold.
- Dubois, M., K. A. Gillies, J. K. Hamilton, P. A. Rebers, and F. Smith. 1956. *Calorimetric method for determination of sugars and related substances.* *Anal. Chem.* 28: 350- 356.
- Draft Indian Standard For Drinking Water – Specification, (Second Revision of IS 10500), ICS No. 13.060.20, Bureau of Indian Standards Manak Bhawan, 9 Bahadur Shah Zafar Marg New Delhi 110002.
- Evans GC. 1972. *The quantitative analysis of plant growth.* Oxford: Blackwell Scientific Publications.
- Jensen, A. 1978. *Chlorophylls and carotenoids.* In: Helleburst, J. A., Craigie, J. S. (eds.) *Handbook of phycological methods: physiological and biochemical methods.* Cambridge Univ. Press, Cambridge, p. 59-70
- Koleyoreas S. A., 1958. *A new method for determining drought resistance.* *Plant Physiol.*, 33: 232-233.
- Patil. P.N, Sawant. D.V, Deshmukh. R.N, 2012, *Physico-chemical parameters for testing of water-A review,* *International Journal of Environmental Science Volume:3.*
- Rajesh B. Biniwale, 2013, *Energy efficient urban wastewater treatment using Phytorid, Puducherry.*
- Swapnil S. Navaghare, Vipul A. Kadam, Suraj T. Sawant, Saurabh Swamy and Prof. Archana N. Mahajan, 2016, *New Invention on Reuse of Sewage and Wastewater by Phytorid Technology,* *International Journal on Recent and Innovation Trends in Computing and Communication, Volume:4 Issue:4*
- Zhishen, J., Mengcheng, T. and Jianming, W. 1999. *The determination of flavonoid contents in mulberry and their scavenging effects on superoxide radicals.* *Food Chemistry* 64:555–559.

**A COMPARATIVE STUDY TO INVESTIGATE THE LIFE SKILLS AMONG THE SECONDARY STUDENTS OF URBAN SCHOOLS AND RURAL SCHOOLS**

**Asst.Prof. Ms. Sheetal Kadam, Pillai HOC College of Education & Research, Rasayani.**

***Abstract***

*Life skills are abilities for adaptive and positive behavior's that enable individuals deal effectively with the demands and challenges of everyday life. Nowadays the secondary school youth have problems in handling challenges as they pursue education such as bullying, absenteeism, dropping out of school, suicide and drug abuse. The purpose of the study is to investigate factors influencing life skills in rural and urban schools, to find the implementation of life skills education in secondary schools, to find out the access of life skills education by secondary students. It is hoped that this research will provide insightful information to teachers in secondary schools, government, parents and other stakeholders in the education sector to enable them to change the negative behavior's in students so that they become better and responsible citizen. For further research, it is recommended that a study should be undertaken to evaluate teacher effectiveness in the teaching of life skills education on the role of school administration in the support of life skills education in schools and finally on the perception and acceptability of life skills education by parents, teachers and students.*

**Introduction:** Adolescence, the second decade of life, is a period of transition between childhood and adulthood. The terms adolescent and youth refer to individual between the ages of 10 to 19 years and 15 to 24 years respectively, while the term young people covers the entire age. It is known that there remains a significant gap between adolescents having accurate information and its transition into behavior. Skill development is a key to facilitate this process of transforming information into healthy behavior. Adolescents with low levels of life skills are known to develop high risk behaviors which lead to long lasting health and social consequences. Many countries across the world have introduced life skills education in the school curriculum. Initiatives to develop and implement life skills education in schools have been undertaken in many countries around the world. The need for life skills education is highlighted, directly and indirectly. Life skills are abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands, challenges, and stress of everyday life. Childhood and adolescence are the developmental periods during which one acquires these skills through various methods and people. Life skills education is aimed at facilitating the development of psychosocial skills that are required to deal with the demands and challenges of everyday life. It includes the application of life skills in the context of specific risk situations and in situations where children and adolescents need to be empowered to promote and protect their rights. In the following research the four major areas of life skills are studied:-

1. Communication/Literacy Life skills
2. Decision making / Problem solving Life skills
3. Critical thinking Life skills

#### 4. Social Life skills

**Interdisciplinary relevance:** A good life skills education will imbibe students' with the basic necessities of life skills and exhibiting good citizenship is the need of the hour. Life Skills comprises of competencies that can enable the youth to cope with challenges and manage their life in a healthy and productive manner. In a constantly changing environment, having life skills is an essential part of being able to meet the challenges of everyday life. The dramatic changes in global economies over the past five years have been matched with the transformation in technology and these are all impacting on education, the workplace and our home life. To cope with the increasing pace and change of modern life, students need new life skills such as the ability to deal with stress and frustration.

**Need and Rationale of the study:** Nowadays the secondary school youth have problems in handling challenges as they pursue education such as bullying, absenteeism, dropping out of school, suicide and drug abuse. The purpose of the study is to investigate factors influencing life skills in rural and urban schools, to find the implementation of life skills education in secondary schools, to find out the access of life skills education by secondary students. It is hoped that this research will provide insightful information to teachers in secondary schools, government, parents and other stakeholders in the education sector to enable them to change the negative behavior's in students so that they become better and responsible citizen. For further research, it is recommended that a study should be undertaken to evaluate teacher effectiveness in the teaching of life skills education on the role of school administration in the support of life skills education in schools and finally on the perception and acceptability of life skills education by parents, teachers and students.

**Aim of the study:**

1. To compare the level of life skills among the secondary students' of rural and urban schools.

**Objectives of the study:** This study aimed at addressing the following broad objectives of implementation of Life Skills education in secondary schools:

1. To compare the level of life skills among the secondary students of rural and urban schools.
2. To compare the level of life skills among the male students' of rural and urban schools.
3. To compare the level of life skills among the female students'' of rural and urban schools.
4. To compare the level of life skills among the male and female students' of rural schools.
5. To compare the level of life skills among the male and female students' of urban schools.
6. To give students/teachers suggestions on how implementation of Life Skills Education can be improved.

**Hypothesis:**

1. There is no significant difference in the level of life skills among the secondary students of rural and urban schools.
2. There is no significant difference in the level of life skills among the male students' of rural and urban schools.

- 3. There is no significant difference in the level of life skills among the female students of rural and urban schools.
- 4. There is no significant difference in the level of life skills among the male and female students of rural schools.
- 5. There is no significant difference in the level of life skills among the male and female students of urban schools.

**Methodology:** The researcher has adopted descriptive type for this study.

**Sample:** The study covered educational institutions of SSC board, Maharashtra state. The total sample is 50 each from rural and urban. The total sample consists of 25 males and 25 female from rural area and 25 males and 25 females from urban school of class IX.

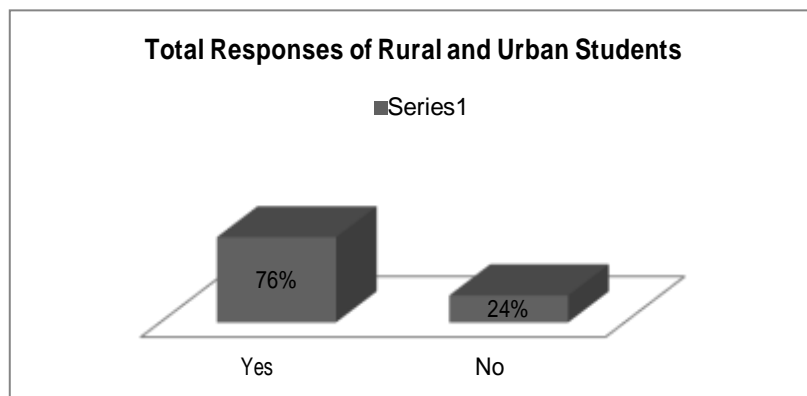
**Analysis of Data:** The descriptive analysis of data has been carried out by calculating percentages of the responses from the students.

**Responses of the students:** The following table shows the distribution of total responses of students in rural and urban area.

**Table 1 Distribution Of Total Responses Of Students In Rural And Urban Area**

Total Responses of Rural & Urban Area	Yes (%)	No (%)
	76%	24%

The following figure 1 shows the total responses of students in rural and urban area.



**Fig 1**

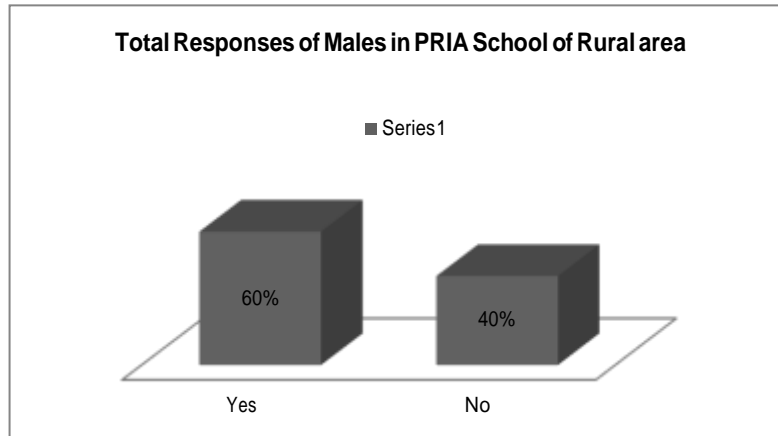
Fig 1 shows the total responses of rural and urban students towards life skills.

The following table shows the distribution of total responses of male students in PRIA school located in rural area.

**Table 2 Distribution Of Total Responses Of Male Students In Pria School Located In Rural Area**

Total Responses of Males in PRIA School of Rural Area	Yes (%)	No (%)
	60%	40%

The following fig 2 shows the distribution of total responses of male students in PRIA school located in rural area



**Fig 2**

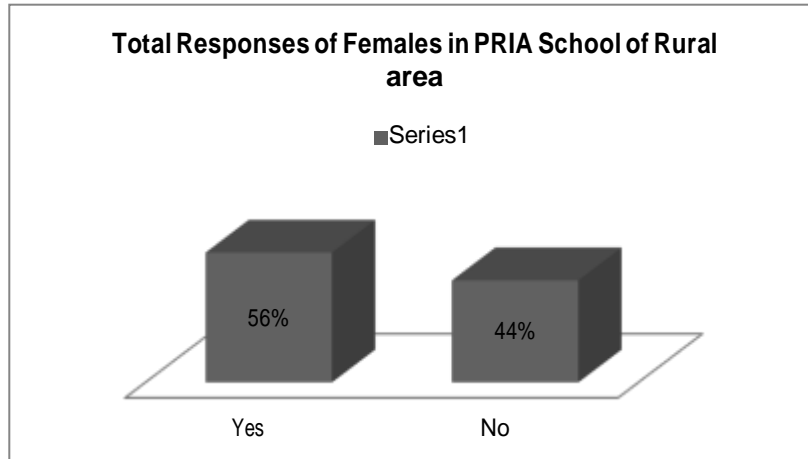
The fig 2 shows the total responses of male students in PRIA school located in rural area. 60% of male students have responded yes towards use of life skills whereas 40% have responded no to the use of life skills.

The following table shows the distribution of total responses of female students in PRIA school located in rural area.

**Table 3 Distribution Of Total Responses Of Female Students In Pria School Located In Rural Area**

Total Responses of Females in PRIA School of Rural Area	Yes (%)	No (%)
	56%	44%

The following fig 3 shows the distribution of total responses of female students in PRIA school located in rural area



**Fig 3**

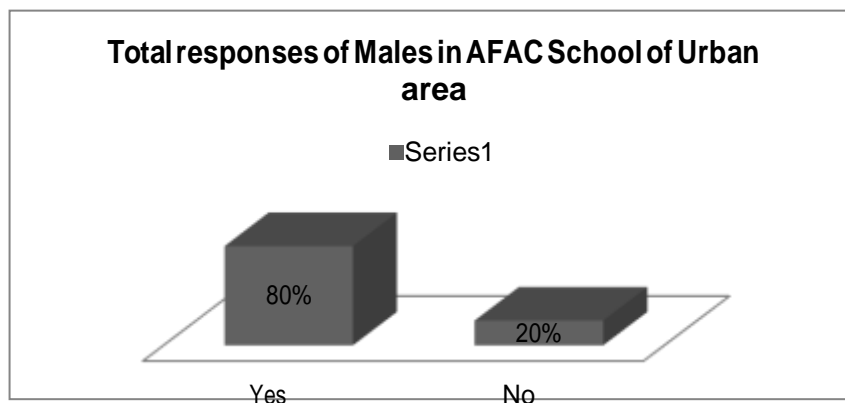
The fig 3 shows the total responses of female students in PRIA school located in rural area. 56% of male students have responded yes towards use of life skills whereas 44% have responded no to the use of life skills.

The following table shows the distribution of total responses of male students in AFAC school located in urban area.

**Table 4 Distribution Of Total Responses Of Male Students In Afac School Located In Urban Area**

Total Responses of Males in AFAC School of Urban Area	Yes (%)	No (%)
	80%	20%

The following fig 4 shows the distribution of total responses of male students in AFAC school located in urban area



**Fig 4**

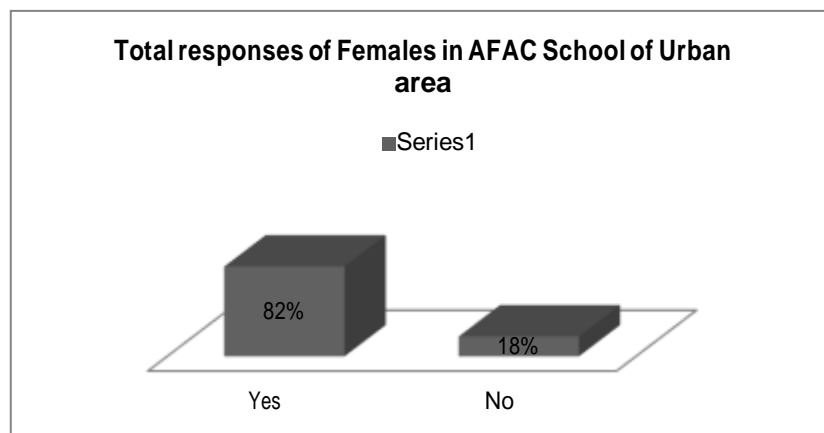


The fig 4 shows the total responses of male students in AFAC school located in urban area. 80% of male students have responded yes towards use of life skills whereas 20% have responded no to the use of life skills.

The following table shows the distribution of total responses of female students in AFAC school located in urban area.

**Table 5 Distribution Of Total Responses Of Female Students In Afac School Located In Urban Area**

Total Responses of Females in AFAC School of Urban Area	Yes (%)	No (%)
	82%	20%



**Fig 5**

The fig 5 shows the total responses of male students in AFAC school located in rural area. 82% of male students have responded yes towards use of life skills whereas 18% have responded no to the use of life skills.

**Major Findings:**

1. There is no significant difference in the level of life skills of secondary students of rural and urban schools.
2. There is no significant difference in the level of life skills of male students of rural and urban schools.
3. There is a significant difference in the level of the life skills of female students of rural and urban.
4. There is no significant difference in the level of life skills among the male and female students of rural schools.

5. There is a significant difference in the level of life skills among the male and female students of urban schools.

**Conclusions of the study:** The main aim of the study was to compare the level of life skills among the students of rural and urban schools. The results of the present study show that there is a significant difference between the level of life skills of female students of rural and urban schools. The result of the present study shows that the female students of urban schools are more sensitized towards life skills than female students of rural schools. They are more aware due to awareness among the urban area as compared to rural area. They are considered to be more responsible and sincere. The females in rural area are coming from such a background whereby the awareness has to be still developed about the life skills. Also, The results of the present study show that there is a significant difference in the level of life skills among the male and female students of urban schools. The female students are more aware of life skills as compared to males. The reasons for this may be that the female students of urban schools are more concerned with the use of life skills and believe in extending their life skills beyond the four walls of their homes. The reasons can also be an appreciation achieved from friends, teachers and parents. They are considered to be more sincere and responsible. The indicators offered in this research focusing on awareness of level of life skills, and also obtained results, revealed that promotion of life skills through daily teaching learning process the students will start believing and practicing life skills which will help them in facing the challenges and ultimately evolve our student as global citizens to take up the future in their stride.

**Suggestions of the study:**

**School Level (Rural & Urban)**

- Sustained and systematic attention should be given to life skill education in the school curriculum.
- Schools should thoroughly examine the "informal curriculum," or the governance of their school community and the relationships among those within it.
- More schools administrators should influence life skills to provide with regular curriculum.
- Co-curricular activities that support and extend life skill education should be encouraged.
- More resources are still needed for schools located in rural areas or that which do not currently offer life skills through curricula.
- Guidance and counseling services in schools has not been as effective, hence the information of life skills which is classroom based is to be considered more effective. This was seen as a solution to those students who could not open up to teacher counselor.
- Life skills should be able to eliminate gender factor that limit the boys and girls.
- Teaching life skills can be enhanced through greater involvement of all teachers.

- Life skills should be followed in daily activities in school.
- Schools should invite and utilize guest speakers on the different life skills.
- School principals should organize gender responsive training and workshop for life skills for teachers.
- The opportunity for school and community service should be made available to all young students as a part of their life skill education.
- The importance of life skills education should be communicated through televised public forums, print media, and public service television announcements. Parents, teachers, and the media are important influences and have significant contributions to make young children imbibe in them life skills, and their support should be enlisted.
- Schools should arrange different training methods for different life skills for teachers.
- Positive attitude has to be developed by teachers and parents among students towards the life.
- Level of psychological skills of the students need to be focused. The focus should be on critical thinking, decision making and other cognitive skills by teachers.
- Establish different clubs like language clubs, health and hygiene clubs that promote life skills which should be put to maximum use, through regular practice and competitions etc.
- Prevention strategies should not only focus on information and knowledge but include acquisition of specific social skills, such as interpersonal relationship, peer resistance, non-conflict resolution skills.
- Schools should channelize funds for promotion of life skills.
- Life skills are valuable component in a school setting especially in instilling cooperation and discipline to the learner, cultivating good boy-girl relationship and moulding God-fearing young generation in rural and urban areas.

**References:**

- Krishnaswamy & Ranganathan. Methodology of Research in Social Sciences. Himalaya Publication: Mumbai, 2006. Pp 299-300.*
- Majumdar, P.K. Statistics- A tool for Social science. Rawat Publications, Jaipur, 2002. Pp 43.*
- Koul, L Methodology of Educational Research. Vikas Publishing House Pvt.Ltd., New Delhi, 2007. Pp 240.*
- Patel R.N., Educational Evaluation. Himalaya Publishing House, Mumbai, 2004. Pp. 312.*
- Garrett, H.E. Statistics in Psychology and Education, New York. Longman, Green and Co., 2006. Pp 100.*
- Garrett, H.E. Statistics in Psychology and Education, New York. Longman, Green and Co., 2006 Pp 101.*
- Best J.and Kahn, J.Research in Education 7<sup>th</sup> Ed.(2003).Prentice Hall of India Pvt.Ltd, New Delhi*

**A STUDY OF CONFLICT RESOLUTION ABILITY OF DEGREE COLLEGE STUDENTS**

**Dr. Pratima Pradhan, MES' Pillai College of Education & Research, New Panvel (W)**

**Abstract**

*Conflict arises from differences. It occurs whenever people disagree over their values, motivations, perceptions, ideas, or desires. Sometimes these differences look trivial, but when a conflict triggers strong feelings, a deep personal and relational need is at the core of the problem—a need to feel safe and secure, a need to feel respected and valued, or a need for greater closeness and intimacy. Therefore it is essential for the students to improve their conflict resolution ability for developing mutual trust and creating a better environment. The present paper focuses on the conflict resolution ability of the degree college students. Descriptive survey method of research was employed to carry out the study. The sample of 244 under graduate students were drawn from commerce and science discipline for the study. A researcher made tool – Conflict Resolution Ability Scale was used to avail the required data. The finding shows that overall the degree college students possess a moderate level of conflict resolution ability.*

**Keywords:** Conflict Resolution Ability, Degree College students, Discipline of education, Academic years

Today the world has become a global village due to which a culturally diverse environment has been created so as the conflicts. Conflicts are emerging when one or more than one person fails to reach agreement on any issue, their needs, desires, preferences, goals, and values do not overlap the perceptions and it is inevitable. Often students are expected to know how to handle conflict without having any knowledge about their own conflict resolution ability. Educators and educational policy makers believe that one of the goals of education is that students are able to think effectively and resolve their conflicts peacefully. Thus, learning should be a transformative activity that integrates academic learning and student development. Often students are expected to know how to handle conflict without being taught the skills; thus, student conduct could be affected. Conflict management and resolution is an expected leadership skill and also serves to aid in knowledge and attitudes about the peaceful resolution of interpersonal conflict which could serve as a deterrent to misconduct. Thus, it is the ability to find effective solution to conflict situation and encompasses the cognitive, affective and interpersonal skills.

**Rationale of the Study:** In the present world, drastic social, political, economic and environmental changes around the globe demand that the citizens be trained to identify and analyse issues and problems. In this critical juncture they should be able to resolve the conflict and make peace, so that they can be the agents of world peace. Thus it is indispensable to understand the conflict resolution ability of the degree college students as they are quite matured to shoulder the responsibility of world peace and sustainable development. College education is responsible not only for developing the intellectual aspect of an individual but also for development of skills required to function as a responsible member of society,

maintaining harmonious relationships and finding constructive solution to interpersonal problems. Students need to be equipped with skills and ability to assess, analyse and resolve various conflicts, which are inevitable part of everyday life, in a peaceful and constructive manner. In the Indian context, research on this area with college students is difficult to find, as per the limited knowledge of the researcher is concerned. Hence the researcher felt the need of studying on the same.

### **Objectives of the Study**

The main objectives of the study were as follows:

1. To ascertain the level of conflict resolution ability of degree college students.
2. To ascertain the level of conflict resolution ability of degree college students w.r.t.-
  - a) Gender
  - b) Academic Discipline
  - c) Academic Year

### **Hypotheses of the Study**

To realise the objectives stated above the following hypotheses were tested:

1. There is no significant difference between male and female degree college students in their conflict resolution ability.
2. There is no significant difference between degree college students from Commerce and Science disciplines in their conflict resolution ability.
3. There is no significant difference between degree college students from different academic years in their conflict resolution ability.

**Reviews of Related Literature:** The literature reviewed on conflict resolution reveals that this area has not been able to get much attention of researchers in India. In abroad, the majority of the studies conducted pertain to the conflict handling styles of individuals. The studies reveal that there exist a difference between conflict handling styles of males and females (Michael, et.al). Sheryl, et.al (2005) found that when compared to their male counterparts, women were more likely to utilize a collaborative conflict resolution style. Peter & Ashlea (2002) and Rahim, et.al (2002) studied conflict resolution in relation to emotional intelligence. Both the studies revealed that emotional intelligence is significantly related to conflict resolution and problem solving. Peter and Ashlea found that people with high emotional intelligence preferred to seek collaborative solutions when confronted with conflict. From the literature reviewed for the present study, it is clear that a substantial amount of work has been done in the field of critical thinking and conflict resolution in relation to a variety of variables. However, to the limited knowledge of the researcher, there appears a gap in the study of critical thinking in relation to conflict resolution ability of an individual in general, and of college students in particular. In the Indian context, the area of students' critical thinking and conflict resolution ability has not been given its due consideration, particularly in the context of college students. This is yet to get the attention of researchers.

**Methodology of the Study:** The present study was concerned with investigating the conflict resolution ability of the Degree college students. For this study, the investigator employed the Descriptive Survey method of research.

**Population and Sampling:** The target population of the study was all the undergraduate students studying in commerce and science streams in various degree colleges of Panvel Tehsil, Raigad district of Maharashtra. The sample was drawn from the target population by using the stratified random sampling technique. The entire sample consisted of 288 students of science and commerce streams. The sample was further bi-furcate to 144 commerce and 144 science students. The sample was also consisted of 144 male and 144 female students. Forty eight students from each year (FY, SY and TY) of study were drawn to represent the desired sample.

**Tool of the Study:** For the collection of relevant data for the present study the Conflict Resolution Ability Scale (CRAS) was developed by the researcher herself. The Conflict Resolution Ability Scale (CRAS) was a rating scale and consisted of 36 items in the form of statements pertaining to interpersonal conflict situations. These items related to the communication, self-control and collaboration aspects of conflict resolution ability. For each statement the respondent had to indicate the extent to which he/she felt the statement was true of his/her behavior by putting a mark on the five point rating scale starting from „Always“ and ending at „Never“. The CRAS scale consisted of 22 positive statements and 14 negative statements. The content validity of the tools was obtained by consulting several experts in the field and the reliability was established by conducting a pilot study on thirty degree college students. The Reliability of the tools was established through pilot study on a group of 30 degree college students. Reliability of Conflict Resolution Ability Scale was found 0.70 which is highly reliable.

**Analysis and Interpretation of Data:** The data collected was subjected to statistical analysis and the results have been presented in the following tables and paragraphs.

**Table 1 Percentage Analysis of Conflict Resolution Ability Scores of Students**

Range	Level	Frequency	Percentage
76-110	Low	49	17.01
111-145	Average	238	82.64
146-180	High	01	0.35
Total		288	100.00

Table 1 show that out of the 288 students under study, maximum students (82.64 %) have average level of conflict resolution ability whereas 17% students exhibited low level of conflict resolution ability. However a very negligible percentage of students (0.35) showed high conflict resolution ability. Thus, it can be interpreted that most of the degree college students have average level of conflict resolution ability.

**Table 2 Significant Difference between Male and Female Students in their Mean Conflict Resolution Ability Scores**

Variable	N	Mean	S.D	S.E	df	t value	t Critical	Level of Significance
Male	144	121.68	10.45	0.87	286	1.05	1.97	NS(0.05)
Female	144	120.41	10.12	0.84				

The data furnished in table 2 reveals that the t-value of 1.05 for the df 286 is less than the critical value of t 1.97 at 0.05 level of significance. Therefore, the null hypothesis that there is no significant difference between male and female degree college students in their conflict resolution ability is accepted. It can thus, be concluded that the male and female degree college students do not differ in their conflict resolution ability.

**Table 3 Significant Difference in Mean Conflict Resolution Ability Scores of Students on the basis of Academic Discipline**

Variable	N	Mean	S.D	S.E	df	t value	Level of Significance
Commerce	144	122.49	10.65	0.89	286	2.40	Significant (0.01)
Science	144	119.60	9.73	0.81			

The t-test applied to see the significance of difference in the mean scores of these two groups presented in table 3 reveals that the t-value of 2.4 is greater than the critical value at level, hence significant. Therefore, the null hypothesis that there is no significant difference between degree college students from Commerce and Science disciplines in their conflict resolution ability is rejected. It can be concluded that there exists a statistically significant difference between the conflict resolution ability of Commerce and Science students. From the mean scores it can be interpreted that commerce students are better in their conflict resolution ability in comparison to their counterparts from science discipline.

**Table 4 Summary of One-Way ANOVA Results for Conflict Resolution Ability Scores of FY, SY and TY Students**

	Sum of Squares (SS)	df	Mean Square (MS)	„F“ value	„F“ Critical
Between Groups	164.53	2	82.26	0.78 (NS at 0.05)	3.03

Within Groups	30362.41	285	105.96		
---------------	----------	-----	--------	--	--

The ANOVA results indicated in the above table 4 show that the calculated value of „F“ (0.78) is less than the „F“ Critical value (3.03) at 0.05 level of significance. Hence, there exists no significant difference in the level of conflict resolution ability of degree college students from different academic years. Therefore, the null hypothesis that there is no significant difference between degree college students from different academic years in their conflict resolution ability is accepted. Thus, it can be concluded that degree college students from FY, SY, and TY possess equal level of conflict resolution ability.

**Major Findings**

The following are the major findings of the present study:

1. The majority of the students under study (82.64%) exhibited average level of conflict resolution ability.
2. There existed no significant difference (at 0.05 level) between male and female degree college students in their conflict resolution ability.
3. There existed a significant difference (at 0.01 level) between degree college students from Commerce and Science disciplines w.r.t. their conflict resolution ability. Overall, students from Commerce group were better than their counterparts from Science group in their conflict resolution ability.
4. There existed no significant difference between FY, SY, and TY degree college students in their conflict resolution ability.

**Conclusions**

Based on the above findings of the study, the following conclusions are drawn:

1. Degree college students possess average level of conflict resolution ability.
2. Gender has no influence on conflict resolution ability among degree college students. Both male and female students possess average level of conflict resolution ability.
3. Academic discipline is a factor associated with conflict resolution ability. Students from Commerce discipline possess better conflict resolution ability in comparison to the students from Science discipline.
4. Academic year is not a factor associated with the conflict resolution ability among degree college students. The students from all the academic years of the courses have average level of conflict resolution ability.

**Recommendations:** Since the students under study possess average level of conflict resolution ability, the university education seems to fall short of achieving one of the essential goal of education i.e. education for global peace and sustainable development. Thus, there is an urgent need to re-examine the curriculum for undergraduate education. In the light of the findings of the study, teachers need to reflect on the effectiveness of their teaching methods for the enhancement of the conflict resolution ability among the students. Students need to actively



participate in activities like debates, group discussions, essay writing, journal writing, quizzes, book club activities, and research projects.

**References**

- Best, J.W. & Kahn, J.V. (2009). *Research in Education. (10th Ed.)*. New Delhi: Dorling Kindersley Pvt. Ltd.
- Hignite, M. A, Margavio, T. M., & Chin, J.M. (2002). *Assessing the Conflict Resolution Profiles of Emerging Information Systems Professionals. Journal of Information systems Education, 13(4)*. 315-324.
- Johnsona, D.W., Johnsona, R., Dudleya, B., & Acikgozb, K. (1994). *Effects of Conflict Resolution Training on Elementary School Students. The Journal of Social Psychology, 134 (6)*. doi:10.1080/00224545.1994.9923015
- Jordan, P. J. & Troth, A.C. (2002). *Emotional Intelligence and Conflict Resolution: Implications for Human Resource Development. Advances in Developing Human Resources, 4 (1)*. 62-79.
- Kwok, L. (1987). *Some determinants of reactions to procedural models for conflict resolution: A cross-national study. Journal of Personality and Social Psychology, 53(5)*, 898-908. doi. 10.1037/0022-3514.53.5.898
- Salami, S.O. (2010). *Conflict Resolution Strategies and Organizational Citizenship Behavior: The Moderating Role of Trait Emotional Intelligence. Social Behavior and Personality: An international journal, 38 (1)*. 75-86. doi: 10.2224/sbp.2010.38.1.75
- Seren, S. & Ustun, B. (2007). *Conflict resolution skills of nursing students in problem-based compared to conventional curricula. Nurse Education Today, 28(4)*. 393-400. doi 10.1016/j.nedt.2007.07.005
- Vera, E.M., Shin, R.Q., Montgomery, G.P., Mildner, C. & Speight, S.L. (2004). *Conflict Resolution Styles, Self-Efficacy, Self-Control, and Future Orientation of Urban Adolescents. Professional School Counselling, 8(1)*. 73-80.
- Volkema, R.J. & Bergmann, T.J. (1995). *Conflict Styles as Indicators of Behavioral Patterns in Interpersonal Conflicts. Journal of Social Psychology, 135(1)*. 5-15. doi:10.1080/00224545.1995.9711395
- Weider-Hatfield, D. & Hatfield, J.D. (1995). *Relationships among conflict management styles, levels of conflict, and reactions to work. Journal of Social Psychology, 135(6)*. 687-698. doi:10.1080/00224545.1995.9713972

**CORRELATIONAL STUDY OF ECOLOGICAL FOOTPRINT OF STUDENT  
TEACHERS WITH THEIR EMOTIONAL QUOTIENT**

**Ms. Geeta S. Thakur**, Asst. Prof. MES' Pillai College of Education and Research, New Panvel

**Abstract**

*It is believed that life is fundamentally a relationship between living organism and its environment; an environment which provides us with all our needs. It is this underlying principle that exists behind the need to conserve and preserve our natural environment, since the very existence of mankind depends on it. The present study was aimed at establishing relationship of ecological footprint of the student teachers with their emotional quotient. Descriptive correlational research method was used to ascertain this relationship between the variables and the extent to which they were related. The sample for the present study comprised of student teachers pursuing Diploma in education, Bachelor of Education and Master of Education degree from the colleges affiliated to the University of Mumbai from rural and urban setup. The tool employed the studying the ecological footprint was constructed with the help of inputs from a tool available on [http://www.epa.gov/airnow/workshop\\_teachers/calculating\\_carbon\\_footprint.pdf](http://www.epa.gov/airnow/workshop_teachers/calculating_carbon_footprint.pdf), changes were made to suit the requirement of the study. The tool used for measuring the emotional quotient of student teachers was a standardized tool by Dr. H.C. Sharma and Dr. R.L. Bharadwaj. The data obtained was subjected to statistical analysis and correlation between the two variables was established using the 'product-moment' coefficient of correlation.*

**Keywords:** Emotional quotient (EQ) and Ecological footprint (EF)

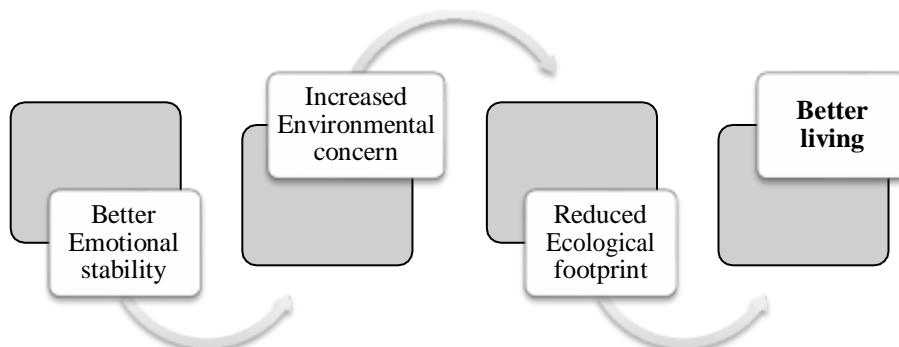
**Introduction:** Human impact on the globe has grown 80 per cent over the last four decades.

<sup>1</sup>As per the Global Ecological Footprint data, humanity is using resources and producing CO<sub>2</sub> emissions at a rate of 60 per cent higher than what nature can regenerate and reabsorb. This gap has resulted in the deterioration of the natural environment on which all the species depend upon for their survival. Nature has a natural capacity to get back to its original form gradually over a period of time, however the vigorous activities of mankind has overpowered and interfered with this natural activity of nature. Natural calamities like floods, droughts, famine, tsunamis, blizzards, earthquakes, erratic rains and unpredictable weather conditions have become more common and frequent from the past few years. Damage to all forms of life can be seen in all these cases. We fail to understand how much is needed, how much we are using and how much we have that is left for use. In order to find out this information, „**Ecological Footprint**“ (EF) has emerged as the world's premier measure of humanity's demand on nature. A person's **ecological footprint** is an estimation of the amount of land required to sustain a person based on their current lifestyle. It expresses the consumption pattern of an individual to maintain a particular life style. It mainly focuses on the consumption of energy, water and other commodities, food habits and processing of domestic waste and recycling. It is assumed that a higher standard of living reflects higher ecological footprint. The solutions to all the

---

<sup>1</sup>[http://www.footprintnetwork.org/en/index.php/GFN/page/the\\_footprint\\_and\\_biodiversity/](http://www.footprintnetwork.org/en/index.php/GFN/page/the_footprint_and_biodiversity/)

environmental problems needs to be solved with all these three „Hs”; Heart to empathize, Head to think and Hand to convert thoughts into actions. Man’s action mainly depends on his emotional stability and concern which is measured by their Emotional Quotient. According to Goleman, **Emotional Quotient (EQ)** predicts as much as 80% of a person’s success in life, whereas intelligence quotient predicts 20%. Emotional Quotient is the ability of an individual to empathize, persevere, control impulses, communicate clearly, make thoughtful decisions, solve problems, motivate oneself and work with others. Individuals with high EQ tend to lead happier lives, with more satisfying relationships. The **rationale** behind this study is that, individuals with high emotional quotient will have concern for the environment and exhibit love, care, preservation, conservation and empathy for the environment. The individuals will judiciously utilize resources and will consume less with a mind-set of **Reuse, Reduce and Recycle**, thereby, leading a better life with a reduced Ecological Footprint. Education is the best vehicle to transmit the ethics and values towards life and environment. Teachers play a fundamental role in the all-round development of the child. As student teachers are at the threshold of entering the career of teaching, it is highly desirable that they understand their level of emotional and its relation to their ecological footprint so that they will be able to effectively transmit a high level of concern for the environment in their students.



**Objectives of the study:**

1. To study the ecological footprint and emotional quotient of student teachers.
2. To study the correlation between the ecological footprint of student teachers and their emotional quotient with respect to the location of the college.

**Hypothesis of the study:**

1. There is no significant relationship between the ecological footprint of student teachers and their emotional quotient.
2. There is no significant relationship between the ecological footprint of student teachers and their emotional quotient with respect to the location of the college.

**Methodology:** For the present study, descriptive correlational research method was used to ascertain this relationship between the variables and the extent to which they were related.

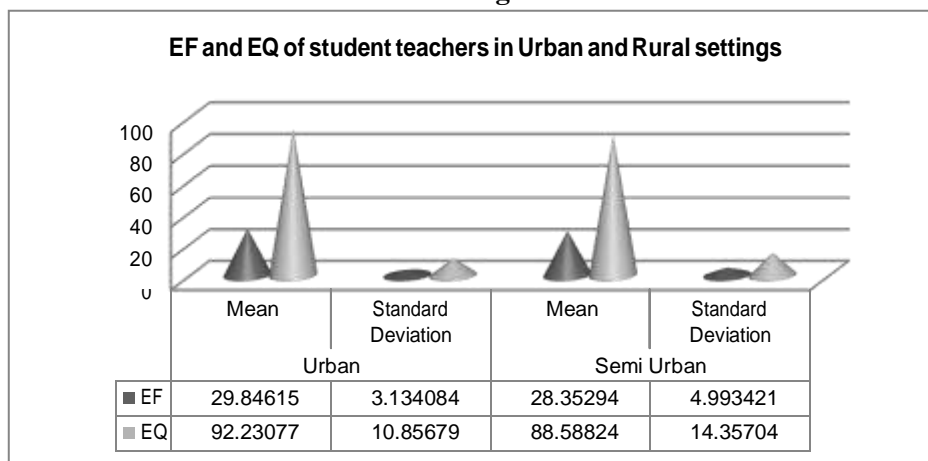
**Samples:** The sample for the present study comprised of student teachers pursuing Diploma in education, Bachelor of Education and Master of Education degree from the colleges affiliated to the University of Mumbai from rural and urban setup only.

**Analysis of the data and interpretation**

**Table 1: Ef And Eq Of Student Teachers With Respect To The Location Of Their College**

Variable s	Urban		Semi Urban	
	Mean	Standard Deviation	Mean	Standard Deviation
<b>EF</b>	29.84615	3.134084	28.35294	4.993421
<b>EQ</b>	92.23077	10.85679	88.58824	14.35704

**Graph 1: Ef And Eq Of Student Teachers With Respect To The Location Of Their College**



The mean value EF of the student teachers belonging to urban areas is slightly higher those belonging to semi urban locality. This indicates that the ecological footprint of the student teachers from urban areas is higher than their counterparts. It is also found that the mean values of the emotional quotient of students belonging to urban areas are much better than those belonging to semi urban areas. Standard deviation for the EF and EQ of Semi urban colleges was higher than that of the urban colleges.

**Hypothesis 1:** There is no significant relationship between the ecological footprints of student teachers with their emotional quotient.

**Table 2: Correlation Between Ef And Eq Of Student Teachers**

	<b>EF</b>	<b>EQ</b>
EF	1	
EQ	-0.3886	1

The correlation between the ecological footprint and emotional quotient of student teachers is found to be -0.3886 which indicates a negative linear correlation. If the emotional quotient of

student teachers increases then life style choices will have a less impact on their ecological footprint. The relationship between the ecological footprint and emotional quotient of student teachers is low but significant. Therefore the null hypothesis is rejected at 0.05 level of significance.

**Hypothesis 2:** There is no significant relationship between the ecological footprint of student teachers and their emotional quotient with respect to the location of the college.

**Table 3: Correlation Between Ef And Eq Of Student Teachers With Respect To The Location Of Their College**

Location of the college→	Urban	Semi Urban
Correlation between EF and EQ→	-0.29059	-0.13664

The correlation between the ecological footprint and emotional quotient of student teachers whose college is located in urban and semi urban areas was found to be -0.29059 and -0.13664 respectively which indicates a negative linear correlation in both the cases. A low correlation was found between EF and EQ among student teachers of urban areas whereas a negligible relationship was found among the student teachers in semi urban areas. However in both the cases the obtained value was less than the table value therefore the null hypothesis was accepted at 0.05 level of significance. Such a finding may be attributed to a better exposure to life experiences in urban areas which helps in obtaining a better emotional stability. The spending capacity of individuals also matter as it may have a direct relationship with those life style habits which has an impact on their ecological footprint.

**Major findings:** It was found that a significant correlation exists between the ecological footprint of student teachers with their emotional quotient however when a correlation was tried to established based on the location of their college it was found to be non-significant.

**Conclusion:** Life style choices are sometimes bound by our capacity to spend. It can be assumed that if the spending capacity is more then we tend to adopt those practices which unknowingly have a greater impact on our environment. The findings helped to identify that ecological footprint of the individuals can be reduced if their emotional quotient is enhanced. Therefore the colleges should provide the student teachers with situations that will boost their emotional quotient. Though the study highlighted one dimension i.e. location of the college, it does not really matter in what part of the country one stays as long as they get sufficient exposure and experience. The study can be continued further by taking other aspects like gender, socio economic status and level of education into consideration and finding out the correlation.

**References**

- Agarwal K.M,4 Sikdar P.K, Deb S.C, (2002), *A Textbook of Environment*, Macmillan India Limited, Kolkata.
- Goleman, D (1995) *Emotional Intelligence: Why it can matter more than IQ*, Bentam Books New York.
- Best JW and Kahn, JV (2006). *Research in Education - Fourth Edition* (p. 59), Prentice-Hall, Chapter 3 —*Experimental Research*, Page 431.
- Kaul, L. (2008) *Methodology of Educational Research (Third Revised Edition)*. New Delhi: Vikas Publishing House Pvt. Ltd.
- Milwi J. O. & Rashid H. (2015) *Research Methodology Principles Methods and Practices*, (First Edition). Delhi: Mangalam Publications.
- Pandy S. R. (2015) *Educational Research*. New Delhi: APH Publishing Corporation.
- Garrett, G.E. (2011). *Statistics in Psychology and Education* (p. 176). Paragon International Publishers. New Delhi, Page 491.

**„THE META-STUDIO" -A META-MODELLING APPROACH TO DEVELOP  
METACOGNITION**

**Dr. Mary George Varghese**, *Asst. Professor MES's Pillai College of Education & Research,  
Chembur, Mumbai, India marypbaby@hotmail.com*

**Abstract**

*Quality education is high on the educational agenda in most the countries, in the developed as well as the developing world. The quality of education mainly depends on the quality of teaching learning process. It is very essential to align educational theories in consonance with the advancement of the education system. It is very much implicit that equipping the learners to achieve the higher educational goals depend on the teaching learning and evaluation (TLE) process. The magnitude of cognitive skills, which a learner can achieve greatly depends on TLE-process. The ability to use the higher order cognitive skills viz. metacognitive abilities requires an overhauling of the current educational practices which focuses mainly the basic cognitive abilities and take the learners through the minimum requirements of education. The new educational practices look for elevating the learners to the higher order cognitive skills and equipping the learners to regulate their own learning process and achieve the ownership of their learnings. The paper proposes a metacognitive framework The 'Meta-Studio' which stimulate the metacognitive skills among the learners.*

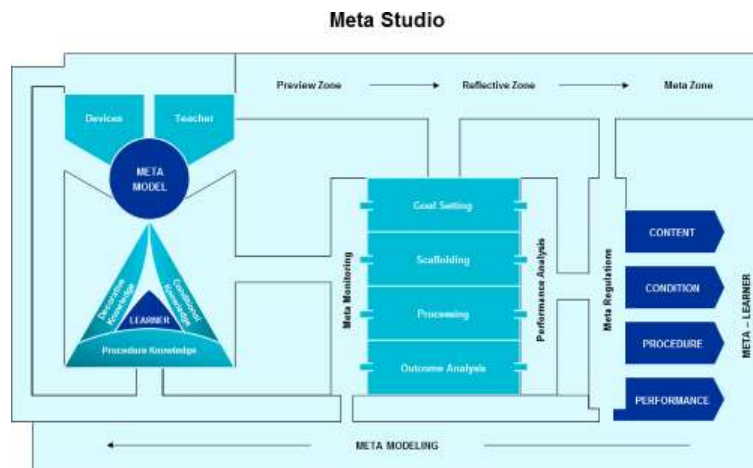
**Keywords:** *The Meta-Studio, Metacognition, Meta-modelling*

**Introduction:** More than ever before, quality education is high on the educational agenda in most the countries. The quality education in the 21<sup>st</sup> century requires a set of skills – creativity, critical thinking, communication and collaboration – and also digital literacy, proactivity, adaptability and open-mindedness. The question is whether schools today can foster these skills so that students are adequately equipped to meet the challenges. Many believe schools have changed too little since the 19th century to prepare students for the 21st. The social, demographic and economic transformations demand an education which prepare the students with higher-order cognitive abilities. The two important pointers which are essential for elevating the learners are; a challenging learning environment coupled with high quality Teaching Learning and Evaluation (TLE) process. The learning environments and TLE processes should train and operate higher- order cognitive skills by prompting learners to plan, attend to relevant content, and monitor and evaluate their learning and thus it become the spine that supports the desired educational objectives.

**Metacognition:** Metacognition is a regulatory system that helps a person to understand and control his or her own cognitive performance. Metacognition allows people to take charge of their own learning. It involves awareness of how they learn, an evaluation of their learning needs, generating strategies to meet these needs and then implementing the strategies. (Hacker, 2009) Learners often show an increase in self-confidence when they build metacognitive skills. Metacognitive skills are generally learned during a later stage of development. For all age groups, metacognitive knowledge is crucial for efficient independent learning because it fosters forethought and self-reflection. Metacognition is a set of skills that enable learners to become aware of how they learn and evaluate and adapt these skills to become increasingly

effective at learning. Metacognition consists of two complementary processes: 1) the knowledge of cognition and 2) the regulation of cognition. **Knowledge of cognition** has three components: knowledge of the factors that influence one's own performance; knowing different types of strategies to use for learning; knowing what strategy to use for a specific learning situation. **Regulation of cognition** involves: setting goals and planning; monitoring and controlling learning; and evaluating one's own regulation (assessing results and strategies used).

**„The Meta-Studio“- A metamodeling frame work towards Metacognition**



The meta learning environment is created in the „Meta-studio“; - a modified highly sophisticated and highly mediated learning environments / platforms which support the metamodeling process on a far more individual basis. The „Meta-studio“ is an educational model focus is on providing a rich, engaging and immersive environment that allows the learner, to progress at their own pace. In such a learning environment, learning objects are linked in to meta- models; the teacher as reflective practioners or the technology supported instrumental tools which are appropriate for the subject area. The major interactions of the teacher and the students would be Divalent or Multivalent in nature. Academics would therefore be free to concentrate on helping the students to develop their learning capabilities and subject knowledge by offering guidance and assisted reflection on content, conditions, procedure and performance. The model ensures, the ability to monitor and capture the student learning experience in cognitive threshold, which is vital to develop thinking and metacognitive skills. Taking this concept further, if we can properly authenticate a student and their experience in the fully monitored and digital environment then a particular skill can be



developed during the learning process, the environment itself can confirm that the student has achieved the desired learning outcomes. This approach would provide a more accurate reflection of a student's ability, including to those students who are poor in their performance.

**The metamodeling process**

It takes place in the „Meta Studio“ at three zones viz. Preview Zone, Reflective Zone and Meta-Zone.

1) Preview Zone which is a preparatory stage which includes learner and the meta-model. The meta-model could be the teacher as a reflective practioners or any assistive technological tool or resources. The learner should be oriented at the Declarative, procedural and Conditional levels of Knowledge.

2) Reflective Zone

In this zone the meta-monitoring is the major orient and it comprises of goal setting, scaffolding, processing and outcome analysis. All these happens in a highly assistive and reflective mode and cognitively alert and reflective in nature. Reflective thinking is the major icon of this stage which immerse the learner and the meta-model in the process.

3) Meta-Zone

The zone takes care of the meta-regulatory activities on 4 major constructs viz. content, conditions, procedure and performance of the transformed learner- The Meta Learner. The regulation can be performed at all levels depends up on the self-assessment and Performance Index.

The „meta-studio“ follows a „content-process-time“ matrix was considered in the meta-modelling process. Prime Time-1, Prime Time-2, Prime Time-3 and Downshift. In the Prime-time 1 (5-10 minutes of the session) the model prepares the learner at declarative, conditional and procedural knowledge level, and connect the learner with the Meta-model. Prime Time-2 focuses mainly on meta-monitoring which is reflective in nature. (20-25 minutes of the session) Prime Time-3 (5-10 minutes of the session) where meta regulation takes place based on Performance Index and Self- check. In Downshift-The Meta-learner unwind before coming out of the Meta-Studio. In this stage, the principle of self-analysis and reflection is mostly employed.

The meta-studio prepares the learner to become a meta-learner who qualifies:

- Knowing the limits of his/her own memory for a particular task and creating a means of external support.
- Self-monitoring the learning strategy, such as concept mapping, and then adapting the strategy if it isn't effective.
- Noticing the quality of comprehension something which just read and then modifying the approach if needed.
- Choose to skim the unimportant information to get to the information one needed.
- Repeatedly rehearsing a skill in order to gain proficiency.

- Periodically doing self-tests to see how well you learned something.

**Conclusion:** The meta-model thus prepares the learner to become an empowered learner through metamodeling process. An empowered learner is a successful learner who can regulate his/her learning which is the need of the need of this century. Thus „The Meta-studio“ provides an adequate monitoring strategies and metacognitive skills among learners and help them to demonstrate „personal initiative, perseverance and adaptive skill in pursuing learning“.

**References:**

- Flavell, J., Metacognition and Cognitive Monitoring A New Area of Cognitive—Developmental Inquiry in American Psychological Association, Inc. Vol. 34, No. 10 , 906-911(1979).*
- Flavell, J. H., Miller, P. H., & Miller, S. A. , Cognitive development Englewood Cliffs, NJ: Prentice-Hall(1993).*
- Brown, A. L., Knowing When, Where and How to Remember: A Problem of Metacognition in Robert Glaser (Ed) Advances in Instructional Psychology. Hillsdale, N.J.: Erlbaum (2002).*
- Hacker, Douglas J., John Dunlosky and Arthur C. Graesser (Eds.). Handbook of Metacognition in Education, 2009.*
- Howard, B. et al., The influence of metacognitive self-regulation and ability levels on problem solving. A paper presented at the annual meeting of the American Educational Research Association, Seattle, Washington (2001).*
- Pashler, H. et al., Organizing instruction and study to improve student learning. IES practice guide, 2007. <http://ies.ed.gov/ncee/wwc/pdf/practiceguides/20072004.pdf>*
- Smith, Cecil M. and Thomas Pourchot. Adult Learning and Development: Perspectives from Educational Psychology, 1998.*
- White, Barbara and John Frederiksen. A Theoretical Framework and Approach for Fostering Metacognitive Development. Educational Psychologist, 40(4), 211–223, 2005.*
- Wilson, Arthur L. and Elisabeth Hayes, Handbook of Adult and Continuing Education by American Association for Adult and Continuing Education.*

**REVISITING TEACHING LEARNING IN CLASSROOMS: PATHWAYS TO  
DEVELOPING REFLECTIVE THINKING**

**Ms Vinita Desai**, Asst Professor, Pillai College of Education & Research, Chembur, Mumbai,  
Email: [vinitavnair01@gmail.com](mailto:vinitavnair01@gmail.com)

**Dr. Karuna Gupta**, Principal, Gurunanak College of Education and Research, Bhandup,  
Mumbai.

**Abstract**

***“When you reflect, you are able to put an experience into perspective. Reflective thinking turns experience into insight.”***

John Maxwell

*The objective of this study was to determine the extent to which in-service teachers' reflect on their effectiveness in teaching-learning transactions and classroom management. This paper looks into teachers' habits of reflective thinking in classroom transactions. Within the qualitative research paradigm, action research was conducted to gain insights into the reflective practices of the in service teachers of primary section. Data was derived from their narratives in the form of open ended questionnaire, verbal discussions and a self assessment reflective tool. Measuring teachers' reflective thinking skills through the self assessment tool threw some light on their ability to reflect on teaching-learning transactions and their effectiveness in classroom management. This also gave them an insight into their weaknesses and strengths in classroom transactions, thus paving way for developing further reflections. Data for the open ended questionnaire was analyzed using thematic coding based on **Schon's Model of Reflective thinking**. The self assessment tool was analyzed based on percentage of scores of the respondents.*

**Keywords:** *In-service teachers, teaching learning transactions, classroom management, reflective practices*

**Introduction**

***“Education is not learning of facts, but the training of the mind to think.”***

Albert Einstein

The world today is changing at a speed where one has hardly any time to stand and stare or even glance back at our past; stop and think or rethink. 21<sup>st</sup> century has become more complex and information is becoming available at an alarming rate and changing more, rapidly prompting users to constantly rethink, switch directions, and change problem-solving strategies. The education system has drastically changed with the upsurge in technology. Innovations have replaced teachers and the students are placed to learning through discovery. In the process, we have failed to train ourselves in looking back and learning from those experiences to move ahead. Reflective thinking is essential for improvement in any practice.

It is important to attune to the challenges surrounding education and help teachers develop reflective practices on their roles, styles, attributes and observations through such far-reaching concerns as the moral and ethical considerations of teaching. Reflection brings about Self awareness and encourages thinking of yourself, your experiences and your view of the world.

It also brings about Self improvement learning from experiences and wanting to improve some area of your life. It enables empowerment there by putting you in control of making changes and behaving in a different way. Reflection is an important dimension of teaching learning. Reflective teaching means looking at what you do in the classroom, thinking about why you do it, and thinking about if it works - a process of self-observation and self-evaluation. Reflective thinking in teaching is thus most important in prompting learning through experiences during complex problem-solving situations because it provides with an opportunity to step back and think about how to actually solve problems and how a particular set of problem solving strategies is appropriated for achieving goals. It helps teachers develop higher-order thinking skills by prompting them to a) relate new knowledge to prior understanding, b) think in both abstract and conceptual terms, c) apply specific strategies in novel situations, and d) understand their own thinking and learning strategies. By gathering information about what goes on in the classroom, further analyzing and evaluating this information, one can identify and explore their practices and underlying beliefs. This will then lead to changes and improvements in their teaching and learning. Reflective teaching is therefore a means of professional development which begins in the classroom.

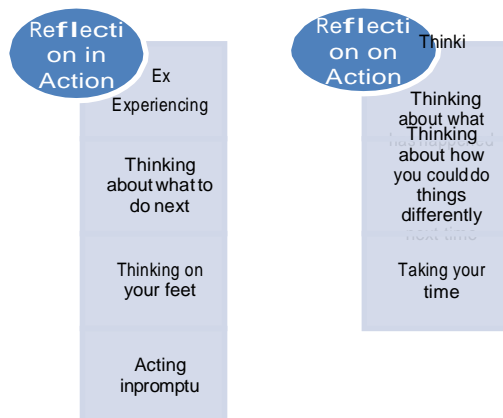
Teachers must constantly ask themselves two questions:

- What am I doing to move the students towards higher levels of understandings and skillful performance?
- How well am I taking into account what students know and care about as I move them toward curriculum goals and facilitate their potentials and talents?

This reflection helps in self assessment. The purpose of this study is to develop awareness of one's classroom teaching learning effectiveness, learning how to manage classroom instructional behavior, and to become more self-directed towards all activities. Self improvement occurs when a teacher acquires competencies that allow intelligent decision making about personal classroom teaching (Darling-Hammond, 1997). Thus adopting a reflective approach to teaching would enable to bring changes in our ways of perceiving teaching and our role in the process of teaching learning.

**Need for the study:** Reviewing the literature it was observed that it is only in the recent times that there has been a focus on teachers' reflective practices in schools. However, not much has been explored and studied with regards to the reflective practices of teachers in classroom management and on their reflection on teaching learning transactions to bring about especially at the primary level. There has been a constant flux in Education over a decade. Technology has made life easier, but learning more complex. With expansion of knowledge, teaching learning has now become a challenge. Teaching requires developing some of the important skills like observation, communication, judgment, decision making, and team work. Such skills require high levels of thinking. Hence teacher has to constantly revisit her transactions and reflect on herself in order to improve and pave way for betterment each time.

**Framework for the Study:** For the present study Schön's model was adopted: Schön (1991) presented the concept of 'reflection in action' and 'reflection on action':



Schön asserts that two types of reflection take place- one during (Reflection in Action) and one after (Reflection on action) the activity or event. For example;

**Reflection in action-**

- You are in lecture/activity/event and you are distracted by some other thoughts.(I have to prepare for my next lecture/when will the bell ring)
- You want to give your best hence you try to help focus better (its an important topic and I need to give in my best)
- You decide to make notes of few important points

**Reflection on action-**

- You notice that sometimes after an event/lecture you had more thoughts, ideas to the same.(I could have added a ppt / I should have not covered so much in one day)
- You file your notes/feedback (I can use this next time)
- You take a feedback on the lecture/event/activity(How do feel/How was the lecture/event activity/ what is your opinion on today's work)

**Objectives:**

- To gain insight on Reflective Practices among in-service teachers
- To foster Reflective thinking among in-service teachers
- To conduct a workshop for in- service teachers
- To study the effect of the workshop on in-service teachers in developing reflective thinking

**Research Questions:**

**RQ1.** Do the in-service teachers adopt Reflective Practices in classroom teaching and learning?

**RQ2.** Was the workshop effective in achieving its objectives?

**RQ3.** To what extent did the workshop help to develop Reflective thinking among in-service teachers?

**Participants:** 25 in-service teachers of primary section from „M „ward, Mumbai was considered for the present study.

**Methodology of the Study:**

The present study was conducted in a workshop oriented set up hence a **Qualitative Action Research approach** was conducted.

**Procedure:** The participants were split into groups of five and were given a topic based on EVS „Save Trees”. They were asked to make presentations through a skit, an advertisement, a drawing, slogan and Storytelling, brainstorming the ideas and using their creativity. Teachers were asked to make their presentations followed by which they were asked to narrate their experiences focusing on their thoughts, feeling and ideas - during planning, preparing and presenting the topic. Teachers were asked to write down their feelings; thoughts and ideas (on post it stickers) through questions based on Revised Blooms taxonomy. This was followed by verbal discussions and sharing of experiences by each participant.

**About the Workshop:** The workshop was conducted for in-service teachers of primary section from „M” ward, Mumbai with the theme as “**Beyond Teaching**”. The focus of the workshop was to engage teachers in activities that not only enrich them professionally but also bring about an awareness of the self. The objective of the workshop was to encourage teachers’ performance in every walk of life so that there will always be scope for improvement and betterment.

**Data collection and Analysis:** Data was collected in the form of open ended questionnaire based on Schons” Reflective thinking, where the participants were made to express their thoughts, feelings and ideas, along with verbal discussions and a Self Assessment questionnaire (3 point scale) on the reflective practices of the in-service teachers in classroom teaching and learning. The open ended questionnaire catered to the reflective practices of the in-service teachers in classroom transactions and on the effectiveness of the workshop conducted. Thematic coding was done for the narratives and percentage analysis on the scores was done for the Self Assessment questionnaire on Reflective Practices.

**Findings:**

**The self assessment tool was based on 5 criteria:**

1. To what extent do you reflect in teaching learning and classroom transactions
2. What reflection methods/tools do you use
3. Do you examine others viewpoints in teaching learning and classroom transactions
4. What assumptions do you question
5. Your ability/freedom to reflect in classroom

Sr no.	Criteria	Mostly	Sometimes	Rarely	Total respondents
--------	----------	--------	-----------	--------	-------------------

1	To what extent do you reflect	20%	28%	52%	25
2	What reflection methods/tools do you use <ul style="list-style-type: none"> <li>• Diary/journal</li> <li>• Discussion</li> <li>• Explore theories</li> <li>• Feedback</li> <li>• Make records</li> <li>• Self observation</li> </ul>	16%	40%	44%	25
3	Do you examine others viewpoints	8%	20%	72%	25
4	What assumptions do you question	4%	32%	64%	25
5	Your ability/freedom to reflect	20%	44%	36%	25

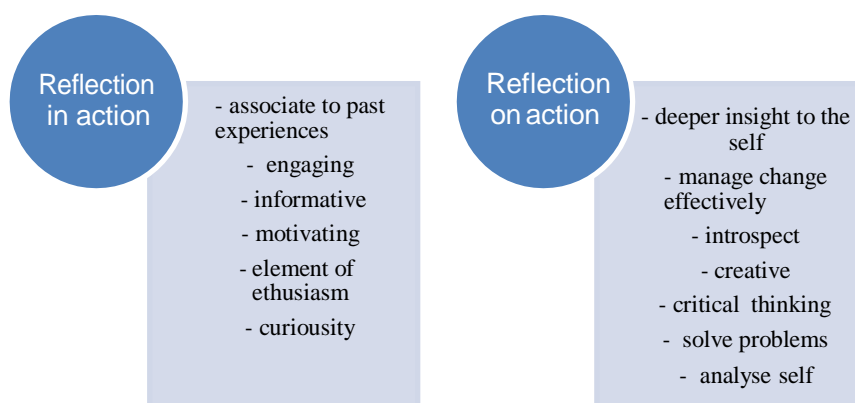
It was surprising to uncover that most teachers rarely reflected on their teaching learning transactions and classroom management strategies. However, some said that they did reflect sometimes while very few revealed to have a regular practice of reflecting.

**RQ1. Do the in-service teachers adopt Reflective Practices in classroom teaching and learning?**

In their reflections the teachers mentioned that they reflected in general on certain occasions like annual day, sports etc and on their overall performance as a teacher. However, they did not make reflection as a practice and did not adopt ways and means to do so in daily life especially in classroom management and teaching learning transactions. They admitted to the fact that they were always in a rush to complete the prescribed syllabi within the given time frame and that they hardly had anytime to deliberate upon and reflect on their effectiveness in classroom transactions and classroom management. A participant mentioned in her reflection, *“The curriculum is so demanding that we barely have any time to meet the daily challenges in classroom- be it in teaching learning or the classroom management as a whole. The curriculum is indeed very rigid and the demands of the school and parents are always much higher than our inputs, hence most of our time is spent in preparation of forthcoming events and lessons after finishing the task on hand and hence we hardly have any time to reflect.”*

**RQ2. Was the workshop effective in achieving its objectives?**

The objective of the workshop was to develop reflecting thinking among in service teachers of primary section and thereby create awareness among them to inculcate reflective practices in daily life and classroom transactions. Themes were made based on the responses and were classified based on their thoughts and ideas while the workshop was being conducted (reflection in action) and on their thoughts and ideas after the workshop was conducted (reflection on action)



**RQ3. To what extent did the workshop help to develop Reflective thinking among in-service teachers?**

The workshop was simply an eye opener to a lot of them as they felt that despite having so many years of experience and the fact that they were performing well they did not deliberate and reflect on their daily transactions. Their responses revealed that they did not have the practice of consciously reflecting after every lesson or activity or any class room transaction. They mentioned that they never seriously indulged in reflections of any kind through discussions with peer, feedback, diary writing etc. They considered the log book more of a routine and hence were mostly disinterested in writing it. They felt the need to infuse more creativity in classrooms to engage the students and explore their mental faculties. The schools did not encourage practices for reflection in the form on feedback after every event, daily journal writing, peer observations and discussions, videotaping of lessons etc. The workshop threw light on various aspects of reflection, its need and importance in daily life in one's personal and professional front. Participants mentioned that they were now more aware of how reflection as a practice would not only bring about awareness of their strengths, but would also enable them to work on themselves and to perform better with strengthened motivation and spirit to enhance their professional competencies and develop the self. They shared their experiences on the effectiveness of the workshop and how it had brought about awareness among them to adopt reflective thinking in class room transactions for effective teaching learning and better classroom management. It motivated them to engage themselves in such higher order thinking skills that would help them deal with challenges and issues at personal and professional arena. It helped them reflect on the strategies and tactics adopted to handle classroom transactions and how effectively they could alter them based on the demands of the situation. It paved way for adopting creative ways in classrooms to keep students engaged while providing them enriching learning experiences and scope for greater analysis of the self and how to deal effectively thus fostering reflective practices.



**Conclusion:** Reflective teaching is thus a personal tool that teachers must use to observe and evaluate themselves and their transactions in classroom. It is important for teachers to have habits of self reflection that brings about awareness which is a powerful device and gives deep insights into „**What, Why and How**“ they teach that can change and improve their teaching learning. Becoming a reflective teacher thus involves moving beyond a primary concern with instructional techniques with a focus on broader educational purposes. Asking such questions like **WHAT, WHY and HOW** gives us certain power over teaching. When we begin to reflect on such questions our degree of autonomy and responsibility as teachers increase and we can have a control over our actions transforming classroom life. Such teachers who reflect bring about a change not only in their professional front but also on their personal dealings thereby changing their attitude, beliefs, and values moving towards greater self awareness. Reflective teaching suggests that experience alone doesn't bring enrichment to one's career, that experience coupled with reflection can be powerful impetus for teacher development. Hence, it is of paramount importance for educators and educational institutions to foster reflective thinking among teachers so that teaching learning not only becomes an enriching learning experience for the learners but also becomes a fun filled activity for the teacher and paves way for creativity with better strategies to deal with challenges and issues of classroom management.

**References:**

- <https://www.teachingenglish.org.uk/.../reflective-teaching-exploring-our-own-classroom>.  
<http://learn.solent.ac.uk/mod/book/view.php?id=2732&chapterid=1113>  
[https://wikieducator.org/images/6/6a/C.girija\\_Navaneedhan.pdf](https://wikieducator.org/images/6/6a/C.girija_Navaneedhan.pdf)

## INDEX

SR. NO.	TITLE & AUTHOR (S) NAME	PAGE NO
59	<b>TEACHER EDUCATION FOR PEACE - A case Study</b> <i>Dr. Judy Grace Andrews</i>	358-363
60	<b>CHANGING CONTEXTS IN TEACHER EDUCATION: ICT AS A PEDAGOGICAL TOOL FOR PROFESSIONAL DEVELOPMENT AND ACADEMIC SUPPORT OF PRE- SERVICE AND IN-SERVICE TEACHERS</b> <i>Dr. Vidhya Satish</i>	364-369
61	<b>STATE OF MINDFULNESS OF UNDERGRADUATE ENGINEERING STUDENTS- A PERSPECTIVE STUDY</b> <i>Dr. Sheela Philip</i>	370-377
62	<b>OVERUSE OF SMART PHONES BY ADOLESCENTS - AN ACTION RESEARCH</b> <i>Dr. Mary Devakumar</i>	378-384
63	<b>A STUDY OF PROBLEM OF DISABLED STUDENTS IN INCLUSIVE EDUCATION USING INFORMATION TECHNOLOGY AT SECONDARY LEVEL IN PUNE DISTRICT</b> <i>Mr. Ilhe Tushar Damodhar &amp; Dr. Vaibhav Jadhav</i>	385-388
64	<b>SOCIAL SKILLS ASSESSMENT FOR F.Y.B.A. STUDENTS</b> <i>Prof. Hasina Shaikh &amp; Dr. Gargee Mitra</i>	389-393
65	<b>DR. A.P.J. ABDUL KALAM ON CREATIVITY AND INNOVATION IN EDUCATION</b> <i>Gaikwad Madhuri &amp; Dr. Vaibhav Jadhav</i>	394-396
66	<b>INNOVATIVE PRACTICES IN SCIENCE EDUCATION FOR CHANGE IN MISCONCEPTION</b> <i>Gayatri Rathod and Dr. Geeta Shinde</i>	397-401
67	<b>EFFECTIVENESS OF BLENDED LEARNING APPROACH FOR TEACHING A UNIT OF MATHEMATICS</b> <i>Dr. Rekha Chavhan and Ms Bhindya Ramchandran</i>	402-407
68	<b>A STUDY OF LEARNING DIFFICULTIES IN COMPUTER EDUCATION OF STD VIII MARATHI MEDIUM STUDENTS</b> <i>Ms. Mamta A. Patil</i>	408-413
69	<b>USING ACTION RESEARCH TO ENHANCE ZOOLOGY TEACHING LEARNING PROCESS AT THIRD YEAR BSC COURSE</b> <i>Rupali Vaity</i>	414-421
70	<b>PREPARING TEACHERS FOR EDUCATION 3.0 THROUGH MOOCS- 2017</b> <i>Ritu Uppal</i>	422-428

71	<b>ATTITUDE OF HIGHER SECONDARY SCHOOL TEACHERS TOWARDS VALUE BASED APPROACH TO PROMOTE PEACE EDUCATION</b> <i>Shubham Rajesh Patil</i>	429-434
72	<b>ENABLING EFFECTIVE STUDENT LEARNING THROUGH FACULTY RESEARCH AND INNOVATION</b> <i>Dr. Rani Tyagi</i>	435-439
73	<b>MEANINGFUL LEARNING WITH TECHNOLOGY</b> <i>Dr. Parth Sarthi Pandey and Dr. Neeta Pandey</i>	440-444

## TEACHER EDUCATION FOR PEACE - A CASE STUDY

**Dr. Judy Grace Andrews**, Associate professor, Gandhi Shikshan Bhavan's Smt. Surajba College of Education, Juhu, Mumbai 400049, judygrace.gsb@gmail.com

### **Abstract**

*Peace is a way of living. Peace as a value cannot be taught but caught. So at Gandhi Shikshan Bhavan a series of activities are done every year in order to promote a culture of peace. Teachers are the agents of social change. Hence the institution takes many fold efforts to imbibe in each of the student -teachers values related to peace. Sarvadharm pratna, paper readings on peace, peace songs, slogan writings on peace, and visits are some of the regular happenings, to promote values related to peace. This paper showcases some of the activities carried out regularly at Gandhi Shikshan Bhavan and the impact it had on its student teachers —Blessed are the peace makers for they shall be called the children of God. These are the words of Jesus Christ who was and is known as the Prince of Peace.*

**Introduction Concept of Peace:** In the dynamic contemporary society the word peace seem to be only a substitute of war i.e. direct violence, terrorism and assault . On the contrary peace is not just the absent of war but it is the absence of structural violence which is poverty, hunger , discrimination , injustice , environmental damage and so on. Thus to obtain peace is not just to have silence at the end but to have economic welfare, social justice , ecological balance , tolerance , democracy and non-violence. Today the society around us is absent of all kinds of values underlying peace. It is only prevalent with violence in all form. The mass media proudly project it as a major part of news and entertainment. Right from the cartoon series name it Tom and Jerry for the toddlers or any serials for the adults the problem of peace is the only thing highlighted. If we allow such dominance in our environment our destiny is only doom. So it is a pertinent problem to envisage and since the destiny of the nation is shaped in the classroom, let us, as teachers and teachers educators determined to take positive measures to bring about the desired change in the society and thereby act as a powerful agent of social change.

Peace education is a right of all children, programmes irrespective of being victims of conflict or not. Education for peace is a hypothetical skeleton from which schools may generate programmes encompassing the spread of universal values and continuing attitudes and the development of skills which allow students of become global citizens. Education for global peace thus becomes paramount. The paper centres on the varied programmes for peace education organised in secondary schools for dissemination of peace through the numerous activities conducted for the students both in and off the campus. The differences in the peace education programmes organised in secondary schools on the basis of age, gender is examined. Such programmes are crucial for the existence and sustainable development of the children and for the achievement of Global Peace. It also aids in the fortification of children and their **Peace as a culture:** The UN has declared the

year 2000 as the International year of peace and decades passed by in only viewing peace as absent of war and violence. The other causes are merely thought, hardly taught. If peace had to become part of our culture and if the golden words printed in the preamble of the constitution had to be practiced in daily life by every citizen of the nation and world at large we need to understand peace in global terms. According to Hague Appeal for Peace Global Campaign for Peace Education , — A culture of peace will be achieved when citizens of the world understand global problems, have the skills to resolve conflicts and struggle for justice non-violently, live by international standards of human rights and equity, appreciate cultural diversity , and respect the Earth and each other. Such learning can only be achieved with systematic education for peace. |

**Peace Education:** Many are practicing peace education already without calling it by name. Education for conflict, resolution , international understanding and human rights , global education , critical pedagogy , social justice education , environmental education , skills education , disarmament and development education and more. Then why one more Education for Peace using this term helps to co-ordinate such global initiatives and unite educators in the common practice for a culture of peace. Thus the need of the hour is to create positive peace that is co-operation and non-violent social change aimed at creating more equitable and just structure in a society. Education for peace by definition has to be child centered (valuing the person) and reconstructionist (valuing positive peace) both of which seems particularly appropriate to the turmoil of the 21<sup>st</sup> Century. There are many approaches to peace education

**Peace education as personal peace:** The approach here is primarily interpersonal stressing the need for empathy and co-operation with a focus on the process of education itself and a need to transform hierarchical structures at all levels of society.

**Peace education as world order:** This approach takes as its starting point the need for a global perspective and the recognition of structural violence as a major obstacle to peace. This can be utopian unless there is a detailed analysis of the links between personal and global change.

**Peace education as the abolition of power relationships:** This approach sees people's values as themselves a product of certain structural variables, for example to do with economic, political and cultural power. The emphasis is therefore on raising awareness of structural violence and identification with the struggles of all oppressed groups.

**Role of a Teacher:** Mahatma Gandhi once said, —if we are to reach real peace in the world, we have to begin with the children. Teachers and educators need to continue to address this issue through the curriculum. It should also be a part of the teacher training programme.

How could teacher education cater to peace ?

First and foremost we need to be quite clear that education for peace is not a separate subject on the time -table but it has to be a dimension across curriculum, a core of the curriculum a concern that may be explored in different ways with any age group and in any subject. Thus the curriculum

from 5 to 16 should be reminded of the broad aims of education, key areas of experiences and essential issues which students should be introduced to.


The aims of education for peace are thus to develop the knowledge, attitudes, and skills which are needed in order:

- 1) to explore concepts of peace both as a state of being and as an active process
- 2) to enquire into the obstacles of peace and the causes of peacelessness, both in individuals, institutions and societies
- 3) to resolve conflicts in ways that will lead towards a less violent and more just world
- 4) to explore a range of different futures , in particular ways of building a more just and sustainable world society.
- 5) To help pupils to develop lively, enquiring minds , the ability to question and argue rationally;
- 6) To instill respect for religious and moral values and tolerance of other races , religions and ways of life
- 7) to help pupils to understand the world in which they live , and the interdependence of individuals , groups and nations

Education for peace, however , is equally about the development of a range of attitudes and skills. The attitudes are a reminder that we must each begin with ourselves that children need their own peace of mind and self-respect before they can be concerned about others. The strong sense of fairness that many students can have ,given appropriate learning experiences , become a part of a commitment to justice , to caring for the planet , to becoming involved in political as well as personal change. But together with the knowledge and attitudes it is the skills that are at the essential core of education for peace. Whatever one is teaching on the timetable these skills can be developed. It is the essential in a democratic society that students develop the skill of critical thinking so that they are able to weigh up various arguments in order to make informed choices.

—There is no way to peace , peace is way<sup>c</sup> – Mahatma Gandhi

The stress in education for peace is thus as much as on content. This can be best illustrated through the diagram below



<b>KNOWLEDGE</b>	<b>ATTITUDES</b>	<b>SKILLS</b>
Issues to do with: 1. Conflict 2. Peace 3. War 4. Nuclear issue	1. Self-respect 2. Respect for others 3. Ecological concern	1. Critical Thinking 2. Co-operation 3. Empathy 4. Assertiveness 5. Conflict

5. Justice	4. Open-mindedness	resolution
6. Power	5. Vision	
7. Gender	6. Commitment to justice	
8. Race		
9. Ecology		

—Peace education is the process of promoting knowledge, skills, attitudes and values needed to bring about behavior changes that will enable children, youth and adults to prevent conflict and violence, both overt and structural; to resolve conflict peacefully; and to create the conditions conducive to peace, whether at an intrapersonal, interpersonal, inter-group, national or international level. (UNICEF). According to Maria Montessori ‘Establishing a lasting peace is the work of education’. Persistent continuous effort has to be taken by every education institution to create peaceful mind as more often inner peace helps to achieve sustainable peace. Peace enables happiness among people. People get involved in development activities. Human rights, democratic norms and value are promoted through peace. Peace creates a feeling of love, trust, tolerance, and brotherhood among people. All development process can only go ahead through peace and harmony.

This paper aims a case study of this institution with regard to its curricular and co-curricular activities organized at the institution Gandhi Shikshan Bhavan, an educational institution that runs on the philosophy of Gandhi believes strongly that education system is a very vital medium to foster peace. —Since wars begin in the minds of men, it is in the minds of men that the defenses of peace must be constructed. (UNESCO n.d.). Hence multiple programs are organized to press on to the goal of promoting peace among its student teachers and faculty both teaching and non teaching. The VISION of this institution is ‘To provide Quality Education for empowerment and enlightenment through Gandhian Philosophy to prepare socially committed teachers. And the MISSION statement of the institution is ‘Dissemination and Nurturance of Gandhian values to develop involved, innovative and dynamic teachers for the welfare of society.

**The goals of this Institution are as follows;**

- To make teaching –learning an enjoyable experience
- To create teachers with well integrated personality
- To prepare teachers as agents of social change
- To ensure harmonious development of teachers for a peaceful society
- To create passion for life long learning amongst student teachers

**Program organized at Gandhi Shikshan Bhavan:**

**For Student teachers:-**

SNO	Activities	Values/skills
1	Prayer- Sarvadharna Pratna, sarvodaya patra, Bhajans and songs	Appreciation, respect and tolerance
2	Paper reading- Great leaders- Gandhiji, Nelson Mandela etc	Soft skills, Social skills
3	Seminars- *Equitable Society with equal opportunities *Aman setu-Building Bridges Across the hearts	Secularism, Co-operation, National values, Social values
4	Expert talks- Renowned Gandhians	Social ,National, and Moral values
5	Book reviews- My experiment with Truth etc	Moral, social
6	Talking Walls'-Displays	Social, aesthetic, moral
7	Celebration of Festivals *Seasonal; Varsha Mangal, Vasantotsav, Maker shankrati * Social ; Navratri, Christmas, Onam, Eid, Diwali * National : Independence day, Republic day	Social, cultural, aesthetic values Organization, presentation skills
8	Visits: *Manibhavan *Maharashtra nature Park,	Moral, Social, Patriotism
9	Camps:* Shantivan –Kushtarog Nivaran samiti *	Social, equality etc
10	Exhibitions : Khadi Gram Udyog, National integration, Swadantha ta sangram	National, social, aesthetic , moral values
11	Flims ; Gandhi etc	Patriotism, tolerance, social, national values
12	Community Work; *Industrial Home for the Blind, *Cheshire home, * Aseema	Equality, fraternity, Secularism
13	Peace activities; * Peace band tying *Oath to promote peace *peace march	Global, social,moral values

For Faculty:

S.NO	ACTIVITIES	VALUES/SKILL
2	Films	
3	Guest lecture by Eminent Gandhians	
4	Yoga	
5	Seminars/ Workshops	
6	Staff get to gether	
7	Community Lunch	



Thus the case study of the institution proves that the vision mission statements are realized in every activity of this institution. The goals and objectives are fulfilled through the curricular, co-curricular activities.

**Conclusion:** If one is teaching for peace and not merely about peace, a close relationship needs to exist between ends and means, content and form. If one is concerned about developing self – respect, appreciation for others, concepts of justice and non violence, they must also be part of the process of learning itself. The members of this institution not only have a tall statement of promoting peace but it strives and takes every effort to promote peace among its faculty and students and encourages each teacher to have person centered learning climate. Such a climate encourages participatory and experiential learning: it involves democracy in action through development of social and political skills in the class-room.

Let there be peace on earth and let it begin with me....

**Reference**

*UNESCO (2004). UNESCO-mainstreaming the culture of peace. Paris: Culture of Peace Co-ordinator, Bureau of Strategic Planning. pp. 1-9.*  
*Montessori Maria, (1965) 'Peace and Education' Theosophical Publishing House, Fourth edition*  
*UNESCO peace package :a hand book for teacher*  
*Haris, Ian and Scott, John (2002) Peace education for new century-Social alternatives*  
*<https://sustainabledevelopment.un.org/post2015/transformingourworld>*

**CHANGING CONTEXTS IN TEACHER EDUCATION: ICT AS A PEDAGOGICAL TOOL FOR PROFESSIONAL DEVELOPMENT AND ACADEMIC SUPPORT OF PRE-SERVICE AND IN-SERVICE TEACHERS**

**Dr. Vidhya Satish**, Director, SIES Institute of Comprehensive Education, Sion, Mumbai, India  
*vidhyas@sies.edu.in*

**Introduction:** Information and Communication Technology (ICT) refers to diverse set of technological tools that help one not only communicate but also create, disseminate, store and manage information (Tinio, 2003). It also refers to anything that permits us to get information and communicate with each other. It can also be referred to as something that has an impact on the environment by usage of electronic and digital equipment (Mohanty & Vohra, 2006). The ICT Policy in School Education, 2012 clearly defines ICT as *-all devices, tools, content, resources, forums, and services, digital and those that can be converted into or delivered through digital forms, which can be deployed for realizing the goals of teaching learning, enhancing access to and reach of resources, building of capacities, as well as management of the educational system*. Today the use of computers has undergone transformation. Usage of computers and other technological devices is no longer a novelty but a necessity. Its usage has heralded great changes across the globe and the field of education is no exception (Victor, 2013). The National Curriculum Framework for Teacher Education (NCFTE, 2009) clearly reiterates the need to develop a symbiotic relationship between schools and teacher training institutions in various areas and one important area specifically highlighted is that of ICT and e-learning initiatives. The Government of India in its 12<sup>th</sup> Five Year Plan (2012-2017) states that Information and Communication Technology (ICT) can make significant differences in improving quality. It urges training and encouragement of teachers to develop and use e-content in classroom teaching. With so much impetus on the usage of technology from various bodies, SIES Institute of Comprehensive Education (SIES ICE) understands this need and has devised not only the teacher training curriculum to train pre-service teachers but also reach out to the teaching fraternity at large through the conduct of two online teacher empowerment certificate programs. The present paper is a representation of these three core initiatives taken by the institute.

- a) Optimal usage of technology by teacher educators in imparting curriculum as part of the teaching-learning process.
- b) Specialized ICT training for pre-service teachers to prepare them for a digitally enabled classroom of today.
- c) Conducting two innovative online certificate courses in Special Education Needs (SEN) for the benefit of in-service teachers.

The initiatives are hereby discussed in detail as follows:

*a) Optimal usage of technology by teacher educators in imparting curriculum as part of the teaching-learning process.*

Teachers themselves represent a group with varying levels of exposure to ICT. The percentage of exposure the trainee teacher gets with regard to ICT usage is proportional to the probability of her ICT usage in actual classroom teaching. So it becomes important for the trainee to be exposed to ICT usage. To achieve this end, the teacher educators at SIES ICE use ICT to a large extent. They make power **point presentations, multimedia presentations** that are not only interesting but also cover lecture content in the most innovative method. **Educational videos and motivational movie screenings** are carried out on a regular basis. It has been found that if quality educational videos are shown to students, not only is concept clarity achieved but the teaching time is reduced to almost half. For example, when Piaget's theory of cognitive development was taught to students, it required a very long time for students to understand the theory, but today when educational videos are shown to them, they not only grasp the theory much faster but are able to retain the understanding too (Satish, Vora & Sivakumar, 2016). With a classroom full of —techno-savvy students, these aids make teaching and learning interesting and useful. Students on the other hand, use power point slides coupled with multimedia effects during their topic related presentations. This helps them to portray their thoughts using audio visual medium effectively. Often their presentations depict concept clarity and are interesting too. Teacher training requires a galore of talents that need to be developed in the pre-service teacher. Music and movement activities, songs, rhymes, stories, step-by-step paper folding activity presentation are few of the examples of the ICT that are shown to the students. These give students an opportunity to look and sing, see and learn and be completely absorbed in their own learning. It has been observed that even shy students are more open when they sing and move along with the videos. The lyrics are shown, the movements are imitated and the music is enjoyed. All these elements make learning fun. **Live sessions** with experts is another milestone that is achieved by SIES. Many institutions of the SIES connect online and participate in live classes usually on self-management, quality control to name a few. The international expert is a management guru who lives in the United States and conducts regular lectures for our students.

*b) Specialized ICT training for pre-service teachers to prepare them for a digitally enabled classroom of today.* Teaching and learning processes have become technology enabled today. Through variety of techniques, tools, content and resources the quality and efficiency of the teaching methodologies can be enhanced. This could be wide ranging such as projecting media as a teaching aid in order to support the lesson that is being taught, to utilizing multimedia that promotes self-learning, to simulations and virtual learning environments. Availability of such teaching-learning aids will play a pivotal role in transforming classrooms into one that is digitally enabled (National Policy on Information and Communication Technology (ICT) In School Education, 2012). The National Curriculum Framework (NCF) for school education, 2005 clearly

states the exemplary role of the teacher as a co-constructor of learning. It is she who facilitates learning at this crucial period in a child's life. The early childhood years i.e., the years from two and half years to six encompasses 'critical periods' in a child's life. It is at these periods the child develops right attitudes, values and a strong sense of desire for learning. Children in these formative years need to be provided with a conducive environment to grow and learn. The conducive learning environment can be offered by ICT to a large extent. But this method of joyful learning can be provided to the children by the teacher only if she is equipped to use this medium as in urban India most of today's classrooms are digitally enabled and engaging (Satish, V, 2014). Also, it is important to understand the fact that today's young learner challenges the teacher often. Thus the need to be 'technically trained' assumes equal importance along with other skill empowerment techniques that are usually involved in professional training. Computers are developmentally appropriate for children above 3 years who are in the Preoperational stage. To make learning concrete, pictures and visual symbols aid to a great extent. It has been found that children who struggle to read, learn better with icons on computers. We must be sensitive to the different learning styles as we serve an ever-larger diversity of children (Gardener, 1987). To achieve this goal of preparing the pre-service teacher extensive training in using different office software such as MS Power point, MS word, MS Excel. Students are given an orientation to the need and importance of using ICT. Methods to adopt and adapt ICT are taught to the students. Theoretical orientation is the first step that we implement that is followed by extensive practical sessions. Our teacher trainees prepare different types of teaching aids using power point presentations. They make flash cards, reading cards, story books, story boards, EVS projects and academic presentations using MS Power point in a developmentally appropriate manner. MS Word is used to prepare sample newsletters, circulars for parents, invitation cards, worksheets and related aids. Using MS Excel, students prepare attendance sheets. The ICT project is also integrated into our evaluation system. To keep abreast with the technological advancements in schools, we encourage students to prepare lesson plans and teaching aids that can be adopted in a smart class. When they are technologically trained, students are empowered and prepared to handle a digitally enabled classroom in their future teaching careers (Satish, Vora & Sivakumar, 2016). It has been found that computers are now a part of many preschool and primary school experience (Satish, V, 2014). The NCF, 2005 clearly states that technology need to be used by both the children and teachers. Both the teacher and the children need to be —active producers and not just —active consumers. ICT enabled environments encourages students to make their knowledge clear and precise. Animation, music, surprise elements and constant interaction hold children's attention and this is the reason multimedia and other technological aids need to be used (Escobedo & Evans, 1997). They can also aid learning, if they are designed to support and be consistent with the educational goals. Also, every teacher trainee attempts to make every lesson of hers exceptional during practice teaching at internship schools with the help of ICTs. Students are

encouraged to use videos and interesting power point presentations while teaching their lessons as part of training. The other innovation that is carried out is **video recording of lectures** for posterity. Students get an opportunity to revisit concepts. **Video recording of student presentations** and practice **lesson demonstrations** give them an opportunity to look at themselves in a critical manner and carry out a clear self-evaluation.

**Forming email groups** to pass on study material is another activity that is regularly undertaken. Presentations and notes are emailed to students. Most of them access e-mails through their mobile phones these days. Also, the **website** of the SIES is designed in a manner that student can access course notes from the website itself. The educator can upload her notes and the registered students get access to it. This ensures student access from anywhere. Our institute website also will be upgraded to get this facility soon. **Social media** is used to a great extent to pass on notices and circulars in the quickest possible way. Ideas for creative art and craft work, language and math games, lesson plans, and teaching aids to name a few are available to a great extent online. Teacher educators pass on these information to the students easily. An excellent method to communicate with **alumni** is also through social media. Closed Facebook groups are formed to achieve this networking. Even event promotions are carried out through social media. Technology, especially social media usage has helped us **link two of our centres** in the best possible way. Such linkages help the institute ensure the dissemination of not only the same quality of training in both the centres but also sharing of ideas in the form of images and videos also. As a pre-service training institute, we thus recognize our role to empower our trainee teachers in this manner using technology.

*c) Conducting two innovative online certificate courses in Special Education Needs (SEN) for the benefit of in-service teachers.* One of the strong recommendations of the National Policy on Information and Communication Technology (ICT) In School Education, 2012 is the development of sensitivity to the needs and issues of special children. It also reinstates the need to use ICT to offer technology enabled inclusive education. At SIES ICE, we understand this recommendation well and deem it our responsibility as a training institute to serve the teaching community. An offshoot of this understanding is the evolution of two certificate courses in the area of Special Education Needs (SEN) through the online medium in collaboration with Drishti, an organization working in the same field for more than two decades. They are Online Certificate course **in Mainstreaming Children with Special Education Needs (SEN) under the RTE** and a **Bridge Course in Teaching Students with Learning and Behavioural Difficulties**. Working teachers deal with various issues and challenges and one such common challenge is classroom management of SEN children. These teachers feel incompetent to handle such children. They wish to help them go through joyful learning. Due to their working hours and physical constraint in enrolling for a full-time program they are unable to take up an extra course to develop an understanding of SEN children. These two online courses are aimed at helping working teachers handle SEN

children in the best possible manner. The fact that learning need not be carried out within the four walls of the classroom is the premise under which online education has been set out at our institution. Nine batches of the first course and four batches of the bridge course have been conducted. Teachers from far and wide, from India and abroad have benefited immensely. The online mode offers opportunities for self-paced learning, convenient timing, balancing work and home life and yet satisfying the learner spirit in them. The unique feature of this online course is the conduct of special contact programs on Saturdays that is preferred by teachers. In these sessions there are brainstorming activities, case study discussions and deliberation of classroom management strategies of SEN children. Learners take this opportunity to clarify their doubts at the contact class. SKYPE sessions are carried out for outstation participants and all those who are unable to attend the contact classes. These sessions and online interactions promote peer learning as a connection between the groups of teachers enrolled for the course along with the course coordinator. The course content is divided into modules with relevant assignments to assess student learning. Timely submission of assignments along with participation in the contact sessions are crucial for the final assessment. The culmination of these results and a term-end online examination leads to certification. Thus, using technology, working teachers are empowered to become not only life-long learners but also sensitive teachers (Satish, Vora & Sivakumar, 2016).

**Conclusion:** The National Curriculum Framework (NCF), 2005 clearly states that ICTs can be effectively used to shape modern society in a manner that leads to the betterment of the human society. Information and Communication Technology for the School System Curricula for ICT in Education Version #1.01 developed by the NCERT, 2013 shares its determination with the NCF, 2005 which states that every learner must be provided learning spaces as per their need and develop world-wide views. ICT offers unique learning modalities which are well used by our institute. The NCFTE, 2009 states that *-It has become more of a fashion statement to have computers or multimedia in schools, the result being that in spite of its potential to make learning liberating, its implementation is often not more than cosmetic.*

We, at SIES ICE **do not** use technology as a cosmetic activity. As a training institute training teachers to handle pre-primary and primary classes, all efforts are carried out to provide holistic training for pre service teachers and also aid in-service teacher training. ICT is thus well integrated and used as a pedagogical tool for professional development of pre-service and in-service teachers with the core ideology being knowledge enhancement.

#### **References**

Government of India. Department of School Education and Literacy. Ministry of Human Resource Development. (2012). *National Policy on Information and Communication Technology (ICT) In School Education*. New Delhi

- Mohanty L., & Vohra N., (2006). *ICT Strategies for Schools*, Sage Publications New Delhi.
- NCERT. (2006, March). *Position paper on Educational Technology*. (Chairperson Mulay V.). New Delhi: Author.
- NCERT (2009) *National Curriculum Framework for Teacher Education* (Chairperson: M.A.Siddiqui) New Delhi: Author.
- NCERT. (2005). *National Curriculum Framework 2005* (Chairperson of Steering Committee: Yash Pal). New Delhi: Author.
- NCERT. (2013). *Information and Communication Technology for the School System. Curricula for ICT Education Version #1.01* (Chairperson of Steering Committee: Rajaram Sharma). N.Delhi
- Satish, V. (2014). *Developmental Appropriateness of Educational Software used in Schools for Greater in Mumbai and Navi Mumbai Region for Children Between Four and Seven Years of Age*, (Unpublished Doctoral Dissertation). College of Home Science, Nirmala Niketan, Mumbai.
- Satish, V., Vora, R., Sivakumar, L. (2016). *Role of ICT in Teaching*. In Mehta. H. (Ed), *ICT as an Effective Teacher Empowerment Tool. Proceedings of the NAAC Sponsored Two Day National Level Seminar on Innovations in Teaching-Learning & Evaluation in Higher Education* (pp.131-134). Mumbai, SIES College of Arts, Science and Commerce.
- Tinio, V. L. (2003). *ICT in Education*. New York: UNDPAPDIP.
- Victor,S.R. (2013). *Teacher Trainees Attitudes towards ICT*. *Journal of Education and Practice*. Vol.4, No.19, 18. Retrieved from [www.iiste.org](http://www.iiste.org)

## STATE OF MINDFULNESS OF UNDERGRADUATE ENGINEERING STUDENTS- A PERSPECTIVE STUDY

**Dr. Sheela Philip**, *Assistant Professor, St. Teresa's Institute of Education*

Mindfulness has been defined as being aware moment-to-moment of one's own subjective conscious experience, or —stream of consciousness— of our thoughts, feelings, bodily sensations, and surrounding environment.(1) It is an effort to be continuously present with experience. It refers to paying attention to self in a particular way: on purpose, in the present moment, and non-judgmentally, i.e., without believing that there is a —right— or —wrong— way.(1)

—Mindfulness— is not the same as —awareness—. For example, a person may be aware he is eating, but not mindful of his eating. If he were mindful, he would notice the sensations and his responses to those sensations, and notice his mind wandering and bring his attention back.

### **Statement of the Problem**

State of mindfulness of final year students pursuing Engineering in Greater Mumbai

### **Need of the Study**

Formal education accounts for 20% of a person's life. The long-term goal of education is to make a complete human, who is self-sufficient and self-reliant. Especially in the Indian subcontinent, high status and value are attached to professions that can make a person independent and self-supporting. Engineering features in this list of high value professions. Unfortunately, in this craving, crucial aspects like attitude and aptitude of the learner are sacrificed in the search of career trends that are contemporary and remunerative.

Thus, one's aptitude and attitude are sacrificed at the altar of materialistic gain and self-gratification, and true potential dies a slow death. Enforced value systems make it necessary for a student to conform to the herd. Academically, they may find themselves in careers that are forced on them by expectant parents and well-wishers. Also, families and students procure loans and even sell off family assets to chase a dream career, often paying huge donations and high fees. The monetary debt that ensues can alter mental well-being by burdening students financially. These burdens prove detrimental to a student's state of mindfulness.

The survey tool on mindfulness used in this research has been validated in several population-based studies; these have been conducted in Western countries where the level of education and familiarity with the language are generally high. There probably has been no survey on mindfulness in India and likely not in such a selected population segment.

Since mindfulness-based therapy has been used for a variety of personality and psychological conditions, it is important to know whether mindfulness states are nurtured in the sample in this population being reviewed in this research.



### **Significance of the Study**

This research intends to find the effectiveness outcomes of Engineering which is a much sort after vocational course. It intends to assess whether at the end of the long, much-dreamed-of educational journey the students are really happy. Have they achieved the desired state of mindfulness that helps them to experience situations without being judgmental and using their preconceived benchmarks? Is higher education contributing to creating individuals who are self-actualised? Are the elements of self-praise and self-worth so blinding that it compels or dampens the wisdom to discern between empty words and correct actions. Finally, is there a difference between the genders in students pursuing Engineering in achieving these outcomes?

### **Scope of the Study**

The study is limited to only students of the Engineering faculty and the sample is obtained from Greater Mumbai.

The study included students of both genders who were compared on the variable of mindfulness.

### **State of Mindfulness**

Bishop, Lau, et al. (2004) (12) proposed a two-component model of mindfulness: the first component involves the self-regulation of attention so that it is maintained on immediate experience. It —involves bringing awareness to current experience – observing and attending to the changing fields of thoughts, feelings, sensations, from moment to moment – by regulating the focus of attention. The second component involves adopting a particular orientation toward one's experiences in the present moment, an orientation that is characterised by curiosity, openness and acceptance. It involves maintaining an attitude of curiosity about objects experienced at each moment, and about where and how the mind wanders from the selected focus of attention. Having the purpose of staying with our experience means that we are actively shaping the mind. However, mindfulness is an emotionally non-reactive state. We don't judge that this experience is good and that one is bad. Or if we do make those judgements we simply notice them and let go of them. We don't get upset because we're experiencing something we don't want to be experiencing or because we're not experiencing what we would rather be experiencing. We simply accept whatever arises. We observe it mindfully. We notice it arising, passing through us, and ceasing to exist. Cognitively, mindfulness is aware that certain experiences are pleasant and some are unpleasant, but on an emotional level we simply don't react. We call this —equanimity— stillness and balance of mind. Whether it's a pleasant experience or a painful experience we treat it the same way. According to Jon Kabat-Zinn (founder of the Mindfulness-Based Stress Reduction Program at the University of Massachusetts Medical Center), left to itself the mind wanders through all kinds of thoughts, including negative ones.(13) As we indulge in these thoughts, mostly about the past or future, we reinforce those emotions and cause ourselves to suffer. The past no longer exists; the future is just a fantasy until it happens. The present moment, the one we actually can experience, is the one we seem most to avoid. That doesn't mean we can no longer

think about the past or future, but when we do so mindfully, we are aware that right now we're thinking about the past or future.

By purposefully directing our awareness towards our present moment experience, we decrease their effect on our lives and create instead a space of freedom where calmness and contentment can grow.

Kabat-Zinn says in his Greater Good video, —Mindfulness is about living life as if it really mattered, moment by moment by moment by moment. He identified a few key components of practising mindfulness:

- Pay close attention to your breathing, especially when you're feeling intense emotions.
- Notice what you're sensing in a given moment, the sights, sounds and smells that ordinarily slip by without reaching your conscious awareness.
- Recognise that your thoughts and emotions are fleeting and do not define you, an insight that can free you from negative thought patterns.
- Tune into your body's physical sensations, from the water hitting your skin in the shower to the way your body rests in your office chair.

Kabat-Zinn's definition highlights that an important aspect of mindfulness is acceptance, or of avoiding harsh judgments. Acceptance means being able to be aware of our experience without either clinging to it or pushing it away. Instead we accept our experience with equanimity.

All too often we find it difficult to accept what we're feeling. A common pattern is to experience some initial unpleasant experience, and then to feel bad because of feeling bad, and then to feel bad about feeling bad about feeling bad, and so on. It's a vicious cycle of feeling bad about feeling bad. The feelings are generated by thinking in unhelpful ways, so this means there are several approaches to breaking the vicious cycle.

Seven mindfulness measures have been developed that are based on self-reporting of trait-like constructs:(14)

- Mindful Attention Awareness Scale (MAAS)
- Freiburg Mindfulness Inventory (FMI)
- Kentucky Inventory of Mindfulness Skills (KIMS)
- Cognitive and Affective Mindfulness Scale (CAMS)
- Mindfulness Questionnaire (MQ)
- Revised Cognitive and Affective Mindfulness Scale (CAMS-R)
- Philadelphia Mindfulness Scale (PHLMS)

#### **4 steps to foster mindfulness(17)**

**Step 1.** Before you begin the activity, pause, take three deep slow conscious breaths. Let the mind be fully engaged in the breath and nothing else for that time

**Step 2.** Focus all of your attention in the present moment. Pretend for the moment that the past and future do not exist. Take awareness to your sense perceptions. Be fully present in the now

**Step 3.** Slowly, with deliberate movements, go about your activity. Make it into a meditative practice but with an intensity of focus

**Step 4.** Remain alert and keep the mind fully attentive to what you are doing in that moment only – not allowing it to slip off into unconscious mind chatter. If your mind does slip off, guide it back to being intensely engaged in what you are doing

### **Tools of the Study**

The trait Mindful Attention Awareness Scale (MAAS) (18) (Appendix 2) is a 15-item scale designed to assess a core characteristic of mindfulness, namely, a receptive state of mind in which attention – a sensitive awareness of what is occurring in the present – simply observes what is taking place, in contrast to the conceptually driven mode of processing, in which events and experiences are filtered through cognitive appraisals, evaluations, memories, beliefs, and other forms of cognitive manipulation.

The trait MAAS has shown excellent psychometric properties. Internal consistency levels (Cronbach's alphas) generally range from 0.80 to 0.90. The MAAS has demonstrated high test-retest reliability, discriminant and convergent validity, known-groups validity, and criterion validity.(18) It taps a quality of consciousness that is related to, and predictive of, a variety of emotion regulation, behaviour regulation, interpersonal and well-being phenomena.

Normative information on the trait MAAS is available for both community adults and college students from the West. In community adults the mean score obtained is 4.20 (standard deviation 0.69); in college students corresponding values are 3.83 (0.70).(18)

A 1-6 Likert scale is used to evaluate responses about 15 day-to-day experiences. The possible responses are:

- 1** = Almost always
- 2** = Very frequently
- 3** = Somewhat frequently
- 4** = Somewhat infrequently
- 5** = Very infrequently
- 6** = Almost never

The mean (average) of the 15 items is calculated. Higher scores reflect higher levels of dispositional mindfulness.

The researcher conducted a survey on mindfulness using the Mindful Attention Awareness Scale in a group of final-year undergraduate students of Engineering from Greater Mumbai.

## **Operational Definition of Terms**

### State of Mindfulness

Mindfulness is defined as being aware moment-to-moment of one's own subjective conscious experience, or –stream of consciousness– of our thoughts, feelings, bodily sensations, and surrounding environment,(1) as measured by the Mindful Attention Awareness Scale (MAAS).(18) It refers to paying attention to self in a particular way: on purpose, in the present moment, and non-judgmentally.

### **Research Questions**

The study was undertaken with the following research question:

- What is the State of Mindfulness in final-year undergraduate students of Engineering?

### **Objectives of the Study**

The study was conducted with the following specific objectives:

#### Descriptive

To find the level of State of Mindfulness of final-year undergraduate students belonging to Engineering

#### Causal-comparative

To compare the State of Mindfulness of male and female final-year undergraduate students belonging to Engineering

### **Hypotheses of the Study**

The following **null hypotheses** were formulated for the study:

1. There is no significant difference in the State of Mindfulness between the genders in final-year undergraduate students of Engineering
2. There is no difference in the average mindfulness score between Engineering students and the general population

### **Methodology of the Study**

The study adopted the descriptive method of the causal-comparative type.

The research included studying students' State of Mindfulness as they exist. It studied these characteristics in the final year, when they will have nearly completed education in their faculty. Hence it is of the descriptive type.

The research aimed at comparing State of Mindfulness on the basis of gender and faculty among final-year undergraduate students of Engineering. Hence, it is a causal-comparative type of research.

### **Sample**

The sample included 136 students who were present on the day of the data procurement, in the final undergraduate year of their professional course (Engineering: B.Tech., n=136). Samples included boys and girls; the distribution reflected their respective representation in their classes and stratification was not done for this purpose.

**Techniques of Data Analysis**

The following techniques of data analysis were used:

1. Descriptive Statistics, including measures of central tendency and variability.
2. Inferential Statistical Techniques
  - i. Student's *t* test for comparison of means between genders and faculties
  - ii. Chi square test for comparison of proportions or trends between genders and faculties

**Analysis and Interpretation**

The sample included 136 students in the final year of B.Tech in Mumbai. The gender distribution is given in Table 1.

**Table 1.** Gender distribution among the sample studied

<b>Faculty</b>	<b>Girls</b>	<b>Boys</b>	<b>Total</b>
<b>B.Tech.</b>	48	88	136

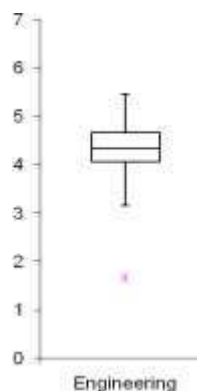
**Descriptive Analysis**

Objective (a) 1. On a range from 0 to 6, the State of Mindfulness of the Engineering students was mean 4.06 (standard deviation 0.74, standard error of mean 0.064), median 4.13 (range 1.67 to 5.80). The statement that received the highest average score (4.78: Somewhat or very infrequently) was —I find myself preoccupied with the future or the past. No statement had an average score below 3.

**Causal-Comparative Analysis**

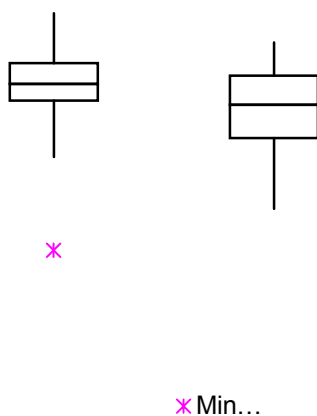
Objective 1

Figure 1 shows the median and interquartile range values, the minimum and maximum values, and the lowest and highest outlier (if any), of the State of Mindfulness of Engineering students.



**Figure 1.** Box-and-whisker plot of State of Mindfulness scores in Engineering students. The graph shows the median and interquartile range values, the minimum and maximum values, and the lowest and highest outlier (if any).

Objective 2. The difference in the State of Mindfulness in female (mean [standard deviation] 4.25 [0.70]; median [range] 4.33 [1.67 to 5.47]) and male (3.96 [0.75]; 4.00 [2.33 to 5.80]) Engineering students was statistically significant ( $p=0.03$ ; Student's  $t$  test for unpaired data), suggesting that female Engineering students had a higher State of Mindfulness than male Engineering students (Figure 6). Thus, Null Hypothesis 5 is rejected.



**Figure 2.** Box-and-whisker plot of State of Mindfulness scores in female and male Engineering students. The graph shows the median and interquartile range values, the minimum and maximum values, and the lowest and highest outlier (if any). Female Engineering students had a higher State of Mindfulness than male Engineering students

**Summary**

The researcher conducted a survey on State of Mindfulness among final-year undergraduate students of Engineering. The observations show a significantly lower State of Mindfulness with the Engineering students as compared to the general population. The Engineering students felt that life is good and that they seldom dwell on the past and the future, indicating a good sync with the definition of State of Mindfulness. In fact, State of Mindfulness was higher among female than male Engineering students.

The findings are listed below.

**Findings**

- Engineering students had a mean score of 4.06 for State of Mindfulness, and stated that they were only somewhat or very infrequently preoccupied with the future or the past.

- Female Engineering students had a significantly higher mean score for State of Mindfulness (4.25) as compared to male Engineering students (3.96).

### **Conclusions**

The Mindfulness among Engineering students is quite high. In a gender-sensitive country such as India. In fact, the State of Mindfulness was higher among female students.

### **Future Studies**

Wider perspectives on these issues can be obtained from similar studies being conducted in

- other institutions with similar faculties
- institutions with other professional and non-professional faculties
- students from the same institutions but from earlier in the undergraduate course studied as cohorts with prospective follow up

### **References**

<https://en.wikipedia.org/wiki/Mindfulness>

Branstrom R, Duncan LG, Moskowitz JT. The association between dispositional mindfulness, psychological well-being, and perceived health in a Swedish population-based sample. *Br J Health Psychol* 2011 Mar;16(2):300-16.

Gu J, Strauss C, Bond R, Cavanagh K. How do mindfulness-based cognitive therapy and mindfulness-based stress reduction improve mental health and wellbeing? A systematic review and meta-analysis of mediation studies. *Clin Psychol Rev* 2015 Apr;37:1-12.

Strauss C, Cavanagh K, Oliver A, Pettman D. Mindfulness-based interventions for people diagnosed with a current episode of an anxiety or depressive disorder: a meta-analysis of randomised controlled trials. *PLoS ONE* 2014 Apr;9(4):e96110.

Khoury B, Sharma M, Rush SE, Fournier C. Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *J Psychosom Res* 2015 Jun;78(6):519-28.

Hofmann SG, Sawyer AT, Witt AA, et al. "The effect of mindfulness based therapy on anxiety and depression: a meta-analytic review". *J Cons Clin Psych* 2010 Apr;78(2):169-83.

Chiesa A. Are mindfulness-based interventions effective for substance use disorders? A systematic review of the evidence". *Subst Use Misuse* 2014 Apr;49(5):492-512.

Bishop SR, Lau M, Shapiro S, Carlson L, Anderson ND, Carmody J, Segal ZV, Abbey S, Speca M, Velting D, Devins G. Mindfulness: A proposed operational definition. *Clin Psychol: Science & Practice* 2004;11(3):230-41.

<http://greatergood.berkeley.edu/topic/mindfulness/definition>

Hick SF. Cultivating therapeutic relationships: the role of mindfulness. In: Hick SF, Bien T (eds.), *Mindfulness and the Therapeutic Relationship*. Guilford Press. 2010.

<http://mrsmindfulness.com/how-you-can-enter-mindfulness-in-4-simple-steps/>

Brown KW, Ryan RM. The benefits of being present: mindfulness and its role in psychological well-being. *J Personality Social Psychol* 2003 Apr;84(4):822.

## OVERUSE OF SMART PHONES BY ADOLESCENTS - AN ACTION RESEARCH

**Dr. Mary Devakumar**, *Asst. Professor, Pillai College of Education and Research, Mumbai*

**Introduction:** Over half a decade, an average individual would wake up and ask oneself ‘what should be done today’ and make a mental to do list and get on with the day.

Today’s netizens wake up asking ‘what have I missed since yesterday night’ and reach out for their mobile phones before reaching out for their toothbrush. Researches worldwide have found that over sixty percent of people touch their mobile phones before doing anything, when they wake up. They need to check their social networking sites - whatsapp, facegroup, twitter, instagram etc. Yes, mobile phones has invaded our lives and that of our children. Parents and teachers often complain and are worried about the continued time spent over social networking sites using a smart phone.

### **Rationale for the Study:**

Mobile phones have become an essential part of daily life since their rapid growth in popularity in the late 1990s. A survey conducted in 2010 shows that mobile phones are the most necessary medium of communication for adolescents and hence has become a part of culture of the whole world.

Most children and youths of today are highly influenced and so much affected by what they watch on these social media sites over the internet that one can easily see the consequences in their academic performance and life styles. It was against this background that the researcher conducted a study of the influence of the overusage of mobile phone ( smart phones) on their achievement in mathematic.

### **Aim of the Study:**

- To study the influence of the overuse of smart phones on the achievement in mathematic of Std IX students of S. V. high school, Mumbai.

### **Objective:**

- To study the duration of daily usage of smart phones by Std IX students of S.V. High School.
- To study the purpose of using smart phones by the Std IX students of S.V. High School
- To study the different apps viewed daily on smart phones by the Std IX students of S.V. High School.
- To study the experience of change in the lifestyles due to smart phones addiction by the Std IX students of S.V. High School.
- To study the influence of overuse of smart phones on mathematical performance of Std IX students of S.V. High School.



**Methodology:**

The mixed method design was adopted and a 25 item questionnaire was administered to sixty five students, 32 boys and 33 girls of a intact class of std IX of S.V. High School Mumbai. A teacher made mathematic test of 20 marks was prepared as per the syllabus was administered. The academic achievement records were taken from the performances in the Ist semester tests and exam of the students. A focused group interview with students and parents were carried out to supplement data collection and bring about authenticity The data collected were analysed using simple percentage calculation. The results showed that overuse of mobile phones has influence on mathematical performance among the students of the class.

**Analysis of the Data**

The 25 item researcher made questionnaire was administered a few significant research questions are selected which reveals certain realities.

- **To study the duration of daily usage of smart phones by Std IX students of S.V. High School.**

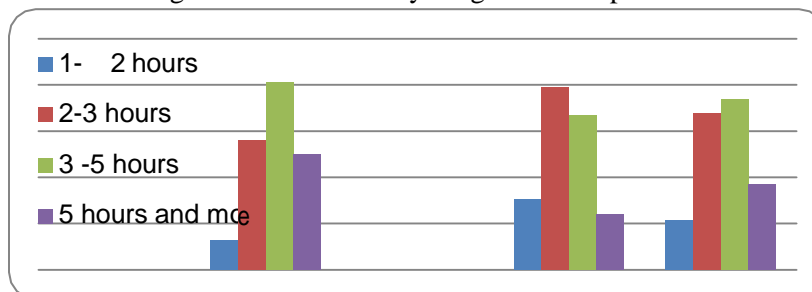
The following table gives the percentage wise distribution of boys and girls w.r.t. duration of daily usage of smart phones

Table 1.: Duration of daily usage of smart phones by TSS.

Duration/day	Boys	%	Girls	%	%Total
1- 2 hours	2	6.25	5	15.15	10.76
2-3 hours	9	28.12	13	39.39	33.84
3 -5 hours	13	40.62	11	33.33	36.92
5 hours and more	8	25	4	12.12	18.46

The result analysis of table 1 shows that 36.92 % TSS spent 3 – 5 hours daily using smart phones. The percentage of boy students using smart phones for 3 – 5 hours was higher than that of the girl students. 10% of the TSS were reported to using mobile phones for 1 -2 hours.

Fig 1: Duration of daily usage of smart phones



□ **To study the purpose of using smart phones by TSS**

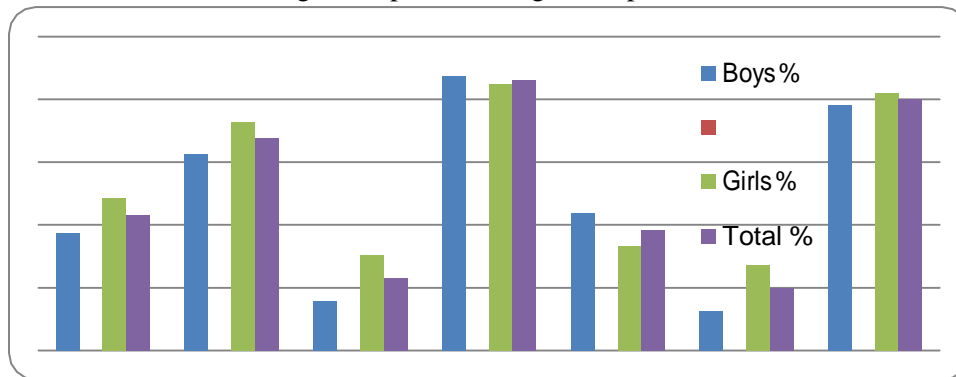
The following table gives the percentage wise distribution of boys and girls w.r.t. purpose of using smart phones

Table 2: Purpose of using smart phones by TSS

	Boys	%	Girls	%	%Total
Finding new friends	12	37.5	16	48.48	43.07
Friendly communication	20	62.5	24	72.72	67.69
Discussing new ideas	5	15.62	10	30.30	23.07
Sharing photos/ forwards	28	87.5	28	84.84	86.15
Getting information	14	43.75	11	33.33	38.46
Discussing online on Social issues	04	12.5	9	27.27	20
Surf the net	25	78.12	27	81.81	80

The above result analysis reveals that 86.15% of students sample used smart phones for sharing photos and forwards, while 6.69% used phones for friendly communication. 20% of the sample used their phones for engaging in discussion of social issues. 80% of the TSS utilised the phone to surf on the net.

Fig 2: Purpose of using smart phones



□ **To study the apps viewed daily on smart phones by TSS.**

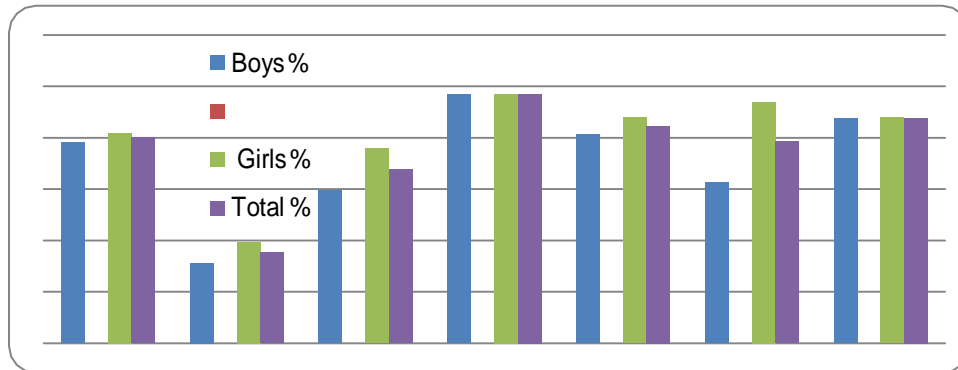
The following table gives the percentage wise distribution of boys and girls w.r.t. Different apps viewed daily on smart phones

**Table 3: Different apps viewed daily on smart phones by TSS**

	Boys	%	Girls	%	Total %
Facebook	25	78.12	27	81.8	80
Twitter	10	31.25	13	39.3	35.38
Instagram	19	59.37	25	75.7	67.69
Whatsapp	31	96.8	32	96.96	96.92
Youtube	26	81.25	29	87.8	84.61
Musical.ly	20	62.5	31	93.9	78.46
Gaming	28	87.5	29	87.8	87.69

The result analysis of table 3. Reveal that the total student sample view different apps on smart phones. The most visited app are whatsapp 96.92% and gaming 87.69%. Twitter is least preferred by the TSS with viewership of 35.38%

**Fig 3: Different apps viewed daily on smart phones**



- **To study the experience of change in the lifestyles due to smart phones addiction by TSS.**

The following table gives the percentage wise distribution of boys and girls w.r.t. the experience of change in the lifestyles due to smart phones addiction by TSS.

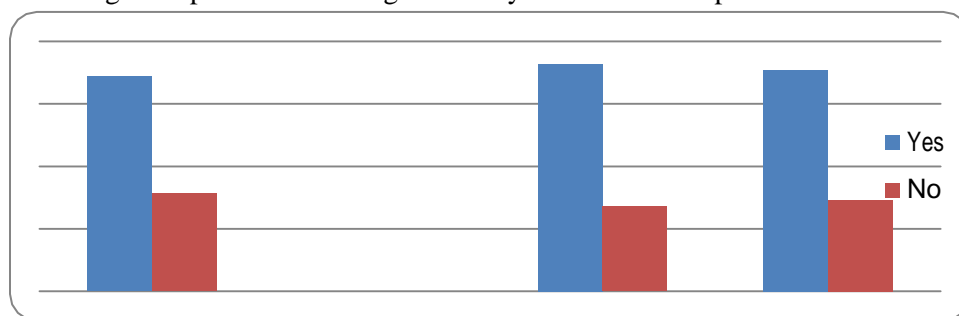
**Table 4.: Experience of change in the lifestyles due to smart phones addiction by TSS**

	Boys	%	Girls	%	Total %
Yes	22	68.75	24	72.7	70.76
No	10	31.25	9	27.2	29.23

Total	32		33		
-------	----	--	----	--	--

The result analysis of table 4 shows that students have experienced a change in their lifestyles and habits and transactions. 70.7% of TSS agree to the fact that they have felt a change in their lifestyle and transaction. 29.2% donot agree that they have experienced a change in lifestyle with usage of mobile phones.

**Fig 4: Experience of change in lifestyles due to smart phone addiction**



**□ To study the performance in Mathematic test of the TSS.**

The following table gives the percentage wise distribution of boys and girls w.r.t. their performance in Mathematic test

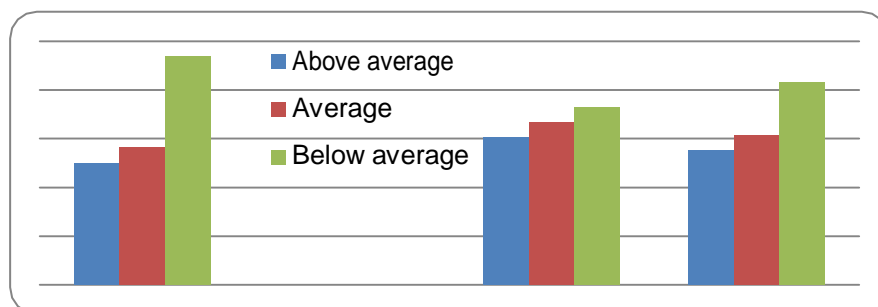
**Table 5: Performance in Mathematic test of the TSS**

	Boys	%	Girls	%	Total %
Above average	8	25	10	30.3	27.69
Average	09	28.12	11	33.3	30.76
Below average	15	46.8	12	36.3	41.53

Table 5 reveals

41.53% of the TSS have scored average, while 30.76% of the TSS has performed below average. 27.69% has reported to perform above average.

**Fig 5: Performance in Mathematic test of Total student sample**



**Discussion:**

The analysis of data reveals a spiraling down of scores in Mathematic test as compared to the I semester test records. Mathematical performance generally involves abilities of focusing, concentration and analytical skills. Researches have shown that addiction or overuse of mobile phones by individuals renders the brain redundant as the individual is involved in passive work ( Fairfield University, 2003). Our ability to memorize and remember is at an all-time low. When faced with a challenge, we tend to pick our smartphones for a dose of instant gratification. This clearly reveals our ability to focus is slowly diminishing , Jackson et al (2014). Haruna, Yunusa, Hadiza ( 2016) .

Accessibility of new apps leads individuals to multitask, a new skill to possess. Researches in this field has shown that multitasking is known to reduce concentration and attention span (WAEC Chief Examiner report, 2014).. There are other health disorders which will be noticeable in the long run, which may also be a factor for poor performance in simple math test.

**Recommendations:**

Since mobile phones are equally important for our transactions in this fast paced life, we can not do away with it. However we can reduce the influence on physical, mental, psychological areas of our life. The research attempts to suggest a few measures

- School should arrange for counselling sessions for the class as well as for parents to deal with mobile phone addiction.
- Teachers should incorporate the harmful effects of continued exposure to radiations through these electronic devices.
- Expert talks and workshops need to organized in schools to enable the studnets to deal with phone addiction.
- Parents need to adopt minimalistic approach in the availability and accessibility of these electronic devices.
- Media and other organisations must join hands to carry out awareness programmes on the long term effects of the hand held electronic devices.

**Conclusion:**

There is a common misconception that action researches are restricted to small groups or closed systems and does not deal with large data and methods. On the contrary, action research can be conducted with reliance on theory and formal data collection. Also larger social issues can also be attempted to bring a change in the status quo or seek to make changes within the existing system. Action researches can be participatory as well as non participatory which aims to seek small-scale localized changes or even large-scale changes.

The trend has changed and action research is known to make meaningful contributions to the larger body of knowledge and understanding. Hence teachers, research scholars should take up budding issues, identify their occurrences and work plausible solutions.

**References**

- Krishnaswamy, Ranganathan( 2006).*Methodology of research in social sciences*. Mumbai: Himalayan publications.
- Kaul L.(2007) *Methodology of educational research*. New Delhi: Vikas Publishing.
- Garett HE( 2006). *Statistics in Psychology and Education*, New York:Longman Green and Co
- Abdul Karim, N. S. & Oyefolahan, I. O. (2009): *Mobile Phone Appropriation: Exploring Differences in terms of Age, Gender and Occupation*, The 6th International Conference on Information Technology and Applications (ICITA 2009)
- Blumenstock, JJ., & Eagle, N. (2010) : *Mobile Divides: Gender, Socioeconomic Status, and Mobile Phone Use in Rwanda*. U.C. Berkeley School of Information Berkeley, CA 94720
- Abdul Karim, N. S. & Oyefolahan, I.O.(2009).*Mobile Phone Appropriation: Exploring Differences in terms of Age, Gender and Occupation*. The 6th International Conference on Information Technology and Applications (ICITA 2009)
- Franzini, C. (2002). *Internet and Society: Social Theory in the Information Age*. New York: Routledge
- Gergen, K.J. (2002) *'The challenge of absent presence'*, in Kats, J.E. and Aakhus, M.A. (Eds.): *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, Cambridge University Press, Cambridge, UK.
- Halpern, D. F. (2003).*Thought and knowledge: An introduction to critical thinking (4th ed.)*. Mahwah, NJ: Erlbaum.[http://www.webopedia.com/TERM/M/mobile\\_phone.html](http://www.webopedia.com/TERM/M/mobile_phone.html) retrieved on August 14th 2015
- Jackson L. A., Zhao Y., Kolenic A., Fitzgerald H. E., Harold R., von Eye A.: *Race, gender, and information technology use: The new digital divide*. *CyberPsychologyBehavior*. 2008;11((4)):437-44

**A STUDY OF PROBLEM OF DISABLED STUDENTS IN INCLUSIVE EDUCATION  
USING INFORMATION TECHNOLOGY AT SECONDARY LEVEL IN PUNE  
DISTRICT**

**Mr. Ilhe Tushar Damodhar, M.Phil (Education)**

**Dr. Vaibhav Jadhav, Savitribai Phule Pune University, Department of Education and Extension**

**Abstract**

*In today's world due to science and Technology we have reached beyond all the boundaries of physical and geographical barriers. Today we can access any kind of information, knowledge of world's corner within a minute. But unfortunately enough to say that there are number of disabled students for inclusive school students to whom these tools of advanced information Technology have multiple problems to use it. With progress in such a direction along with disabled students for inclusive school students is the need of the time to study. When we think about use of advanced Technology for better understanding and information the difference between normal and special students are very important in the study. We cannot go further without understanding these differences. Generally normal student can very easily use all the tools and techniques of advanced Technology to get better information and knowledge. They can access internet and read related sources and other information's. But on contrarily disabled students for inclusive school students cannot read the same material information due to their problem of disabled students for inclusive school. So there should be proper alternative to use same information for the disabled students for inclusive school student. There is not a proper device which can be used as alternative to visual information for disabled students for inclusive school student. The purpose of the study is to make that alternative for the disabled students for inclusive school student. There should be same information in the audio form. So below the visual information there should be one option of audio of the same information. This is the one problem among all the problems of the disabled students for inclusive school students at the Secondary level Education. To study all these problems of the disabled students for inclusive school students the survey sample method will be used to diagnose the whole problem. The mean of the descriptive statistical method will be derived at the final stage. At this stage all the problems of disabled students for inclusive school students will be analyzed and listed with proper solutions. In which it includes Audio-Visual conference will be held under guidance of experts. The trained teachers should be appointed for the proper training. The study will help disabled students for inclusive education schools students and future researchers.*

**Keywords-** *Technology, inclusive education, disabled students, problems, secondary level.*

**Introduction:** Central Government has increased the scope of disabilities type. Government increased type to 21 from 7 and PWD act 2016. So all these 21 categories are considered this research. Types of Disabilities have been increased from existing 7 to 21 and Central Government will have power to add more types of Disabilities Shri Thaawarchand Gehlot addresses the Press Conference Shri Thaawarchand Gehlot, Minister of Social Justice and Empowerment has said that in the —Rights of Persons With Disabilities (RPWD) Bill, the Disability has been defined based on

an evolving and dynamic concept and the types of disabilities have been increased from existing 7 to 21 and the Central Government will have the power to add more types of disabilities.

1. Blindness 2.Low-vision 3. Leprosy Cured persons 4. Hearing Impairment (deaf and hard of hearing) 5.Locomotor Disability 6.Dwarfism 7.Intellectual Disability 8.Mental Illness 9.Autism Spectrum Disorder 10.Cerebral Palsy 11.Muscular Dystrophy 12.Chronic Neurological conditions 13.Specific Learning Disabilities 14.Multiple Sclerosis 15.Speech and Language disability 16.Thalassemia 17. Hemophilia 18.Sickle Cell disease 19.. Multiple Disabilities including deaf blindness 20.Acid Attack victim 21. Parkinson's disease

**Inclusion** - Inclusion in education is an approach to educating students with special educational needs. Under the inclusion model students with special needs spend most or all of their time with non-disabled students. Implementation of these practices varies. Schools most frequently use them for selected students with mild to severe special needs. Inclusion can be defined and evaluated at the level of principles, place, purpose, practice & person.

**Inclusive education** - Inclusion is about school change to improve the educational system for all students. It means changes in curriculum, changes in how teachers teach & how students learn, as well as changes in how students with & without special needs interact with & relate to one another. Inclusive education is a process of enabling all students, including previously excluded groups, to learn & participate effectively within mainstream school systems.

**Disability:** \_\_\_ The impairment becomes disability when it is developed to such an extent that the individual cannot fully participate in the social and vocational pursuits. But this condition does not prevent the individual from overcoming his disabling conditions and through using his/her training in need-based skills to reach the optimum level possible. Societal attitudes make it difficult for these persons to function normally even after need-based skill training.“

— Person with disability | means a person suffering from less than 40% of any disability as certified by the medical authority. |

### **Objectives**

- To search the current status of all-encompassing education based technology for the students.
- To explore the problems faced by students with disabilities based on technology-based learning.
- To analyzing the activities being implemented to solve the problem of students at the school level while implementing technology-based comprehensive education.
- To Search for training to be given to teachers for the development of technology-based comprehensive education for disabled students.

**Hypothesis:** Inclusive Students with disabilities have knowledge about technology-based comprehensive education. At the school level some attempts have been made to tackle the problems faced by people with disabilities by taking technology-based comprehensive education.



**Methods & procedures:** The study all these problems of the disabled students for inclusive school students the survey sample method will be used to diagnose the whole problem. For this study all the disabled students for inclusive school students of the Pune district ICT will be tested. For this study the sample will be 200 Students and 50 teachers related to inclusive school. The questionnaire will be filled form all the disabled students for inclusive school students to understand the problem. The sampling technique used will be purposive sampling technique. The list of various problems will be made after the study of questionnaires. The collected data along with all the problems will be analyzed on the microscopic level. The method of the data analysis will be descriptive statistical method.

### **Results and Discussion**

1. To search the current status of all-encompassing education based technology for the students.

At the problem of Disabled Student in inclusive schools Technology, handling the computer, key board, Problem for the follow teachers instruction, Search online Material.

2. To explore the problems faced by students with disabilities based on technology-based learning.

In inclusive School workshops and training courses are arranged. But them incapable to use dewiest like inclusive Student. They faces Problem to apply online for government job So applicable form should be audio visual from not available on portal. Government portal available audio visual But not use in comfortable in inclusive school students.

3. To analyzing the activities being implemented to solve the problem of students at the school level while implementing technology-based comprehensive education.

Trained teachers only conduct closes on special schools. Different workshops are arranged. They trained to read books online. At school level arrange seminar, workshop, at school level practice based teaching from the inclusive students.

### **Conclusion and Implication of the Study**

In the inclusive education is challenging in India. In India there is lack of infrastructure and trines facilities. If we want to made it inclusive our common effort are needed. Inclusive education schools using sole the technology based problem need for the extra facilities in inclusive education school.

### **References**

- Thombre. V. R.(2013) Comparative study of the Awareness of B.ed and D.ed teacher Educators towards inclusive Education*  
*M.phil Department of Education and extension, Savitribai Phule Pune University*  
*Belapurkar. A. M.(2013) Inclusive practice in Urban and Rural school in Pune a study*  
*Ph.D Department of Education and extension, Savitribai Phule Pune University*  
*Vlavi. N.(2016) Attitude, Self-Efficacy and skills of pre-service cachers towards inclusive Education*

*Ph.D Department of Education and extension, Savitribai Phule Pune University*

**Website**

-[www.google.com](http://www.google.com) – search in Research and online information in blind student history

<http://www.narendramodi.in/rights-of-persons-with-disabilities-bill-2016-passed-by-parliament-533533>

<http://pib.nic.in/newsite/PrintRelease.aspx?relid=155592>

'National Programme for Control of Blindness and Visual Impairment'

<http://npcb.nic.in/index1.asp?linkid=55>

IDEA (Individuals with disabilities Education Act)

<https://www.google.co.in/search?q=intellectual+disability+definition&source>

<https://www.google.co.in/search?q=autism+spectrum+disorder+definition&source>

<http://www.cdc.gov/ncbddd/autism/signs.htm>

[www.rehabcouncil.nic.in](http://www.rehabcouncil.nic.in)

<http://socialjustice.nic.in/>

<http://www.cdc.gov/ncbddd/autism/signs.htm>

<http://socialjustice.nic.in/pwd2011.php>

[www.rehabcouncil.nic.in](http://www.rehabcouncil.nic.in)

<http://socialjustice.nic.in/>

[https://arksped.k12.ar.us/rules\\_regs\\_08/](https://arksped.k12.ar.us/rules_regs_08/)

<https://www.google.co.in/search?speech+and+language+disability+definition>

<https://www.google.co.in/search?q=Hemophilia+disability+definition&source>

<http://www.ideapractices.org/law/regualtions/glossaryIndex.php>

<http://www.ideapractices.org/law/regualtions/glossaryIndex.php>

<https://www.google.co.in/Acid+Attack+victim+definition>

<http://www.webmd.com/parkinsons-disease/tc/parkinsons-disease-topic-overview#1>

## SOCIAL SKILLS ASSESSMENT FOR F.Y.B.A. STUDENTS

**Prof. Hasina Shaikh**, *Assistant Professor, Education Dept., St. Mira's College for Girls*

**Dr. Gargee Mitra**, *Principal I/C, MAEERs MIT School of Education & Research, Pune*

### **Introduction:**

We humans are social animals and most of our human progress has been due to the fact that we are good social interactors. Thus, developing a distinct set of social skills is a foundation of social success.

Though some of the human kind seems to adapt very well to the different social skills very easily, there are still many who need to be coached and guided for handling the different social situations. The good news is that social skills can be developed through practice. Researchers in social skills have always highlighted the importance of non-verbal communication more than verbal communication.

Classrooms are actually the place where social skills are practiced the most by the students. It is in the classrooms that social hierarchies are established and depending upon how well they practice their social skills, the social standing are determined. Apart from this, academic functioning, social skills and problem behaviour are inter related. Social skills equip us with the strategies for forming and maintaining relationships, for solving problems and conflicts with other people.

Social skills are the skills we use to communicate and interact with each other, both verbally and non-verbally, through gestures, body language and our personal appearance.

([www.skillsyouneed.com/ips/social-skills.html](http://www.skillsyouneed.com/ips/social-skills.html))

Social skills is further defined as a proficiency at suggesting desirable responses in others and consists of many competencies like developing others, inspirational leadership, influence, communication, change catalyst, conflict management, building bonds, teamwork, collaboration, etc. In a layman's language, social skills can be explained as the different set of abilities that are necessary to get along with others and also to create and maintain a satisfying relationship.

Social skills are the components of behaviour and are not the same as behaviour. Walker (1983) defines social skills as —a set of competencies that a) allow an individual to initiate and maintain positive social relationships, b) contribute to peer acceptance and to a satisfactory school adjustment, and c) allow an individual to cope effectively with the larger social environment. Prior to deciding the development of social skills among students it is crucial to understand what a student can and cannot do. It is therefore important that educators who value the development of these social skills also need to focus attention on the assessment of these skills.

**Need for Social Skills in college students:**

- Many college going students today struggle to get along moderately with their peers and if this feeling of social failure or social non-acceptance persists for a long time then it may lead to students feeling low, incompetent and non-confident.
- The college students are from the age group where they become career oriented and want to focus on their upcoming job. In the absence of the basic social skills, it would severely limit the quality of work that they would produce in future. We can therefore also state that social skills may predict how well the students would perform at home, educational institution and in the future workplace.
- Researches have shown that students who are socially skilled spend more time on task and more time helping others. This also helps solving classroom problem behaviour and achievement increases.
- A healthy set of social skills among the students shall also lead to a healthy relationship with parents, teachers, friends and all others thus meeting the needs of our pragmatist society.
- By developing our social skills people find us more desirable which shall help students in building strong interpersonal relationships.
- Promoting social skills also helps in promoting our happiness and satisfaction which in turn boosts our self-esteem and reduces our day to day life stress.
- Most job sectors look for employees who are -people smart and they are also ready to give lucrative offers to clients who fit into these employability criteria. These individuals are in high demand as organizations do not just benefit monetarily but also excel in their marketing strategy and can communicate well to their clientele. Thus a good set of social skills is a career success predictor.
- Better social skills results in better communication which results in us relating efficiently to a larger group of people. A person with a well developed social skill finds it very comfortable to communicate his outlook, thoughts or ideas to a larger group of people and even convey his negative thoughts or disagreements to people who may not agree to his / her point of view.

**Consequences of Social Skills:**

**Good Social Skills**

Positive and safe educational environment.

Child resiliency in the face of future crises or other stressful life events.

Students who seek an appropriate and safe avenue for aggression and frustration.

**Poor Social Skills**

Experience difficulty in interpersonal relationship with parents, teachers and peers.

Evoking highly negative responses leading to peer rejection.

Shows signs and symptoms of depression, aggression and anxiety.

Students take personal responsibility for promoting safety.

Demonstrate poor academic performance as an indirect consequence.

Shows higher incidences of involvement in criminal justice as adults.

**Research Question:**

What is the social skill status of the F.Y.B.A. students?

**Statement of the Problem:**

To find the social skill status among the F.Y.B.A. students studying in an English medium under graduation college in Pune city.

**Objective:**

1. To assess the social skill of the F.Y.B.A. students in Pune city.

**Conceptual Definitions:**

**Social Skill:** Socially acceptable learned behaviours that enable an individual to interact effectively with others and to avoid or escape negative social interactions with others (Gresham & Elliott, 1990).

**Operational Definition:**

**Social Skill:** For the present study social skills refers to assessment of the three parameters of Self-awareness, Effective Communication and Interpersonal Relationships in the F.Y.B.A. students.

**Theoretical Foundation:**

Daniel Goleman puts it as -We are wired to connect. Erikson's Psychosocial Theory of personality development emphasizes the interrelationship between social and emotional domains. He emphasized the role of interpersonal relationships in solving a series of conflicts in a person. Vygotsky (1978) highlighted that cognitive functions are connected to the external or social world. Vygotsky explained that children learn in a systematic and logical way as a result of dialogue and interaction with a skilled helper within a zone of proximal development (ZPD). The lower boundary of the ZPD are activities the learner can do on his or her own without the assistance of a teacher or mentor.

Bandura (1965, 1977, 1986), in his theories of social learning and social cognition, theorized three categories of influences on developing social competence: (1) behaviors children and adolescents observe within their home or culture, (2) cognitive factors such as a student's own expectations of success, and (3) social factors such as classroom and school climate.

**Theory of Social Isolation:** Wilson (1987) defined social isolation as —the lack of contact or of sustained interaction with individuals or institutions that represent mainstream society.¶

Hawthorne, G. (2006) defined it as living without companionship, having low levels of social contact, little social support, feeling separate from others, being an outsider, isolated and suffering loneliness.¶

**Review of Related Literature:**

Researchers across the globe have time and again proved that apart from the importance of daily interaction, social skills have a big impact on the child's ability to succeed in an academic setting. The classroom acts both as a training ground for social skills development as well as an arena in which these skills are put to use.

A study conducted by Kristina (2011) studied the measurement of life skill acquisition in the state level sports team participants of age group 9 to 14 years. This study highlighted that life skills learnt in early life are utilized later in life and therefore it is critical that steps are taken to evaluate its effectiveness. This was a mixed method, pre-experimental design and apart from the quantitative measurements, focus group methodology was also used for triangulation purposes. This study highlighted the necessity of formation of life skills in students.

Malecki & Elliott (2002) in their study reported that social skills significantly predict year end achievements.

Another thing research has shown us is that even the best interventions may fall short in achieving desired outcomes without a well-defined, systemic framework, or program, to support it. Such programs embed evidence-based interventions into a larger context that considers cultural and environmental issues that may be important factors in contributing to overall success (Greenberg, Domitrovich, & Bumbarger, 1999; Reed, Feibus, & Rosenfield, 1998).

There are many interventions and programs recommended by researchers that highlight on evidence based resources for social skill acquisition.

Research shows that up to 60% of the meaning in any social interaction is communicated through nonverbal cues (Burgoon & Bacue, 2003); therefore, the skill to actively scan for both verbal and nonverbal cues is important. Social scanning involves the skill to actively observe and recognize both verbal and nonverbal messages from others. This involves the skill to not only actively listen to what other social parties are saying, but also to read between the lines.

**Scope:**

1. This study focuses on the F.Y.B.A. students studying in the under-graduation colleges in Pune city.
2. This study is related to the assessment of only three parameters of social skills – Self-awareness, Effective Communication and Interpersonal Relationships.

**Delimitations:**

1. This study was delimited to the F.Y.B.A. students studying in one under graduation college of Pune city.
2. The data collection for the study has been done using the standardized test (Life Skill Assessment Scale) only.
3. Only three selective parameters of social skills have been considered in this study.

**Limitations:**

1. The assessment of Social Skills is dependent on the truthfulness of the responses given by the F.Y.B.A. students during the study.
2. The researchers had no control over factors like stress, fatigue, family background, socio-economic background, span of attention, interest, etc.

**Research Method:** Survey Method

**Population:** All the F.Y.B.A. students studying in the under-graduation colleges in Pune city.

**Sampling Technique:** Purposive Sample

**Sample Size:** 35 F.Y.B.A. students

**Data Collection Tool:** Standardised Test – Life Skills Assessment Scale (LSAS) developed by Radhakrishnan Nair, B. Subasree and Sunitha Ranjan. This scale consisted of measuring 10 dimensions of life skills and the scores obtained under each life skill represented the level of life skills in the respective domain. After the summation of all the scores under each of the dimensions the global score for life skills can be evolved. For the present study, the researcher considered only the three dimensions of self-awareness, effective communication and interpersonal relationship had been considered.

**Data Analysis Tool:** Percentage

**Data Representation:** Pie - Graph

The data analysis has revealed the following results:

**Observation:**

Majority of the F.Y.B.A. students have been rated average (66%, 63%, 60% respectively) in the assessment of the areas of self-awareness, effective communication and interpersonal relationships from the social skills competencies.

**Interpretation:**

There is a significant training needed in the areas of self-awareness, effective communication and interpersonal relationships.

**Conclusion:**

We know that social skills if developed effectively can be a fundamental reason for better social interactions and also better academic achievements in students. Educators need to take initiatives to design effective need based social skill programs and also evaluate the progress of the students so that we may help them to succeed in their academics as well as life.

**Selected References:**

Huitt, W. & Dawson, C. (2011, April). *Social development: Why it is important and how to impact it. Educational Psychology Interactive. Valdosta, GA: Valdosta State University. Retrieved from <http://www.edpsycinteractive.org/papers/socdev.pdf>*

**DR. A.P.J. ABDUL KALAM ON CREATIVITY AND INNOVATION IN EDUCATION**

**Gaikwad Madhuri**, *M.Phil Research Scholar,*

**Dr. Vaibhav Jadhav**, *Assistant Professor, Department of Education and Extension, Savitribai Phule Pune University, Pune*

**Abstract**

*Education process is transforming us with new innovation through environmental experiences. Many factors are related to this process. A person strive to bring positive change in her/him self. So a person is learning continuously. This world is ever changing and evolving. And we should change according to the need of the today's world. he was the renounce scholar in the world of science and technology. According to Dr. A.P.J. Kalam, education is search for truth. Education is journey towards knowledge and acquisition of knowledge. This journey opens new vision which does not includes, jealousy, hatred, discrimination, disrespect, enmity for others, it makes man a pious human being. Uniformity in brotherhood is the real central theme of this education. Real education increases prestige and self respect of man. If every individual could understand real meaning of education and try to implement it, for his own upliftment for him the world will become a better place to dwell in. Dr.A.P.J. Abdul Kalam depicted his thoughts on educational system in his book —Way beyond the Three. Researcher would like to depict some of his thought from this book, —Those who have ability to think critically, should be allowed to take chances with innovation, they need more freedom and support for their innovative ideas.*

*According to Dr. A.P.J Abdul Kalam (2006), the education system has a tremendous responsibility to transform a child is to a leader- the transformation from \_what can you do for me' to \_what can I do for you?' The most important part of education is inculcating in the students the spirit of \_we can do it'. Education is an endless journey- through knowledge and enlightenment. Real education enhances the dignity of a human being and increases his- or her self- respect and universal brotherhood in its true sense becomes the sheet anchor for such education. The objectives of this research study are to study Scientific Educational thoughts of Dr. A.P.J. Kalam and Study the Scientific Educational Thoughts and classify them accordingly. Case study is the method of research and document analysis is the method used under the case study method. Samples used here for the study are the autobiography and the biography which are specially meant for the scientific research education. Data were collected by the note card. Researcher has specifically used his thoughts in the research for the development of the scientific attitude.*

**Keywords:** *Scientific Attitude, Education, Innovation, Creativity, Scientific Thought.*



**Introduction:**

Education process is transforming us with new innovation through environmental experiences. Many factors are related to this process. A person strive to bring positive change in her/him self. So a person is learning continuously. This world is ever changing and evolving. And we should change according to the need of the today's world.

Dr.A.P.J. Abdul Kalam has given ways to develop scientific attitude among students. He was 11<sup>th</sup> President of India. He was an eminent scholar. Avul Pakir Janulabaddin Abdul Kalam was born on 15<sup>th</sup> October 1931 in Rameshwaram, Tamil Nadu. He was conferred with highest honors of India like Padmabhushan, Padmavibhushan, Bharatratna.

According to Dr. A.P.J. Kalam, education is search for truth. Education is journey towards knowledge and acquisition of knowledge. This journey opens new vision which does not includes, jealousy, hatred, discrimination, disrespect, enmity for others, it makes man a pious human being. Uniformity in brotherhood is the real central theme of this education. Real education increases prestige and self respect of man. If every individual could understand real meaning of education and if he uses it for upliftment of human being in every field then, this world will become a better place to live. Dr.A.P.J. Abdul Kalam depicted his thoughts on educational system in his book —Way beyond the Threel. Researcher would like to depict some of his thought from the above book, -Those who have ability to think critically, should be allowed to take chances with innovation, they need more freedom and support for their innovative ideasl.

**Objective:**

- To study Scientific Educational thoughts of Dr. A.P.J. Kalam
- To Study the Scientific Educational Thoughts and classify them accordingly.

**Methods & Procedure**

Case study is the method for the research and document analysis is the method used under the case study method.

**Results & Discussion**

- Education which is imparted in childhood at the every stage of development of minds is more important than the education received in college and university.
- Education nurtures the child's curiosity about the environment and integrates the thinking process with the skills of hand limb and body. Twelve years of value based education in the school campus are essential to establish an open and transparent society. Emphasis should be on exploration, innovativeness and creativity through activities. At the secondary stage, emphasis should be on experiments, problem solving and team work. All levels of education should ensure the convergence of bio-info-nanoeco education.

**Curriculum:** The concept of curriculum according the Dr. Kalam includes: nano-science biotechnology, IT, Industries and development of creativity, innovation, entrepreneurship and management skills among students other than the regular subjects of study. Universities should

become facilitators for creating entrepreneurship and should introduce a \_syllabus of entrepreneurship' co-ordination and spiritualism and education, the lessons of truth, path of righteousness, service towards others and faith in God should be included in the curriculum.

It is essential that schools and colleges arrange a lecture by a great teacher of the institution once a week for one hour on Indian's civilization heritage. This class can be called moral science class. This will elevate heritage. This class can be called a moral science class. This will elevate the young mind to love the country to love other human beings and elevate the young to higher planes.

**Conclusion and Implication of the Study**

Present research will be useful to teacher and students in teaching learning process. It will also develop spiritual and scientific attitude among teachers and students. After knowing thoughts of Dr. A.P.J. Abdul Kalam, student will get guidance and inspiration on how to live life and student will also get inspiration from his experiences and life-sketch.

**Reference:**

*Kalam Abdul,A.P.J.(1998) .India 2020-A Vision for the New Millennium. Penguin Books India Ltd.*

*Kalam Abdul,A.P.J.Ignited Minds. Penguin Books India Ltd.*

*Kalam Abdul,A.P.J.Wings of Fire. University Press.*

*Qurashi Faruqe. A P J Abdul Kalam. Viajy Goel English- Hindi Publishers.*

*Kalam Abdul,A.P.J. Indomitable Spirit. Rajpal & Sons.*

*Indian Science Congress 2006. Edutrack 2006.*

*Alex George.Thesis (A Study on the Educational Thoughts of Dr. A.P.J Abdul Kalam and its Relevance in the Present Indian School System)*

## INNOVATIVE PRACTICES IN SCIENCE EDUCATION FOR CHANGE IN MISCONCEPTION

Gayatri Rathod, *M.Phil. Scholar,*

Dr. Geeta Shinde, *Assistant Professor, Department of Education and Extension, Savitribai Phule Pune University*

### **Abstract**

*There is a great proverb —Necessity is the mother of invention and if this invention is in the educational field then there is lot of way to improve the teaching-learning process. To dwell in this earthly natural world scientific knowledge or literacy is required to identify the questions their related answers and the conclusion based on it to make it understand. According to the Brown (1994) a 3-4 years of child also has his thinking, creative ideas and thoughts which can help him to understand the world where he dwells. The concept which considered child as a blank slate is day by day coming to an end. The major effect of the science education is to make the child understand the concepts, explain and to classify it which make him to understand by the ease. It can be said that the Concepts of the particular subjects which are construction can be considered as the building block of the knowledge. In this material world student's concepts where seen by their interpretations of the objects and the events where it dwells. It has been studied that the students which he observed in the daily life nearly have concept for all the things which they see, hear and observe in his growth. Many studies are going on, for the identification and ideas of the students which are contradictory to the scientific ideas which is called as the misconceptions. It has been observed that the surrounding where the child dwells see and observed or the books, teaching are the mostly cause of misconception to the students. Objectives of the study are to identify misconceptions and find out reason for misconception in biological concept and use Inquiry Method for conceptual change in school students, method use for the study descriptive survey research method in this descriptive survey method interview tool for understanding students' ideas and misconceptions about Cell structure and micro-organism single quasi research method where use i.e., pretest and posttest. and procedure single quasi research method where use i.e., pretest and posttest, sample schools from the pune (Maharashtra state) from the four direction which have State board syllabus and English medium school., major findings are that the misconception can be change with the use of innovation technique like the Inquiry method and implications of the study is that if tis innovation method used for the teaching the science subject specially the topic can be make it easy and learned with ease.*

**Keywords:** *innovative techniques, inquiry method, misconceptions, science method.*

### **Introduction**

In this 21<sup>st</sup> century emphasis on given on the science education and the technology to the child and this is continuing and rising too. It is for the preparation for life and living in the next century and makes the child to prepare and make understand of the technology and the natural science and nature of the science and their usefulness to the society where child dwells. (Aikenhead, 1990; Council of Minister of Education, 1997; Hodson, 1998).

Since last few decades, science education is on its high priorities and the study and its recommendation for example, influential policy reports recommending comprehensive changes in science teaching and learning were issued by the American Association for the Advancement of

Science, 1993, and the National Research Council, 1996. For scientifically and technologically oriented global economy has been recommendation in the hope o prepares a science educated national work which can work and can stand with the increasing competition for the survival. (Lumpe, Haney & Czemiak, 2000). There are many criticisms which include too dependence on the textbook and its activities, vigorously studying of the theories, rote learning rather than inquiry processes, as well as activity base studying and learning (Driver & Leach, 1993; Loving, 1997). This type of Learning has become burden on the student, which lack of interest in it and meaningless for many students studying it which may lead to misunderstanding for the concept.

The focus of this study is to reduce the misconception of the students' studying in the 8<sup>th</sup> grade science subject by the innovative teaching technique i.e., inquiry method and emerging roles of science teachers in the context of an innovative teaching and learning environment. This study involved the participation of science learner.

**Objective:**

- To identify misconceptions and find out reason for misconception in biological concept.
- To use Inquiry Method for conceptual change in school students.

**Hypothesis**

**Research Hypothesis on objective 1**

- Students of standard VIIth who learn through Inquiry Method will perform significantly better in post –test as compared to pre-test.

**Research Hypothesis on objective 2**

- Students with misconception in topic —Cell Structure and micro-organisms|| class of VIIth who was given Inquiry method teaching will perform significantly better in posttest as compared to pre-test.
- The Inquiry method is effective for retention of science subject content in students with misconception.

**Methods & Procedure**

**Step I:** Identification of students' misconception is an important stage in this study of misconceptions in the science. For identification of students misconception researcher used descriptive survey research method. In this descriptive survey method interview tool for understanding students ideas and misconceptions about Cell structure and micro-organism.

After identifying students misconception through interview and pre-test researcher will analysis textbook for knowing / understanding the sources of students' misconceptions.

**Step II:** *inquiry based learning* researcher will plan scientific knowledge, process of research, open mindedness, ability to balance alternative, co-operative spirit & skill. This will be design conceding the responses given by the students. The design will consist of power point presentation, Activity based study, nuggets, and Project based small videos.

**Step III: Experimental research:** single **quasi research method** where use i.e., pre-test and post-test. Will be conducted to know the effectiveness of the method related to the topic Cell Structure and micro-organisms. The test then analyzed by the statistical technique.

### **Results & Discussion**

The phenomena in more scientific terms and the content of the children's knowledge can be easily studied through the inquiry session which has good impact on the learning of the students which can be said by conducting the Post session interview for describing the phenomena. Students showed an improvement in the conceptual changes which was satisfactorily significant found in observation. After the inquiry session the responses by the interviewees has observed to be change in the scientific terms which eerily was some different. The traditional way of thinking and understanding, given responses have also improved and changed. during the inquiry sessions and by interview-about –instances researcher observed Overall improvement in understanding confirmed both by discussions responses into the extent and precision of the students' knowledge and the fact which students were carrying earlier. Here can be said that there is the replacement or change in the misconception into the scientific knowledge. For example, if compared with the pre and post session interview and questionnaires responses of this study researcher has observed that in the pre-session students mentioned only one or two reasons for their answers but in the post session they mentioned more than one reasons and valid reason has been provided. Advancement in learning science depends on the growing knowledge and the understanding of the content by inputting the sense organ. (Leach & Driver et al 1996). in the study Carey (1985) contemplate the fact that all students have similar cognitive skills in their conceptions and misconceptions the differences can be accounted for in terms of differences in their content specific knowledge schemas which can be changed by the innovative method of teaching and learning. in the study of the Kuhn (1970) has explained that in the process of conceptual change students accept only those conceptions for which they have knowledge base which they has developed in their early stage of learning. By using the innovative teaching method i.e., inquiry method for change in the science concept it has been found that this method is useful for change in the scientific concept.

### **Conclusion and Implication of the Study**

1. For Teacher: the researcher observes in the study that many students possess misconceptions in basic biology concept this may be the upbringing and home environment where the child come from. In some part the text book may also be responsible unknowingly as this increase the rote learning without understanding the concept. Text book concept the theory part and the activity part due to lack of time cannot be completed or taken by the teacher during the class session. the teacher centred traditional method of learning may lead to the misconception as it has been observed that different students have different pase of leering which may lead to the misconception. The use of the innovation and including the students centred activity like The drawing, writing, and mainly oral debate protocols expose student thinking and can make the

concept more easily, it has been in the (Bloom's Taxonomy was created in 1956 under the leadership of educational psychologist Dr Benjamin Bloom it has been observed that promote higher forms of thinking in education, such as **analyzing** and evaluating concepts, processes, procedures, and principles, rather than just remembering facts (rote learning)). for the improve science teaching The science methods have a leading role to play for making the child understand the concept in the positive way in the science teaching-learning process.

Use of innovative techniques: teacher centred Traditional methods of teaching are not sufficient in overcoming student misconceptions in the science learning. It has to be observed that new innovative techniques and models of science instruction must be practiced by teachers such as cooperative learning strategies, Inquiry training model, web-quest etc in the teaching leaning process. In 1989, the Biological Science Curriculum Study (Binghamton University, New York) group developed the 5E Model of instruction. The 5E cycle 1) focuses on major misconceptions, 2) begins with an *'engage'* phase that requires active participation by students, 3) moves to additional phases that develop and expand the information and ideas, 4) but with much of the articulation done by the students, and 5) ends with an *'evaluate'* phase that emphasizes student synthesis and/or application, plus self-assessment, more than grade reports.

1. Curriculum Modification-among the students Misconception may arise when teaching fails to induce a conceptual change during the science session. It has been observed that for prevention of the concept to convert into misconception to consider the logical structure of the subject matter is necessary. It has been observed and advised in various studies that the teacher should take into account the students' prior knowledge of the subject or the topic before delivering the lesson. It has been observed that the students' inability to use concepts in novel situations lead into the formation of the misconceptions it also has been observed that the Students tend to restrict their understanding to the particular context, in which the concept is learned as the method is not found interesting which restrict the learning to change his concept.

2. Development of Innovative Material-for promotion of the effective and meaningful learning, there is the need to identify the causes of such misconceptions and find ways to rectify them for the change in therein misconception, research based material is very important. This may help teachers, and learner to overcome misconceptions and other barriers of understanding especially in the science subject.

### **References**

AAAS Project 2061 (n.d.) [*Pilot and field test data collected between 2006 and 2010*]. Unpublished raw data.

Abraham, M. R., Williamson, V. M., & Westbrook, S. L. (1994). A cross age study of the understanding of five chemistry concepts. *Journal of Research in Science Teaching*, 31(2), 147–165.

Adeniyi, E. (1985). *Misconceptions of selected ecological concepts held by some Nigerian students*. *Journal of Biological Education*, 19(4), 311–316.

Ahtee, M., & Varjola, I. (1998). *Students' understanding of chemical reaction*. International Journal of Science Education, 20, 305–316.

Alsop, S. & Hicks, K. (2003). *Teaching Science*. New Delhi, Vinod Vashistha publishing co.

Gay, L.R. & Peter Airasian (2000) *Educational Research*, New Delhi :Prentice Hall of India Private Limited. P.No. 139

Ahuja, Ram. (2001) *Research Methods*, Rawat Publication P.No. 275,729 Best, J.W. & Kahn, J.V. (2009) *Research in Education*, Ed.10th, New Delhi ; Prentice Hall of India Private Limited .

<http://www.abdulkalam.com/kalam/>

<http://blog.seattlepi.com/monsoonmasala/2009/06/22/my-interview-with-dr-abdul-kalam/>

[http://en.wikiquote.org/wiki/A.\\_P.\\_J.\\_Abdul\\_Kalam](http://en.wikiquote.org/wiki/A._P._J._Abdul_Kalam)

<http://www.vigyanprasar.gov.in/scientists/Abdulkalam/Abdulkalam.htm>

<http://www.bihartimes.in/articles/nalin/kalam1.html>

[https://books.google.co.in/books?id=wpQHBAQAQBAJ&pg=PA372&lpg=PA372&dq=who+is+called+dr.+kalam+is+self+discipline+person&source=bl&ots=N4TfklL1CK&sig=5n0gI0BrjOwP\\_K-](https://books.google.co.in/books?id=wpQHBAQAQBAJ&pg=PA372&lpg=PA372&dq=who+is+called+dr.+kalam+is+self+discipline+person&source=bl&ots=N4TfklL1CK&sig=5n0gI0BrjOwP_K-cPFnf8xzzzLA&hl=en&sa=X&ei=aHg_VdzwNoaRuASj34GAAQ&ved=0CCwQ6AEwAw#v=onepage&q=who%20is%20called%20dr.%20kalam%20is%20self%20discipline%20person&f=false)

[https://www.google.co.in/?gfe\\_rd=cr&ei=iHc\\_VaffMunA8geLvYGwAQ&gws\\_rd=ssl#q=who+is+called+dr.+kalam+is+faithful++person](https://www.google.co.in/?gfe_rd=cr&ei=iHc_VaffMunA8geLvYGwAQ&gws_rd=ssl#q=who+is+called+dr.+kalam+is+faithful++person)

[https://www.google.co.in/?gfe\\_rd=cr&ei=iHc\\_VaffMunA8geLvYGwAQ&gws\\_rd=ssl#q=who+is+called+dr.+kalam+is+faithful++person](https://www.google.co.in/?gfe_rd=cr&ei=iHc_VaffMunA8geLvYGwAQ&gws_rd=ssl#q=who+is+called+dr.+kalam+is+faithful++person)

<http://www.oneindia.com/india/ex-president-dr-apj-abdul-kalam-meets-97-year-old-fan-in-coimbatore-1487594.html>

<http://www.expertsbrain.com/blog/abdul-kalam-books-review/>

<http://www.expertsbrain.com/blog/abdul-kalam-books-review/>

<http://www.quora.com/What-are-some-famous-stories-about-APJ-Abdul-Kalam>

[http://en.wikipedia.org/wiki/A.\\_P.\\_J.\\_Abdul\\_Kalam](http://en.wikipedia.org/wiki/A._P._J._Abdul_Kalam)

<http://www.thehindu.com/news/national/kalam-says-no-leaves-nda-in-lurch/article3542718.ece?mstac>

## **EFFECTIVENESS OF BLENDED LEARNING APPROACH FOR TEACHING A UNIT OF MATHEMATICS**

**Dr. Rekha Chavhan**, *Asst. Professor*,

**Ms Bhindya Ramchandran**, *Department of Education, S.N.D.T.Women's University, Mumbai.*

### **Abstract**

*The 21<sup>st</sup> century is a century for technology because of this the expectations and needs of the learners have changed accordingly. According to the needs of the present learners there should also be change in pedagogies. Pedagogy should have the potential to increase intellectual engagement and foster deep understanding through the development of hands on and minds-on dispositions towards teaching and learning. This can be possible with blended learning approach. Flipped classroom is a blended learning approach of learning wherein the traditional way of teaching and learning is reversed. It inverts the traditional teaching by delivering instruction online outside of classroom and moving homework and discussion into the classroom. It acknowledges that knowledge construction is a complex process; hence it requires teachers and the students to collaboratively build and reflect on learning. Keeping these things in mind present study was conducted to study Effectiveness of Blended Learning Approach for Teaching a Unit of Mathematics. Experimental method was used. One group pre- test post- test design was used. Standard VII Th students were chosen as sample for the study. Program was implemented for a period of one month and its effectiveness was measured in terms of achievement in mathematics and self-regulated learning. It is found that there was increase in achievement and self-regulated learning of students after teaching them through flipped classroom model.*

### **Introduction**

In today's education development of 21st century skill is of pivotal importance. 21st century skills broadens students' knowledge, skills, work habits, and character traits that are believed to be critically important to succeed in today's world, particularly in collegiate programs and contemporary careers and workplaces .Without these skills, students will not be able to successfully participate in the global economy. Development of 21st century skills is possible by integrating ICT in teaching learning process. This can be possible with blended learning approach. Blended learning approach is one of such practice which has the potential to revolutionize teaching and learning. Flipped classroom is a blended learning approach of learning wherein the traditional way of teaching and learning is reversed. It inverts the traditional teaching by delivering instruction online outside of classroom and moving homework and discussion into the classroom. The Flipped Classroom model flips the traditional relationship between class time and homework . Students learn at home via online coursework and lectures, and teachers use class time for teacher-guided practice or projects. This model enables teachers to use class time for more than delivering traditional lectures. In a traditional classroom the students are taught the concept in the classroom and expected to do homework at home whereas in flipped classroom the students will learn the concepts at home and then do the -homework|- which becomes -classwork| in the classroom with the direct help of the teachers. The flipped classroom is a pedagogical model in which the typical



lecture and homework elements of a course are reversed. This definitely does not mean that the teachers work is reduced as the learning material provided to the students, that the students are expected to learn at home are prepared by the teachers. These learning materials include videos, podcasts, screencasts etc. The learning materials used in the classroom for in-class activity must also be taken into consideration- like worksheets, puzzle sheets, quizzes etc.

In a flipped classroom the learning starts from home and again ends at home i.e. first the students watch video at home at their own pace, then they are expected to apply the knowledge in the in-class activity, during this phase the teacher helps the students in case of any difficulty in understanding the concepts or applying the knowledge. Then finally the students are given opportunity to extend their learning at home. It acknowledges that knowledge construction is a complex process; hence it requires teachers and the students to collaboratively build and reflect on learning.

Considering the importance of this approach following study was conducted to enhance student learning. This study was conducted by Ms Bhindya Ramchandran ,M.Ed student of Dept. of Education, SNTD women's University. She is presently working in the department as visiting faculty for M.A Education course.

Title of the Study: Effectiveness of Flipped Classroom Model for Teaching a Unit of Mathematics

Variables of the study: The study has following variables.

Independent variable: Flipped classroom Model

Dependent variable: a. Achievement in mathematics  
b. Self-regulated learning

**Objectives of the Study:**

To develop learning material for flipped classroom model for teaching mathematics.

To study the effectiveness of flipped classroom model for teaching of mathematics in terms of

- a. Achievement in mathematics
- b. Self-regulated learning

To estimate effect size of the treatment on experimental group for

- a. Achievement in mathematics
- b. Self-regulated learning

**Hypotheses of the study:**

The following null hypotheses were formulated.

- There is no significant difference in the pre-test and post-test scores of mathematics achievement of the students of experimental group.
- There is no significant difference in the pre-test and post-test scores for self-regulated learning of the students of experimental group.

Methodology of the study:

For the present study the experimental method has been used. The pre experimental pre test-post test single group design was used. The design is symbolically represented as:

T1                      X                      T2  
Pre-Test              Treatment              Post-Test

Sample: its size, nature and technique:

For the present study the non probability sampling technique has been used. The total sample of fifty seven students was selected through cluster sampling technique. The final sample in the experimental group was thirty five students, as the rest of the twenty two students have remained absent for one or more sessions of the flipped classroom.

**Scope and Delimitation of the study**

- The study dealt with the students of St. Marys High school, Dahanu Road.
- Only the 7th B students of St. Marys High school, Dahanu Road are considered.
- It included school affiliated to SSC board excluding other boards like CBSE, ICSE, IB, IGCSE etc.
- Only English medium students have been chosen for the present study.
- Only one unit of mathematics of standard VII was taught through flipped classroom model.

**Tools for data collection:**

For the purpose of collecting quantitative data the following tools were used by the researcher

- a. Achievement Test
- b. Self-regulated learning Scale (Zimmerman & Risemberg; 1997)

**Data Collection**

For data collection researcher took permission from the St.Mary's High school's principal. After getting permission all the tools were administered on students of VII-A as pre test. The program was implemented for a period of one month (9th Jan 2017- 8 Feb 2017). After completion of the program same tools were administered as post test on the experimental group and after that data was analyzed and conclusions were drawn.

**Data Analysis**

For analyzing this data the researcher made use of t test. It was used to determine if there was significant difference between the pre-test and post-test scores of students' achievement in mathematics and self-regulated learning. The calculated  $t'$  was compared with the corresponding tabulated value of  $t'$  in the distribution table for accepting or rejecting the null hypothesis. For measuring the extent of the effect of the program implemented effect size was also calculated. The effect of the program on achievement in mathematics and self-regulated learning was calculated.

**Analysis of data:**

est has been used to calculate the difference in the pre-test post test score of students. The relevant statistics for significance of difference in achievement in mathematics is indicated in the following table.

Table 1.1

**Significance of Difference in Achievement in Mathematics**

Test	N	Mean	SD	t-ratio	L .O. S.
Pre test	35	4.85	1.71	34.76	0.01
Post test	35	23.91	3.32		

It is observed from the above table that there is a significant difference in the pre-test and post test scores of students of experimental group in mathematics achievement. This implies that the achievement of the students has been increased after the administration of the flipped classroom sessions.

**Significance of difference in Self Regulated learning is indicated in the following table. 1.2**

Test	N	Mean	SD	t-ratio	L .O. S.
Pre test	35	227.8	24.40	9.62	0.01
Post test	35	257.82	25.83		

It is observed from the above table that there is a significant difference in the pre-test and post test scores of students for self-regulated learning . This implies that the self-regulated learning of the students has been enhanced after the administration of the flipped classroom sessions.

**Effect on Achievement**

To obtain the magnitude of the effectiveness of the programme on achievement in mathematics of the experimental group, Cohen’s d was calculated .

The obtained  $d = 7.24$ , is more than the Cohen’s d index 0.8. That means there has been a large effect of this program in increasing the achievement in mathematics of the students.

**Effect on Self-Regulated Learning**

To obtain the magnitude of the effectiveness of the programme on the self-regulated learning of the students of the experimental group, Cohen’s d was calculated.

The obtained  $d = 1.19$ , is more than the Cohen’s d index 0.8. That means there has been a large effect of this program in enhancing the self-regulated learning of the students.

**Findings and Conclusions of the study:**

- There is a significant difference in the pre-test and post test scores of students of experimental group in mathematics achievement. This implies that the achievement of the students has been increased after implementation of flipped classroom model.
- There is a significant difference in the pre-test and post test scores of students for self-regulated learning of the students of experimental group. This implies that the self-regulated

learning of the students has been enhanced after the implementation of the flipped classroom sessions.

- The obtained  $d = 7.24$ , is more than Cohen's  $d$  index 0.8. That means there has been a large effect of the program in increasing the achievement of the students.
- The obtained  $d = 1.19$ , is more than Cohen's  $d$  index 0.8. That means there has been a large effect of the program in enhancing the self-regulated learning of the students.

In conclusion it can be said that the flipped classroom program was effective in enhancing the mathematics achievement of the students and the self-regulated learning of the students.

### **Recommendations**

Teachers can prepare learning materials like screencasts, videos, audios, audio embedded power point presentations etc so that the learners can learn by themselves.

Teachers can identify additional resources for ( pre-class and post-class activities) to enhance students learning. Games on the websites like:

<http://www.sheppardsoftware.com/mathgames/geometry/shapeshoot/VolumeShapesShoot.htm> OR Exploring sites like: <https://www.mathsisfun.com/definitions/volume.html>

Teachers can design different assessment tools like quizzes, puzzles, worksheets etc.

Teachers can ask the students to prepare KWL charts, Mind maps, Concept maps of the topic taught.

### **References:**

- Al-Zahrani, A (2015) *From passive to active: The impact of the flipped classroom through social learning platforms on higher education students' creative thinking*. Retrieved on July 17, 2016 from World Wide Web: <http://onlinelibrary.wiley.com/doi/10.1111/bjjet.12353/abstract>
- Attardi, S., Faden, L., Goldszmidt, M., McLean, S. (2016) *Flipped Classrooms and Student Learning: Not Just Surface Gains*. Retrieved on July 24, 2016 from World Wide Web: <https://www.ncbi.nlm.nih.gov/pubmed/26847257>
- Brame, C., (2013). *Flipping the classroom*. Vanderbilt University Center for Teaching. Retrieved November 12, 2016 from World Wide Web: <http://cft.vanderbilt.edu/guides-sub-pages/flipping-the-classroom/>
- Brown, K (June 2015) *Evaluating student performance and perceptions in a flipped introductory undergraduate biology classroom*. Retrieved on July 12, 2016 from World Wide Web: [http://scholarworks.umb.edu/masters\\_theses/304/](http://scholarworks.umb.edu/masters_theses/304/)
- Chipperfield, J., Dorsett, P., McNally, B. et al. (2016) *Flipped classroom experiences: student preferences and flip strategy in a higher education context*. Retrieved on July 18, 2016 from World Wide Web: <http://link.springer.com/article/10.1007/s10734-016-0014-z>
- Clark, K (2013) *Examining the effects of the flipped model of instruction on student engagement and performance in the secondary mathematics classroom: An action research study*. Retrieved on July 14, 2016 from World Wide Web: <http://search.proquest.com/docview/1437012328/70082D498EB44D25PQ/1?accountid=141537>
- Cobb (2016) *Turning the Classroom Upside Down: Experimenting with the Flipped Classroom in American Government*. Retrieved on July 18, 2016 from World Wide Web: <http://www.tandfonline.com/doi/abs/10.1080/15512169.2015.1063437>

- Enfield, J (2013) *Looking at the Impact of the Flipped Classroom Model of Instruction on Undergraduate Multimedia Students at CSUN*. Retrieved on July 14, 2016 from World Wide Web: <http://link.springer.com/article/10.1007/s11528-013-0698-1>
- Ferriman, J (2014) *6 steps for flipping your classroom*. Retrieved July 27, 2016 from World Wide Web: <https://www.learndash.com/6-steps-for-flipping-your-classroom/>
- Sierra ,H (May 2015) *Students' Experiences in a Math Analysis Flipped Classroom*. Retrieved on July 14, 2016 from World Wide Web: <http://search.proquest.com/docview/1688710068/F34DBD8EB01F493FPQ/1?accountid=141537>
- Smith ,J (2015) *The efficacy of a flipped learning classroom*. Retrieved on July 12, 2016 from World Wide Web: <http://gradworks.umi.com/37/19/3719573.html>
- Wiginton, B (2013) *Flipped Instruction: An investigation into the effect of learning environment on student self-efficacy, learning style, and academic achievement in Algebra I classroom*. Retrieved on July 14, 2016 from World Wide Web: <http://search.proquest.com/docview/1505373684/7F45567B20AA4BCCPQ/1?accountid=141537>

**A STUDY OF LEARNING DIFFICULTIES IN COMPUTER EDUCATION OF STD VIII  
MARATHI MEDIUM STUDENTS**

**Ms. Mamta A. Patil**, Assistant Professor, Pillai HOC College of Education & Research,  
Rasayani

**Abstract**

*Education is the backbone of a nation which plays a major role in the development of modern economies whereas Information Communication Technology (ICT) plays a vital role in imparting education in the modern scenario. Computer education is intended to train students who are generally unfamiliar with computers to use a computer for useful tasks. Most of the Std. VIII Marathi medium students passing their examinations from Municipal schools are not aware of the computer education. Many of the Municipal schools fail to provide computer education to the students till Std. VII due to various problems. Compared to the students of English medium, the students of Marathi medium while operating computer shows lack of confidence and their performance level is much lesser than those of English medium students. The need of the global education requires highly qualified and well trained computer professionals, so the schools should train and educate the Marathi medium students to develop their computer skills and contribute to the wealth and health of the society, community, country and world. This paper studies the learning difficulties of Marathi medium students who are introduced to Computer Education in Std. VIII and the reasons behind it. By identifying and removing the learning difficulties of Marathi medium students with regard to computer learning, the researcher wants to develop their computer skills.*

**Introduction:**

—There can be infinite uses of computer and of new age technology, but if the teachers themselves are not able to bring it into the classroom and make it work, then it fails.¶

Nancy Kassebaum, U.S. Senator

Education in India is in a process of change. The manner of teaching has changed from a product/content-centered approach, to an outcomes/learner-centered approach where specific outcomes and not retention of knowledge is the key aspect.

Computers have become increasingly important in all aspects of our daily life and professional fields, therefore, the reliance on computer education increases at a faster rate. Computer education is intended to train students who are generally unfamiliar with computers to use a computer for useful tasks.

As far as the computer education is concerned the students need not be language dependent but to understand the basics of computer education he/she should be capable to cope up with the computer system.

We regularly find that most of the Std. VIII Marathi medium students passing their examinations from Government / Municipal schools are not aware of the computer education. Many of the Government / Municipal schools failed to provide computer education to the students till Std. VII due to State norms or Socio economic problems.

Computer education has the potential to play a vital role in the new outcome – based education system. So the need of the global education requires highly qualified and well trained computer

professionals, so as to train the Marathi medium students so that they can develop and contribute to the wealth and health of the society, community, country and world.

This study intends to show that the current method of teaching computer to the Std. VIII Marathi medium students is not meeting the true goals of computer education. Computer education can be redesigned to eliminate many of the problems faced by the Marathi medium students and can make continued computer learning, both in formal settings (i.e. classes) as well as informal settings (i.e. friendly advice), more educational, useful, and successful.

### **Operational Definition**

It is important to define all unusual terms that are used in the statement of the problem that could be misinterpreted. These definitions help to establish the frame of reference with which the researcher approaches the problem. The operational definitions of the terms are as follows:

**Learning difficulties:** It means the problems faced by the Marathi medium students while learning computer education in Std. VIII in understanding the English language, computer programs, applications and multimedia skills.

**Computer Education:** It means teaching fundamentals/basics of computer like different parts of computer, types of computer, hardware, software, programs, applications and multimedia skills to the students as one of the subjects.

**Marathi Student:** The student whose mother tongue is Marathi and is studying in Marathi medium school.

### **Need and Importance**

Technology has the ability to enhance relationships between teachers and students. When teachers effectively integrate technology into subject areas, students develop interest in learning. It helps to make teaching - learning process more meaningful and fun. Therefore there is a strong need to study the learning difficulties of Marathi medium students, because their mother tongue and spoken language is Marathi and computer is more or less based on English language. By identifying and removing the learning difficulties of Marathi medium students with regard to computer learning, the researcher wants to develop their computer skills.

### **Research Question**

To what extent is English language a learning difficulty in computer education among Marathi medium students?

### **Objectives**

To study the learning difficulties faced by the Marathi medium students in computer education because of English language.

To study the learning difficulties faced by the Marathi medium students in computer education because of teaching methodology.

To study the learning difficulties faced by the Marathi medium students in computer education

because of their Municipal school background.

To analyze the learning difficulty levels of Std. VIII Marathi medium students.

To compare the learning difficulty levels among the girls and boys of the Std. VIII Marathi medium students.

### **Scope**

The scope of the study is to identify learning difficulties of the Std. VIII Marathi medium students (boys & girls).

This study is expected to contribute significantly towards highlighting the need for Municipal schools to provide Computer Education to the Marathi medium students beginning from Std. I. This study would also give an insight into levels of learning difficulties found in students (girls and boys) of Std. VIII Marathi medium.

### **Delimitations**

This study is limited only to Std. VIII Marathi medium students from Central Mumbai region schools. The study does not involve teacher's view points and difficulties faced while teaching computer education to the Std. VIII Marathi medium students.

### **Review of Literature:**

Nandhini Manivannan. (2005) explains in her study *'Computer Assister Language Learning for Vernacular Medium Students of Engineering Colleges'*, how to equip the students from vernacular medium schools to acquire skills of effective communication through the help of modern teaching aids. It was found that Students have handicap in comprehending the all English syllabus, it also crucially undermines the student's ability to communicate with teachers and peers and computers can develop the communicative skills at the own pace of the learners

Wighting MJ (2006), has used a mixed method design to determine how far the use of computers in the classroom affects the sense of learning in a community among high school students. The main objectives of his study were to study how do high school students describe classroom community and its importance for their learning and what are the factors student consider to be important for the development of a sense of classroom community.

Michael Trucane (2009) has reviewed the progress of computers in secondary schools, and noted that the challenges that India currently faces related to providing universal access to a relevalent and quality education for everyone and the solutions it deploys to meet such challenges are of increasing interest and relevalence to people around world. This is especially true as it relates to the use of ICT to meet a variety of educational and developmental objectives.

### **Research Methodology**

The method of investigation adopted for the present study can be categorized as *'Descriptive Survey Method'*. The tool used by the researcher to collect the data was a *'Questionnaire'*. In fact, the use of Interview technique along with the questionnaire would be more appropriate, as



interview enables the researcher to explain the purpose and meaning of questions to get valid responses, in revealing the reasons for actions, feelings and attitudes of the subject under references. Moreover, interview permits exchange of ideas, creates a friendly atmosphere thus resulting in more reliable information. However, this technique of interviewing being time consuming the researcher had to restrict to only one tool i.e. the questionnaire. For trial, the questions were tried on few students to remove ambiguity and to find out whether the questions were relevant and within the pupil's reach.

### **Data Collection**

After selecting the final tool the next stage was of collecting data. This stage involves the actual collection of the information required for the purpose of the study. Collection of data is of vital importance in the entire research process. Moreover data collected should be adequate, authentic and reliable so as to ensure that the findings of the research would be reliable and valid.

In order to collect information from the students of Std. VIII, Marathi medium studying in different schools of Chembur, researcher met the school authorities personally by prior appointment and requested permission for gathering data.

On the appointed day and time, the researcher, with her tools went to the class, explained the purpose of research and appealed to the students to answer the questionnaire carefully. The researcher also explained the procedure of responding to the tools, clarified the doubts of the students if any and motivated them to fill up the forms completely.

The researcher found it to be more convenient to read each question aloud and make the whole class answer it simultaneously. This avoided confusion and discussion among the students and it gave a better insight into the question. Time duration was thirty five minutes to answer the questionnaire. The students were very co-operative and answered the questionnaire which was then collected back from the students.

The support, the response and the interest shown by some of the Principals were overwhelming and encouraging which encouraged the researcher moving ahead.

Thus the tool was administered in the following three different schools in Chembur area:

AFAC English & Marathi High School

Chembur High School

Marathi Madhyamik Shala

### **Validity and Reliability**

Content validity was obtained. The reliability was found by the test-retest method. The result of the test-retest method was 0.68. Hence, the tool was considered to be reliable.

### **Analysis of Data**

The collected data was classified into tabular format. The responses were then utilized for calculating percentage. According to the percentage, the researcher was able to interpret the given data.

Further the researcher used those percentages to draw graphical representation of the given data. For the comparison of the response collected from the students (boys and girls), the researcher used Bar Graph. The graphical representation helped the researcher to draw inferences for the present study.

### **Findings of the Study**

The major findings of the study are as follows:

The assumed learning difficulties in computer education were found more significant among the Marathi medium students coming from municipal schools.

The obtained response showed minimal learning difficulties in the case of the students who were studying in High Schools from the beginning.

### **Educational Implications of the Study**

In order to enhance the interest of the students in computer education, everyone involved in the educational field – the school, the principal and teachers should make positive effort in providing the computer education to the Marathi medium student.

The school should also design an innovative teaching-learning methodology which will be more project/practical based than theoretical, helping in creating conducive and joyful learning experience for the students.

### **Recommendations**

The researcher would like to make some recommendations to improve some of the existing conditions:

Government should make computer education a compulsory subject beginning from the Primary section in all Marathi medium schools.

The teachers who give computer education to students need to be trained, so that they are able to explain the concepts and technical terms clearly to the Marathi medium students. Advanced training for computer teachers could enhance the quality of education for students.

The school should design time-table in such a manner that there should be at least two periods for computer education in a week.

The students do not get access to computers because most schools do not have sufficient computers in their lab. The quality education could be given to students if adequate numbers (minimum 10) of computers are installed in the computer lab.

The school must also be able to provide time for practical sessions for computer education once in a week. This will help the student to understand the concept and will help to get the required skills.

The school should take extra coaching for English language so that the students' understanding level increases and does not have any difficulty while studying computer education.

### **Suggestions**

We see that the term learning difficulties is much a complex term and with all the important

values within, it needs a greater insight and research in the problems faced by the Marathi medium students while learning computer education. Thus the following are a few recommendations which can be taken in hand for further research study:

A comparative study of learning difficulties in Computer Education of English and Marathi medium students.

An investigation into the problems faced by students in computer education.

A study of relationship between teaching methodology and students understanding level.

A study of the facilities provided by the school for computer education.

A comparative study of the interest in learning computer education in boys and girls.

A study of relationship between Marathi medium students from high school and municipal schools.

### **References**

#### **Websites:**

<http://www.eric.ed.gov>

<http://www.ericdigests.org/2001-2/urban-internet.html>

<http://www.google.com>

[www.educomp.com/News/NewsText.aspx?id=37](http://www.educomp.com/News/NewsText.aspx?id=37)

[www.tn.gov.in/matricsyllabus/primary.pdf](http://www.tn.gov.in/matricsyllabus/primary.pdf)

<http://upetd.up.ac.za/thesis/available/etd-03302005-145607/>

[http://www.brainware-india.com/about\\_us\\_achievements.html](http://www.brainware-india.com/about_us_achievements.html)

<http://www.amadergramonline.net/publications/KT4D-SecondaryEd.pdf>

<http://archives.chennaionline.com/education/News/2004/09news30.asp>

<http://hagar.up.ac.za/catts/dissertations.html>

<http://upetd.up.ac.za/thesis/available/etd-12022004-100710>

[http://www.physiciancareernetwork.com/birkman\\_reliability.pdf](http://www.physiciancareernetwork.com/birkman_reliability.pdf)

Books:

## USING ACTION RESEARCH TO ENHANCE ZOOLOGY TEACHING LEARNING PROCESS AT THIRD YEAR BSC COURSE.

**Rupali Vaity**, *SIES College of Arts, Science & Commerce, Sion West*

### Abstract

*The main objective of the study was to implement an action research strategy to improve teaching learning process in the subject of Zoology at third year BSc degree course. The present paper aims at understanding:*

- *The levels of intellectual challenges included in the traditional activities used for laboratory instructions.*
- *The levels of intellectual challenges included in the redesigned activities used for laboratory instructions.*
- *Relationship between activities enjoyed by the students and those that enhance their learning*

*The major findings of the study were:*

- *The result of the analysis of the review of the activities and exercises in the recommended Zoology Practical syllabus showed that all the exercises and activities were predominantly at the lower cognitive levels of Blooms Taxonomy of educational objectives.*
- *The result also showed that the mean achievement score of the students taught with the redesigned course materials was significantly higher than the mean achievement score of those taught using the traditional course materials.*
- *There was significant correlation between activities enjoyed by students and those that enhanced their learning.*

*Keywords: Action research, Zoology, Third year BSc cour*

### Introduction

Action research is a qualitative research technique (Denzin & Lincoln, 2000), using methods including observation, field notes, interviews, questionnaires, sociometry, archival data (e.g. documents), artifacts, and self reporting (e.g. journal entries) (Hopkins, 1993; Mills, 2000). The basic assumption is that people learn and create new knowledge out of personal experiences through reflection, then formulate abstract conceptions and generalizations. These are then applied to new contexts and situations (Zuber- Skerritt, 1992b). —Action research projects are always case studies! (Hermes, 1999, p. 203) because they focus on local context and action, and thus any generalizations relate only to that situation.

Zoology is a scientific study of anatomy, physiology, behavior, habitat, genetics and classification of animal. In the subject of zoology students learn various aspects of animals in theory lectures conducted in class rooms or laboratories or they perform practicals related to these aspects in the laboratory or field. The zoology laboratory activities include observation of specimens, live or preserved, observation of permanent slides, preparation of temporary mountings, performing practicals related to physiology, behavior, genetics and ecology. These activities are very important and valuable, they have not consistently included higher levels of intellectual challenges. It was observed that, the practical course work in zoology, learning was typically evaluated by

performance of the students based on results of practical examination at the end of semester which includes submission of field reports, submission of their practical work in the form practical journal and marks given to them by examiners based on their actual performance of the practical in the laboratory, where students essentially had to regurgitate rather than use and synthesize information. However Bloom's taxonomy suggests that the development of cognitive ability is hierarchical, progressing from simple understanding to application and synthesis of that knowledge, and that performance tasks undertaken by students should reflect the range of cognitive skills (Reed & Bergemann, 2001). Hence the author felt the need to reconsider teaching zoology laboratory section, using action research approach.

Effective zoology teaching involves enabling students to develop a deep understanding of the materials they are studying. This can be achieved through a variety of thought-demanding tasks (Levin & Nolan, 2000), including having student explain concepts in their own words, making predictions, drawing diagrams, finding exemplars in new contexts and applying concepts to new situations (Brandt, 1992). Zoology is a subject that cannot be taught in four walled class rooms and laboratories. It requires students and teachers to move outside the class room and explore the subject on field.

One way to encourage students to achieve a deeper understanding of course materials is to facilitate higher levels of learning by increasing the intellectual challenge of the tasks requested in student assignments and activities. This can be achieved by the use of Bloom's taxonomy, where the use of activities that can be associated with specific verbs correlate with higher levels of intellectual challenge, such as the use of —findll, a knowledge term, versus —classify, an analysis term with a higher expectation of intellectual challenge. Studies of student learning in higher education in the United States have tended to focus on learning-oriented behaviors and their relationship to grade and performance-oriented behaviors (Cross & Steadman, 1996). In contrast, there is a rich body of research by scholars in the United Kingdom and Australia that have concentrated on studying deep and surface approaches to learning by students (Prosser & Trigwell, 1999). A surface approach is characterized by an attempt by learners to reproduce information, a concern for grades and course requirements, and is characterized by minimal mental effort. In contrast, a deep approach relies on relating new information to existing knowledge, the application of new information to new contexts and on the creation of meaning (Cross & Steadman, 1996). This deep approach correlates to Bloom's taxonomy, in that moving tasks beyond a knowledge level to application, comprehension, analysis and synthesis will encourage learners to move beyond that surface approach. There is a clear relationship between teaching strategies and student learning, with students adopting deep approaches in classrooms that are more student-centered (Prosser & Trigwell, 1999). Students with a deep approach to learning and who were shown to have a solid initial grasp of subject matter tended to be more successful than students with poor

initial conceptual development who used a deep approach, or groups that used a shallow approach to learning (Prosser, et al, 2000).

Method:

Action research was conducted in teaching learning process for Third year BSc students. The course work for third year BSc zoology involved two semesters- semester v and semester vi. The course work included four theory papers and four practical components. Action research was applied for both the semesters. However it was not possible to apply action research for all the four practical components and hence only one paper (practical 4) was used for application of action research in both the semesters.

The action research was conducted for two consecutive years which involved one cycle of the action research study. In the first year that is academic year 2014-15, the practical course work of paper 4 was studied carefully and analyzed with respect to Bloom's taxonomy. Students were subjected to traditional teaching learning process. In the second year of the study that is academic year 2015-16, the practical course work of paper 4 was redesigned with respect to Bloom's taxonomy. Students were subjected to redesigned course work. Students feedback regarding their approach towards the activities in the practical component 4 was analyzed with the help of questionnaire in both the academic years.

Practical 4 semester v course work taught by traditional method include following activities:

- Rapid field tests for sulphates, nitrates and base deficiency of soil samples.
- Determination of carbonates in soil by rapid titration

In above to experiments soil samples were provided to the students by the teachers. The soil samples were tailor made that is they were adulterated in the beginning only so as to get positive results. Students had to simply perform test there was no other analytical task involved in these practicals. They had to simply perform the experiment mechanically.

- Analysis of community by working out ecological indices using line transect method and quadrat method.

The above experiment was conducted in the laboratory itself wherein actually the experiment needs to be done in field.

- Study of interaction between organism: social organization in honey bee, termite, hanuman langur and asian elephant.
- Study of fauna of different zoogeographic regions.

The above experiment is a simple observation task, wherein students don't have to apply any analytical skills.

- Temporary preparation of head and mouth parts of mosquito

Specimens of mosquito are provided by the teachers, students have to simply mount the mosquito head and identify the mosquito species.

- Biostatistics: From the given data: make frequency distribution table, plot frequency polygon, histogram, derive mean and standard deviation, plot bar diagram and pie diagram. Problems were given to the students from previous years practical journal and they had to simply work on data provided to them.

Redesigned course work of practical 4 semester v included following changes in the way the practical was conducted for the students by the teacher

- The title of the practical was changed to Analysis of soil for sulphates, nitrates, base deficiency and carbonates by rapid field test. The practical was announced one week before the commencement and students bought soil samples from various sources and analyzed in the laboratory.
- The practical on community analysis was first performed in the laboratory using hypothetical field and then students were taken on actual field to find out ecological indices using line transect method, quadrat method and point count method. Here apart from finding ecological indices, students had to perform an extra task of identifying the animals on field.
- The activity on study of social organization in honey bee, termite, hanuman langur and Asian elephant was conducted in the laboratory, and then students were told to make a report on any one animal interaction they studied in natural environment.
- The redesigned activity on study of fauna of different zoogeographical regions was conducted in the class room in a different way. Instead of teacher teaching and explaining all zoogeographical regions, students were divided into groups and each group was made to give power point presentation of one zoogeographical region.
- The temporary preparation of slide of mosquito mouth parts was redesigned so that students bought mosquito samples from the areas where they resided and analyzed the type of mosquito species most commonly found in their area. They were then supposed to make a survey on the mosquito borne diseases in their area.
- Biostatistics problems were taught to the students with the help of examples that were present in their journals. Students were then supposed to conduct a survey and prepare a report of it using various biostatistics tools they had studied.

Practical 4 semester vi course work taught by traditional method include following activities:

- Study of physical properties of water—turbidity and conductivity
- Study of chemical properties of water--- total acidity, total alkalinity, COD, heavy metal-copper, nitrate and nitrite nitrogen
- Study of present status, distribution, habitats and reasons for decline in India of some animals
- Identification of permanent slides/ specimens of plasmodium, ascaris, wuchereria
- Biostatistics: Application of Z test, t test, Chi square test
- Use of spreadsheet program in biostatistics.

Redesigned course work of practical 4 semester vi included following changes in the way the practical was conducted for the students by the teacher

Title of the practical was changed to analysis of physical and chemical properties of water samples from different areas. In this activity, student bought water samples from various sources and the samples were then analyzed by them in the laboratory.

The activity on study of present status, distribution, habitat and reasons for decline in India of some animal was redesigned where students were made to gather data from newspapers and other means and present the topic in front their class.

The activity on identification of permanent slides/ specimens of plasmodium, ascaris and wuchereria was redesigned wherein students had to analyze many blood smears and identify whether the slide was malaria positive or not.

Problems in biostatistics were solved using regular problems from the journal and then students were given task wherein they had to collect data on the health status of the students within the college premises, formulate the hypothesis and apply any of the biostatistical test for analysis of the data

Practical 4 semester vi course work taught by traditional method include following activities:

- Study of physical properties of water—turbidity and conductivity
- Study of chemical properties of water--- total acidity, total alkalinity, COD, heavy metal-copper, nitrate and nitrite nitrogen

Water samples were provided by the teachers and the samples were tailor made so as to get positive results. The experiments were performed by the students mechanically by the students, there was no intellectual tasks involved in the experiment.

- Study of present status, distribution, habitats and reasons for decline in India of some animals
- Identification of permanent slides/ specimens of plasmodium, ascaris, wuchereria

The above experiment was simply observation based.

- Biostatistics: Application of Z test, t test, Chi square test
- Use of spreadsheet program in biostatistics.

Problems were provided by the teachers in from the previous years journal, students had to simply solve the problems based on the data provided.

Redesigned course work of practical 4 semester vi included following changes in the way the practical was conducted for the students by the teacher.

Title of the practical was changed to analysis of physical and chemical properties of water samples from different areas. In this activity, student bought water samples from various sources and the samples were then analyzed by them in the laboratory.



The activity on study of present status, distribution, habitat and reasons for decline in India of some animal was redesigned where students were made to gather data from newspapers and other means and present the topic in front their class.

The activity on identification of permanent slides/ specimens of plasmodium, ascaris and wuchereria was redesigned wherein students had to analyze many blood smears and identify whether the slide was malaria positive or not.

Problems in biostatistics were solved using regular problems from the journal and then students were given task wherein they had to collect data on the health status of the students within the college premises, formulate the hypothesis and apply any of the biostatistical test for analysis of the data

The objective of the study was:

- To compare the course work of TYBSc practical 4 of both the semesters taught by traditional method and redesigned method using Bloom's taxonomy
- To analyze the questionnaire given to the students in order to understand whether there is a correlation between their learning preference and enjoyment preference.

**Results:**

Comparison of laboratory activities and tasks taught by traditional method and using redesigned course work of practical 4 in both semester v and semester vi was done by content analysis. There are different approaches to content analysis, including word counts in which the incidence of particular words are counted in a text to indicate the emphasis adopted by the author, and this approach was used in this project in the following manner. Each of the laboratory handouts were content analyzed for the tasks that students were required to undertake by counting the number of times particular verbs were used. Words with a similar intention were categorized together. Based on the results of the content analysis, the number of times a verb in a category was used in the practical journal was plotted for each traditional and redesigned laboratory activity

In all cases, the redesigned labs contained a greater range of tasks and categories, in comparison to traditional activity. The traditional laboratory course work focused on observation, identification and manipulation of the activity, Whereas the redesigned course work emphasized on activities involving higher intellectual levels.

Levels in Bloom's taxonomy and associated verbs (Reed & Bergmann, 2001) were used as the basis for further textual analysis, counting the number of times particular verbs were associated with a particular level in the taxonomy. Using Bloom's taxonomy the total range of tasks (i.e. all the verbs used in the Laboratory journal) were classified into the six levels in Bloom's taxonomy, namely (a) knowledge, (b) comprehension, (c) application, (d) analysis, (e) synthesis, and (f) evaluation. For instance, the—manipulatel examples were then included in Bloom's —applicationl category. These data were transformed into percentages.

### **BLOOM'S CLASSIFICATION**

As illustrated in the graph, in general the course work for practical 4 for both the semesters, the frequency of direct observation (Bloom's level 1) has remained same throughout because zoology is a subject which cannot be studied without observations. However there was increase in the range of tasks, including planning, experimenting, hypothesizing, analyzing data from a total of 7.4% Bloom's levels 2 and 3 in the traditional activities, to a total of 20.3% for Bloom's levels 2 and 3 plus 10.2% in Bloom's levels 4, 5, and 6 in the redesigned activities.

Student ratings of activities

Student average ranks for learning preference and enjoyment preference in academic year 2014-15 and 2015-16 were as follows:

Academic year    2014-15                      2015-16

Ranking for preferred learning     $W = 0.521, p = 0.000$        $W = .391, p = 0.000$

Ranking for enjoyment of activities       $W = 0.482, p = 0.000$        $W = .451, p = 0.000$

Kendall's coefficient of concordance showed that there is an overall similarity between student ranking of preferred learning activities as well as for activities rated for enjoyment for both the academic years.

Spearman's rank order correlation showed that the overall ranking of the two categories is significantly correlated for both the academic years

Academic year

2014-15

2015-16

Spearman's rank order correlation      = 0.697,  $p = 0.01$                       = .871,  $p = 0.01$

The high correlations showed that overall students felt they learned more from activities they enjoyed, and conversely, that they learned less from activities they did not enjoy. While the overall rank orders differed between academic year 2014-15 and 2015-16, there is a strong correlation between the two years for both rank preferences of activities for learning and activities enjoyed.

### **Discussion:**

The action research carried out for TYBSc practical 4 course work for both the semesters indicated a number of changes that need to be made in instruction in order to enhance student learning. The results indicate that the revised course work involved students in performing tasks with a higher level of intellectual challenge, as indicated by the increase in higher Bloom's taxonomy verbs determined by content analysis of the original and revised activities. Additionally, there was a decrease of 21.2% in the use of terms from Bloom's level 1, the knowledge terminology. It may be possible to further increase the use of higher levels of intellectual challenge, and further reduce the reliance on knowledge terms (93.7% of original activities) by revising other activities in the next cycle of action research

**References**

- Brandt, R. (1992). *On teaching for understanding: A conversation with Howard Gardner*. *Educational Leadership*, 50, 4-7.
- Cross, K.P., & Steadman, M.H. (1996). *Classroom research: Implementing the scholarship of teaching*. San Francisco: Jossey-Bass.
- Denzin, N. K., & Lincoln, Y. (Eds.) (2000). *Handbook of qualitative research*. Thousand Oaks, CA: Sage Publications.
- Hermes, L. (1999). *Learner assessment through subjective theories and action research*. *Assessment and Evaluation in Higher Education*, 24, 197-204.
- Hopkins, D. (1993). *A teacher's guide to classroom research (2nd ed.)*. Buckingham, United Kingdom: Open University Press.
- Jennifer .L. J (2005). *Action research implemented to improve Zoology laboratory activities in a freshman biology majors course* : *Electronic journal of science education* Vol. 9, No.4
- Levin, J. & Nolan, J.F. (2000). *Principles of classroom management: A professional decision-making model*. Needham Heights: Allyn & Bacon.
- Prosser, M., & Trigwell, K. (1999). *Understanding and learning in teaching: The experience in higher education*. Philadelphia, PA: Society for Research into Higher Education & Open University Press.
- Prosser, M., Trigwell, K., Hazel, E., & Waterhouse, F. (2000). *Students' experiences of studying physics concepts: The effect of disintegrated perceptions and approaches*. *European Journal of Psychology of Education*, 15, 61-74.
- Reed, A. J. S., & Bergemann, V. E. (2001). *A guide to observation, participation, and reflection in the classroom*, 4th ed. Boston: McGrawHill.
- Zuber-Skerritt, O. (1992b). *Action research in higher education: Examples and reflections*. London: Kogan Page Limited.

**PREPARING TEACHERS FOR EDUCATION 3.0 THROUGH MOOCS 2017**

**Ritu Uppal**

**Abstract**

*There is an increasing need for education since the workforce of the —knowledge economy is expected to be highly educated and continuously improve by engaging in life-long learning.*

*Historical model of learning heavily relied on content and the competence of teachers to impart instructions in a closed group. The need of the hour is to develop learning skills i.e. the 4 C's – creativity, critical thinking, communication, and collaboration to absorb the abundance of content available due to the advent of multimedia technology, coupled with connectivity in the form of internet.*

*MOOC is the latest phenomenon wherein education is imparted free of cost to anyone, anywhere, with no barrier of age, qualification, gender, etc. MOOCs seem to be the best tools that bridge the traditional method and contemporary need. This paper aims to study how the MOOCs effectively help in delivery of content along with development of teaching learning skills in the participants so as to make them future ready. It will also discuss the extent – geographical areas, various domains like cognitive domain (knowledge oriented), affective domain (soft skill oriented), psychomotor domains (skill oriented) where MOOCs are being conducted. MOOCs have the capacity to break the barriers between various disciplines in education and take education to a new level where a holistic, multi-disciplinary education is feasible.*

*The core MOOC components of self-organization, connectedness, openness, and complexity etc. serve as an interesting paradigm for new educational orders that require the learners to be well equipped with the 4 C's of learning. The paper aims to analyse how MOOCs aid in acquiring teaching learning skills along with the content delivery without compromising with either. This paper will also study how MOOCs are an ideal platform to reduce the educational disparities amongst the millions of learners in India.*

**Introduction:**

The traditional way of learning heavily relied on the skills of teachers to impart instructions in a classroom setup. Teachers played a key role in helping students to develop skills and overall development of individuals. —Every teacher wrestles with the challenge of keeping two or three dozen students in a classroom engaged. (Greenberg, et al., 2014). Use of multimedia technology, coupled with connectivity in the form of internet, changed this model significantly wherein technology primarily focused on standardising the instructions and facilitating imparting them in a structured manner for an identified group of people. This has led to a dramatic increase in the number of students enrolled in higher education. Distance education has been argued to be one of the most powerful responses to meet the growing need for education (Gunawardena & McIsaac, 2004).

Education has moved on at a very fast pace from Education 1.0 in the beginning of 21st century, to Education 2.0 in last ten years and now to education 3.0. According to Borden (2015) —Education 3.0 entails a confluence of neuroscience, cognitive psychology, and education technology, using web-based digital and mobile technology, including apps, hardware and software, and anything else with an e in front of it. Many educators are practising Education 1.0; talking about doing

Education 2.0; when they should actually be planning and applying Education 3.0. (Gerstein, 2013). The need of the hour is to develop learning skills i.e. the 4 C's – creativity, critical thinking, communication, and collaboration to absorb the abundance of content available due to the advent of multimedia technology, coupled with connectivity in the form of internet. Current learners being digitally native are using web 3.0 tools for their day-to-day activities. The mighty responsibility on the shoulders of teachers hence is not to be a sage on the stage but to facilitate the ever-increasing demands of students who are digital residents of the era. For this, the teachers need to pace up and be speedily updated about the latest in the field of education.

The latest tool of technology led education revolution seems to be the Massive Online Open Courses (MOOC). As the name suggests, these courses are designed for mass learning through internet and social media, where in very large number of learners can join the course to become a part of a network of self-directed learners. (Downes, 2008).

—With the advent of standard based reforms, the quality of teachers has become a major concern of policy-makers, college and university presidents, especially at the colleges of teacher education and the public in general. In an era of increasing standards and accountability in education, teacher quality and teacher training will be more important than ever. (Sain & Kaware, 2014). MOOCs with their flexible and partially free approach seem to provide best of both worlds to teachers by not only updating their knowledge but also making them shell out less to earn their certificate.

The principal variant of the web or what is called web 1.0 or static web yet the fundamentals of teaching were the same. Conventional techniques for teaching were prevalent in which the instructor is the sage on the stage and the primary and indisputable source of knowledge. Instruction was as yet unidirectional and learners were passive consumers of the knowledge. (Kharbach, 2017).

By the end of 20th century, education became more inclusive, social and participatory. The term 2.0 education was born due to emergence of various web technologies and social media tools like wikis, blogs, facebook, orkut, wassap etc these tools enable creation, sharing, amongst learners all over the world creating a network of learners who are creating knowledge through collaboration. The role of the teacher has transformed from a sage on the stage to a guide by the side. The teachers mentor, guide and create an environment for learning rather than delivering knowledge directly that can be consumed as it is by the learners. One can say that -What happened in education 2.0 was only an evolution and not revolution (Kharbach, 2017).

According to Keats, & Schmidt (2007), education 3.0 will include learners from different institutes, different cultures and different geographical locations, creating knowledge. Education 3.0 is a connectivist, heutagogical approach to teaching and learning. The teachers, learners, networks, connections, media, resources, tools create a unique entity that has the potential to meet individual learners', educators', and even societal needs. Many resources for Education 3.0 are literally freely available for the taking (Gerstein, 2013).

### **Need for Teacher Education / Training**

It is also well documented through the studies by various governmental bodies and international agencies like UNESCO that there is an immediate need for quality teachers at all levels including higher education. There is an incremental requirement for about 8.7 million teachers and trainers in India till 2022. It is also projected that there would be an increasing requirement for Higher Education teachers due to increase in enrolment rates into Higher Education. (NSDC, 2008.).

**Table 3.1: Incremental Need for Teachers and Trainers with Student-Teacher Ratio of 1:30 For School Education And 1:15 For College Education And Vocational Training.**

Category Need for teachers and trainers (in\_000s) between 2008 and 2022

Teachers in School Education	3,511
Teachers in Higher Education	4,458
Trainers for technical training (ITI/ITC)	233
Trainers in other Vocational Streams	463
Total	8,664

Source: NSDC

Thus India alone needs about 4.5 million additional teachers for higher education by 2022. It is important to note that the same report puts the number of teachers available for higher education in 2008 at 0.7 million against incremental need of 4.5 million. The demand gap therefore is very large. The report also pegs the annual need to train higher education teachers at 226 thousand.

In addition to the quantity stress should also be put on the quality of teachers. Today's learners are digitally savvy and using the latest technology as a way of life. Learners are the natives of the digital era and more comfortable interacting with the virtual environment vis a vis the previous generation. Blogs, Twitter, Podcasts, Wikis, Social network sites, Virtual 3D worlds, Video sharing, Photo sharing, etc. are various multimedia tools widely used and accessed by them. ICT has influenced the teaching learning process in a big way. Teachers have to be education 3.0 teachers who plan, design and deliver content using the 3.0 tools so that learners easily and effectively learn from it.

Teachers are employed on the basis of their pre service qualifications. Teaching, being creative and individualistic, requires periodic rejuvenation of teachers' attributes and upgrading of their technical know-how. By its very definition, a professional, including a teacher is a lifelong learner because of his association with scientific knowledge which keeps growing and so opportunities

have to be afforded to ensure that he keeps learning and developing throughout his professional life. Professional preparation and professional development of teachers is a continuous process. Perraton (2010) in a report on the role of open and distance learning in teacher education, categorized teacher education into initial training and continuing professional development. He also stated that MOOCs could be used to train teachers for both teacher training and also for lifelong training. With the current fiery need of teachers around and equally important being the quality of teachers who can ride the bus of education 3.0, training teachers has become the need of the hour.

### **About MOOC**

In the words of Thompson a proponent of MOOC, —Massively Open Online Course (MOOC) is a model for delivering learning content online to virtually any person—with no limit on attendance—who wants to take the course. Participants can be students enrolled at the institution hosting the MOOC or anyone with Internet access. The —openl students, who pay nothing to participate, can join in some or all of the course activities, which might include watching videos, posting on discussion boards and blogs, and commenting via social media platforms. Although —openl participants receive no credit for the course and may get little or no direct feedback from the instructor, their involvement can add a dynamic to the course that benefits all students (Thompson, 2009).

Siemens George and Cormier Dave are credited to have conducted the first MOOC in 2008 and coined the term. —A MOOC is an online course with the option of free and open registration, a publicly shared curriculum, and open-ended outcomes. MOOCs integrate social networking, accessible online resources, and are facilitated by leading practitioners in the field of study. Most significantly, MOOCs build on the engagement of learners who self-organise their participation according to learning goals, prior knowledge and skills, and common interestsl. (McAuley, Stewart, Siemens, and Cormier, 2008).

Although the definition of MOOCs is still changing and developing, the idea of free, open, online courses is turning the world of higher education on its head.

### **MOOCs and Teacher Education**

Teacher training has become an important phenomenon in the 21st century due to the ever increasing demand for education and need for acquiring new skill sets. Teacher education is a program related with teacher proficiency and competence that would make them competent enough to face new challenges in the education. We also need to train teachers with new perspectives as the outer world is in the classroom and schools are opening to the world. The pre-service and in-service teacher education programs have shown paradigm shift with its emphasis on globalization and individualization. (Singh, 2014). With Education 3.0 being the current buzz with the students, institutions and citizens across the globe, teachers have to brace themselves with the up-to-the-minute on goings in the field to provide effective and engaging learning to the learners

focusing on harnessing creativity, developing critical thinking through collaboration and communication. The flexible design of MOOCs can fulfil all these educational needs of the hour. All the above needs that use various content presentations and automated assessment methods would lend themselves well to the acquisition of content knowledge required in both the initial training and aspects of the professional development of teachers. Peer assessment methods currently being used by MOOCs such as Coursera could also work in the acquisition of skills related to the design and development of instructional activities required for teachers in initial teacher preparation programs.

The challenge here is the extra time needed by the teachers to gain these additional skills without leaving their current work. MOOCs can help in achievement of these rules wherein teachers will learn these skill sets without feeling the pressure of being time bound, and actively learning with peer inputs and coming up with their own network of lifelong learning.

Fyle (n.d.) has included the pedagogical affordances that MOOCs must have for their successful contribution to teacher education and the suitability of MOOCs for teacher education in developing world contexts. He states that in order for MOOCs to fulfil the need for social interaction in communities that include teachers, their peers, teacher-educators and mentors, the parameters of current MOOC designs would have to be extended. In other words, MOOCs designed for teacher professional development would have to include more sophisticated online forums and other technology-oriented social structures and features that would support effective forms of social-constructivist learning.

Knight (2013) states that yet MOOCs greatest impact may come from what they can teach the teachers: offering a unique opportunity to monitor student behaviour during lessons in unprecedented detail.

One can say that MOOCs differentiating characteristics of openness, makes it one of the most flexible and viable mode of anytime anywhere online learning. Not only the content be dynamic, the instructional approach can also be modified as per the learner needs.

### **Conclusion**

The present day teachers have a dual responsibility of focusing on pedagogy of teaching in addition to the core content to meet the present day student-centred learning, that supports knowledge construction at any place and anytime. Higher education teachers in particular are looking for avenues of keeping abreast with not only their core content, but also the pedagogy of online learning and role of ICT in creating a conducive and convenient learning environment for their students. MOOC can play a large role in addressing the challenge before India to educate and train the teachers with education 3.0 and also many people to create a skilled work force. While attempt has been made here to list some of the challenges that teachers face for providing quality education, the list is not exhaustive, however the relevance of MOOC in providing quality education to masses cannot be undermined. As seen in the previous sections, MOOC is able to co-



create as well as duplicate knowledge at low cost when connected to Internet. India as a country is well connected with internet though the cost and quality of connectivity is a matter of concern for many people. MOOCs can certainly be an instrument of change for revolutionising the basic and higher education in India.

**Reference**

- Borden, J. (2015). *Education 3.0: Embracing Technology to Jump the Curve*. *Wired Magazine*. Retrieved on September 8, 2017, from [https://en.wikipedia.org/wiki/Education\\_3.0](https://en.wikipedia.org/wiki/Education_3.0)
- Downes, S. (2008). *MOOC and Mookies: The Connectivism and Connecting Knowledge Online Course*. Retrieved November 23, 2012, from Slideshare.net: <http://www.slideshare.net/Downes/mooc-and-mookiesthe-connectivism-connective-knowledge-online-course-presentation>
- Fyle, C. (n.d.). *Teacher Education MOOCs for Developing World Contexts: Issues and Design Considerations*. Retrieved on February 18, 2014, from <https://linc.mit.edu/linc2013/proceedings/Session3/Session3Fyle.pdf>
- Gerstein, J. (2013). *Education 3.0 and the Pedagogy (Andragogy, Heutagogy) of Mobile Learning*. [web log post]. Retrieved on September 8, 2017, from <https://usergeneratededucation.wordpress.com/2013/05/13/education-3-0-and-the-pedagogy-andragogy-heutagogy-of-mobile-learning/>
- Greenberg, J., et. Al. (2014). *Training our future teachers*. [http://www.nctq.org/dmsView/Future\\_Teachers\\_Classroom\\_Management\\_NCT\\_Q\\_Report](http://www.nctq.org/dmsView/Future_Teachers_Classroom_Management_NCT_Q_Report)
- Gunawardena, C. N., & McIsaac, M. S. (2004). *Distance education*. In D. H. Jonassen (Ed.), *Handbook of research on educational communications and technology* (pp. 355-395). Mahwah, New Jersey: Lawrence Erlbaum Associates. Retrieved on Nov 22, 2012
- Keats, D., & Schmidt, J. P. (2007). *The genesis and emergence of Education 3.0 in higher education and its potential for Africa*. *Peer-Reviewed Journal on the Internet*, 12(3). Retrieved on September 4, 2017, from [http://firstmonday.org/issues/issue12\\_3/keats/index.html](http://firstmonday.org/issues/issue12_3/keats/index.html)
- Kharbach, M. (2017). *Education 1.0 VS Education 2.0 VS Education 3.0*. Retrieved September 9, 2017, from <http://www.educatorstechnology.com/2013/11/education-10-vs-education-20-vs.html>
- Knight, H. (2013). *MOOCs data offers promise of perfect teaching*. [web log post]. Retrieved on March 1, 2014, from <http://www.bbc.com/future/story/20131029-we-can-build-the-perfect-teacher>
- McAulley, A., Stewart, B., Siemens, G., & Cormier, D. (2008). *THE MOOC MODEL FOR DIGITAL PRACTICE*. Retrieved on March 2, 2014, from [https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/MOOC\\_Final.pdf](https://oerknowledgecloud.org/sites/oerknowledgecloud.org/files/MOOC_Final.pdf)
- (2008). *Human Resource and Skill Requirements in the Education and Skill Development Services Sector*. Retrieved on December 5, 2016, from <http://glpc.guj.nic.in/pride/ADMINUI/Resourcefiles/Res276Education%20Skill%20Development.pdf>
- Perraton, H. (2010). *Teacher Education: the Role of Open and Distance Learning*. Retrieved on August 1, 2014, from [http://dSPACE.col.org/bitstream/handle/11599/290/Teacher\\_Education\\_Role\\_ODL.pdf?sequence=1&isAllowed=y](http://dSPACE.col.org/bitstream/handle/11599/290/Teacher_Education_Role_ODL.pdf?sequence=1&isAllowed=y)

- Pumpic (n.d.). Education 1.0 Vs Education 2.0 Vs Education 3.0. Retrieved on September 9, 2017, from <https://guides.co/g/how-to-use-smartphones-and-tablets-to-boost-your-kid-s-education/62951>*
- Sain, S. K., & Kaware, S. S. (2014). The Challenges and Quality of Teacher Education in India at Present in Indian Educational Scenario. Journal of Education & Social Policy, 1(1), pp. 13 – pp. 17. Retrieved on September 8, 2017, from [http://jespnet.com/journals/Vol\\_1\\_No\\_1\\_June\\_2014/3.pdf](http://jespnet.com/journals/Vol_1_No_1_June_2014/3.pdf)*
- Singh, G. (2014). Emerging Trends and Innovations in Teacher Education. Indian Journal of Applied Research, 4(5). Retrieved on September 8, 2017, from <http://www.palieducationsociety.org/Imerging%20trends%20in%20teacher%20education%20in%20India.pdf>*
- Thompson, K. (2009). 7 THINGS YOU SHOULD KNOW ABOUT MOOCS. Retrieved November 22, 2012, from Educause: [http://www.educause.edu/library/resources/7-things-you-should-know-about\(Young, 2012\)\(Young, 2012\)-moocs](http://www.educause.edu/library/resources/7-things-you-should-know-about(Young, 2012)(Young, 2012)-moocs)*

**ATTITUDE OF HIGHER SECONDARY SCHOOL TEACHERS TOWARDS VALUE  
BASED APPROACH TO PROMOTE PEACE EDUCATION**

**Mrs. Shubham Rajesh Patil, N. M. F. College of Education, Kandivali (E).**

**Abstract**

*The researcher made an attempt to study the attitude of higher secondary school teachers towards value based approach to promote peace education. Peace at this moment in our history is only a dream that is far from the actual daily reality. Conflicts, violence and wars are on the rise globally and there is a remarkable increase in structural violence within and among nations. Higher secondary school teachers can play a significant role in promoting peace education by inculcating values. Hence this survey has been done. Normative survey method on a random sample of 120 teachers of higher secondary schools from Palghar District of Maharashtra, India, was undertaken. A 'Teachers' Attitude to value based approach to promote peace education Scale' was developed by the researcher to collect the data. Mean, SD, t- test, F- test were the statistics applied. Results indicate that there is a favourable attitude among the sample higher secondary school teachers towards value based approach to promote peace education. There is a significant difference in attitude with regard to location, academic qualifications and professional qualifications. But there is no significance difference with regard to gender, age and teaching experience.*

**Introduction**

—Education is Value Enterprise. |

Values guide the behaviour and conduct of individual. They help in framing goals and direct actions towards achieving the goals. Values are the moving spirit in our lives. Values relate to the aims of human life. According to its verbal meaning, value signifies that quality of an individual or thing which makes that individual or thing important, respectable and useful. This quality may be internal or external or both. John Dewey explains the term value as to prize, to esteem, to appraise, to estimate. According to him, values mean to cherish something.

Peace education means to learn about and to learn for peace. Learning about peace means obtaining knowledge and understanding of:

- What contributes to peace,
- What damages peace,
- What leads to war,
- What does peace mean on each level,
- What is my role in it,
- How are the different levels connected.

Peace in its most positive aspects embraces ideas of justice, global sustainability and the eradication of structures that promote insecurity, poverty, hunger, malnutrition and lack of access to resources. Thus, peace education is a remedial measure to protect children from falling into the ways of violence in society.

Since education for peace is value centred, peace being a value itself; the primary means to achieve this aim is a growing understanding of human values. If we are to spread real peace in the world we shall have to begin with young generation. Educational institutes are the platforms where the young minds can be moulded to understand the deeper meaning of peace. Teacher has very crucial role in peace education.

**Objectives of the Study**

- 1) To construct a 'Teachers' Attitude to value based approach to promote peace education Scale' for the teachers at higher secondary level.
- 2) To survey higher secondary school teachers' attitude towards value based approach to promote peace education.
- 3) To study the significance of difference in attitude towards value based approach to promote peace education with respect to the variables like gender, location, academic qualifications, professional qualifications, age and teaching experience.

**Hypotheses**

- 1) There is no significant difference in the attitude of teachers towards value based approach to promote peace education with regard to their gender.
- 2) There is no significant difference in the attitude of teachers towards value based approach to promote peace education with regard to their location..
- 3) There is no significant difference in the attitude of teachers towards value based approach to promote peace education with regard to their professional qualifications.
- 4) There is no significant difference in the attitude of teachers towards value based approach to promote peace education with regard to their age.
- 5) There is no significant difference in the attitude of teachers towards value based approach to promote peace education with regard to their teaching experience.

**Method**

In view of nature and purpose of the present study, 'the method of normative survey' was selected.

**Sample**

A total of 120 teachers were selected by random sampling technique from schools in Palghar District of Maharashtra, India.

**Development of 'teachers' attitude towards value based approach to promote peace education scale**

The researcher developed a tool which, after item analysis, consisted of a total of 35 items of which 22 were positive and 13 negative. Each statement was anchored on a 5- point scale i.e. Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA) and Strongly Disagree (SDA). The scores were 5, 4, 3, 2 and 1 for the positive items and the reverse for the negative items. The tool was finalised after having discussions with experts.

**Validity and Reliability of the Test**

The reliability of the scale was established by using split half method. The coefficient of correlation was 0.82

**Data Collection**

The researcher personally visited the higher secondary schools to collect the required data from the teachers at higher secondary level. She explained to all the respondents about the purpose of the study. The doubts were clarified.

**Scoring and Coding the Data**

The tool consisted of 22 positive and 13 negative statements after item analysis.

The scale was administered to a total of 120 teachers. The scoring procedure explained above was adopted and the composite index of level of attitude for individual teacher was calculated. The maximum score for the scale is 175 (35 items x 5), neutral score is 105 (35 items x 3) and the lowest possible score is 35 (35 items x 1).

**Presentation and Analysis of Data**

**TABLE 1: DISTRIBUTION OF THE TOTAL SAMPLE ABOVE AND BELOW THE NEUTRAL POINT**

Total Sample N	Above the Neutral Point (105)	Below the Neutral Point (105)
120	81 (67.5%)	39 (32.5%)

It is found that nearly two thirds of the sample i.e.81 out of 120 or 67.5% have scored above the neutral point and just one third or 39 out of 120 or 32.5% have scored below the neutral point.

**TABLE 2: GENDER DIFFERENCES IN TEACHERS' ATTITUDE TOWARDS VALUE BASED APPROACH TO PROMOTE PEACE EDUCATION**

Gender	Sample Size N	Mean	S.D.	t- value
Male	60	123.26	13.75	1.865 #
Female	60	120.15	12.09	

# Not significant

The mean scores of male teachers is 123.26, of the female teachers is 120.15; the S.D values are 13.75 and 12.09 respectively. The t- test value, 1.865, is not significant even at 0.05 level. Hence the null hypothesis \_There is no significant difference in the attitude of teachers towards value based approach to promote peace education with regard to their gender' is accepted.

**TABLE 3: DIFFERENCE BETWEEN RURAL AND URBAN TEACHERS' ATTITUDE TOWARDS VALUE BASED APPROACH TO PROMOTE PEACE EDUCATION**

Location	Sample Size N	Mean	S.D.	t- value
Rural	60	125.26	14.22	3.90**
Urban	60	119.55	11.84	

**\*\*Significant at 0.01 level**

The mean scores of rural teachers is 125.26, of the urban teachers is 119.55; the S.D values are 14.22 and 11.84 respectively. The t- test value, 3.90 is significant at 0.01 level. Hence the formulated null hypothesis ‘There is no significant difference in the attitude of teachers towards value based approach to promote peace education with regard to their location’ is rejected. The attitude towards value based approach to promote peace education of rural teachers is more favourable than that of the urban teachers.

**TABLE 4: DIFFERENCE IN ATTITUDE TOWARDS VALUE BASED APPROACH TO PROMOTE PEACE EDUCATION AMONG TEACHERS WITH DIFFERENT LEVELS OF QUALIFICATION**

Professional Qualifications	Sample Size N	Mean	S.D.	F- value
B.Ed.	102	121.44	12.57	4.22*
M.Ed.	11	127.82	13.56	
Others	07	127.00	16.78	

**\*Significant at 0.05 level**

The mean scores of teachers is 121.44 of teachers with B.Ed. is 121.44, of those with M.Ed. is 127.82 and those with other professional qualifications is 127.00; the S.D values are 12.57, 13.56 and 16.78 respectively. The F value is 4.22 which is significant at 0.05 level. Hence the null hypothesis ‘There is no significant difference in the attitude of teachers towards value based approach to promote peace education with regard to their level of professional qualifications’ is rejected. Further t- test between pairs of subsample groups indicated there was significant difference between teachers with other professional qualifications on the one and those with B.Ed. and M.Ed. qualifications; but there was no significant difference between the .Ed. and M.Ed. subsample groups.

**TABLE 5: DIFFERENCES IN ATTITUDE OF TEACHERS TOWARDS VALUE BASED APPROACH TO PROMOTE PEACE EDUCATION IN DIFFERENT AGE GROUP**

Age Group	Sample Size N	Mean	S.D.	F- value
Below 27 years	50	124.94	12.67	1.12#
Between 28 and 43 years	214	121.79	13.41	
44 years and above	56	122.48	13.79	

**# Not significant**

The mean scores of teachers in the age group below 27 years is 124.94, of the teachers in the age group between 28 and 43 years is 121.79 and of teachers in the age group above 44 years is 122.48; the S.D values are 12.67, 13.41 and 13.79 respectively. The F value 1.12 is not significant. Hence the null hypothesis ‘There is no significant difference in the attitude of teachers towards value

based approach to promote peace education at secondary level with regard to their age' is accepted.

**TABLE 6: DIFFERENCES IN ATTITUDE OF TEACHERS TOWARDS VALUE BASED APPROACH TO PROMOTE PEACE EDUCATION AMONG SUBSAMPLE GROUPS IN TERMS OF YEARS OF TEACHING EXPERIENCE**

Years Of Teaching Experience	Sample Size N	Mean	S.D.	F- value
Below 3 years	78	123.96	12.84	1.42#
Between 4 and 16 years	207	121.48	13.57	
17 years and above	35	124.40	13.18	

# Not significant

The mean scores of teachers with teaching experience below 3 years is 123.96, between 4 and 16 years is 121.48 and of the teachers with teaching experience 17 years and above is 124.40; the S.D values are 12.84, 13.57 and 13.18 respectively. The F value, 1.42, is not significant. Hence the null hypothesis 'There is no significant difference in the attitude of teachers towards value based approach to promote peace education with regard to their years of teaching experience' is accepted.

**Findings**

1. The majority of the Higher Secondary School Teachers (67.5%) have favourable attitude towards value based approach to promote peace education' whereas 32.5% of the teachers have an unfavourable attitude.
2. There is no significant difference between male and female teachers in their attitude towards value based approach to promote peace education.
3. There is a significant difference between rural and urban teachers in their attitude towards value based approach to promote peace education , rural teachers have a higher mean score than urban teachers.
4. Significant difference was found in the attitude of teachers with regard to their level of professional qualifications; there were differences between teachers with B.Ed. and M.Ed. qualifications.
5. There is no significant difference among the different age groups of teachers in their attitude towards value based approach to promote peace education.
6. There is no significant difference in their attitude towards value based approach to promote peace education among subsample groups of teachers with different years of teaching experience.

**Conclusion**

The government and society at large have equal responsibility to provide the teacher with suitable grounds and thereby bringing about a matured and responsible population for the coming generation to lead a better life. There is no other resource that matches the human being, because

mankind is the foundation or the corner stone of any development and civilization. Out of the human intellect, a nation is built. In this paper, a systematic attempt has been made to illustrate the meaning of values and value education, their need, principles about the determination of values, classification of values, different values enshrined in the Indian Constitution, peace education, process of liberalization, privatization, globalization and role of the peace education for inculcating values among students for developing the spirit of communal harmony. Value and Peace Education are significant for combating social evils produced by liberalization, privatization and globalization (LPG). Thus Peace can be attained through value and peace education for achieving the objective of National Integration.

### **References**

- Asgharali Engineer. (1995). Lifting the veil: communal violence and communal harmony in contemporary India. Delhi: Sangam Books.*
- Aggarwal J.C (2002) Theory and principles of education. New Delhi : Vikas Publishing house, pp. 384*
- Balwinder Kaur(2006). Peace Education. New Delhi: Deep and Deep Publication.*
- Chakarborty A.K. (2004) Theory and principles of education. Meerut : Surya Publication, pp.574 – 583*
- Ghose D.N. (2005). A text book of value education. New Delhi : Dominant Publishers*
- Ludden, David, editor. (1996). Contesting the Nation: Religion, Community, and the Politics of Democracy in India, edited by David Ludden (Philadelphia: Univ. of Pennsylvania)*



**ENABLING EFFECTIVE STUDENT LEARNING THROUGH FACULTY RESEARCH  
AND INNOVATION**

**Dr. Rani Tyagi, H.R.COLLEGE OF COMMERCE AND, ranityagi@gmail.com**

***Abstract***

*Academicians have been arguing for decade's about whether or not faculty research supports undergraduate instruction. Those who say it does—a group that includes most administrators and faculty members—cite many ways in which research can enrich teaching, while those on the other side cite numerous studies that have consistently failed to show a measurable linkage between the two activities. This article proposes that the two sides are debating different propositions: whether research can support teaching in principle and whether it has been shown to do so in practice. The article reviews the literature on the current state of the research teaching nexus and then examines three specific strategies for integrating teaching and scholarship: bringing research into the classroom, involving undergraduates in research projects, and broadening the definition of scholarship beyond frontier disciplinary research. Finally, ways are suggested to better realize the potential synergies between faculty research and undergraduate education.*

**Keywords:** *research-teaching nexus, research, teaching*

**Introduction**

Research and teaching have different goals and require different skills and personal attributes. The primary goal of research is to advance knowledge, while that of teaching is to develop and enhance abilities. Researchers are valued mainly for what they discover and for the problems they solve, and teachers for what they enable their students to discover and solve. Excellent researchers must be observant, objective, skilled at drawing inferences, and tolerant of ambiguity, and excellent teachers must be skilled communicators, familiar with the conditions that promote learning and expert at establishing them, and approachable and empathetic. Having both sets of traits is clearly possible and desirable but not necessary to be successful in one domain or the other. Moreover, first-class teaching and first class research are each effectively full-time jobs, so that time spent on one activity is generally time taken away from the other. There should consequently be no surprise if studies reveal no significant correlation between faculty research and effective teaching.

Given that expectations for faculty research have risen at the same time that higher education is facing demands for increased public accountability, the advantages of strengthening the connection between research and teaching (or to introduce the term commonly used in this context, the *research-teaching nexus*) seem clear, and several studies encourage a stronger connection. Students obviously can benefit from effective linkages between faculty research and undergraduate education; faculty can benefit from the efficiency and satisfaction of integrating their primary professional responsibilities, universities may benefit when their stakeholders perceive that they are not neglecting their educational missions, since a more positive public image

may translate into greater financial support from legislative, industrial and philanthropic groups and more student applicants, resulting in a stronger and more selective student body.

In short, there are numerous reasons to strengthen the research teaching nexus, at both the individual faculty and institutional level. Toward this end, we examine in this paper three commonly proposed strategies for strengthening the nexus: (1) bringing research into the classroom; (2) involving students in research projects, and (3) broadening the model for academic scholarship.

### **I. Bringing Research into the Classroom (Together Teaching and Learning)**

Probably the most conventional argument for how research supports teaching is that faculty with active research programs bring their research into the classroom and use it to inform their teaching. **Pocklington and Tupper** found that this assumption is frequently unjustified and claim that “current models of integration are inadequate philosophically, they are naïve politically; and they ignore reforms essential to integrating research and teaching.” **Colbeck** observes that it is difficult to bring research into the classroom in “hard” disciplines such as the physical sciences and engineering for two reasons: hierarchical knowledge structures in those disciplines put most research well over the heads of most undergraduates, and rigidly constrained curricula limit opportunities to bring in new material. The few published claims we could find regarding the benefits of incorporating research in undergraduate classes rely on indirect measures such as self-reports, and show mixed results. **Jenkins et al.** used data from student focus groups to argue that integrating research can benefit students through “staff enthusiasm, credibility and institutional reputation,” and **Neumann** reported students’ opinions that integrating research helped instructors impart a positive and inquisitive approach to learning. It is certainly reasonable to hypothesize that faculty could capitalize on their research experience in the classroom using inductive methods. For example, skilled faculty researchers could take the methods they use in their scholarly activities and translate them into an inductive teaching environment by borrowing elements of their own research or choosing challenges more appropriate to the subjects and levels of the courses they are teaching. The faculty’s research knowledge and experience, including their knowledge of the relevant literature, familiarity with current information finding strategies, knowledge of modern laboratory techniques, experience supervising research students, awareness of colleagues doing related work in the field or simply their intimate familiarity with the research process itself, could all be brought into their teaching and thereby enrich student instruction in this classroom environment. Students taught in this manner would get excellent training in the skills required for graduate study and research careers. More importantly, it would help students to develop critical thinking and problem-solving skills that will serve them well in any career path they undertake.

### **II. Involving Students in Research Projects**

Engaging students in research projects is frequently cited as an effective way to link faculty research and undergraduate teaching, a major goal of this study. While this activity clearly has the

potential to benefit students (proposition 1), determining whether undergraduate research strengthens the research-teaching nexus in practice (proposition 2) requires an analysis of how much undergraduate research programs have benefited students and what percentage of students have reaped those benefits. It is also worthwhile to examine how programs should be structured to maximize any benefits and extend them to a broad spectrum of the student body.

Another potential strategy to strengthen the connection between faculty research and undergraduate teaching is to broaden the definition of research to include forms of scholarship other than conventional frontier research, such as research on teaching and learning. If faculty members study innovative instructional methods, evaluate the extent to which the methods improve knowledge acquisition and skill development, apply the outcomes to their own courses, and publish relevant findings that can be used by other instructors to improve their teaching, it is reasonable to hypothesize that improved learning should result.

### **III. Broadening the Definition of Research**

Another potential strategy to strengthen the connection between faculty research and undergraduate teaching is to broaden the definition of research to include forms of scholarship other than conventional frontier research, such as research on teaching and learning. If faculty members study innovative instructional methods, evaluate the extent to which the methods improve knowledge acquisition and skill development, apply the outcomes to their own courses, and publish relevant findings that can be used by other instructors to improve their teaching.

Top-tier research universities are centers of excellence for the creation of new knowledge, set up with the vision to emerge as national and international leaders in research output and intellectual property. They enroll a selective set of talented, research-oriented students to be taught by stellar faculty. Faculty and students at the university attract handsome research grants and exhibit the greatest international diversity. Going beyond traditional scientific and applied research, these universities have phenomenally broadened the scope of India's research capabilities to new interdisciplinary areas of scholarship that present the greatest opportunity for the creation of new knowledge and hold most relevance for India in the new world. For example, Indian universities are at the forefront of research in bioscience, environment and climate change, inclusive development and leadership. Leveraging their cost and competitive advantage, Indian research universities have pioneered the model of blended research where they collaboratively produce cutting-edge research with other top-rung universities around the world.

### **IV Learner Centered Approach**

In the learner-centred paradigm of education, students are encouraged to take greater responsibility for their learning outcomes. The professor ceases to be the fount of knowledge filling the empty receptacles of students' minds; instead, students actively participate in the discovery of knowledge. They are encouraged to be reflexive and thoughtful learners, learning from themselves, their peers and their immediate environment just as much as they would from their

professors. Accordingly, the teaching-learning methodology involves less lecturing and rote note-taking and more hands-on activities to allow for experiential and interactive learning. Over the years, such emphasis on learning has impacted students and learning outcomes in ways that have far-reaching impact for Indian economy and society. Firstly, by stoking students' innate curiosity and encouraging them to learn in self-directed ways, it has enabled Indian graduates to be independent, critical thinkers. As a result, it has greatly enhanced the country's innovation capability and entrepreneurial ambition, positioning it amongst the most attractive R&D hubs for dozens of multinationals. Secondly, the learner-centered paradigm has helped India's thriving human resource base to keep pace with the changing needs of their work environments. Over the years, with evolution of the „knowledge economy“, learning and work have become inseparable, making constant on-the-job learning and up-gradation indispensable. Trained to be active and adaptive lifelong learners, the Indian workforce is known to be dynamic and agile even in the face of „disruptive“ progress. Lastly, but importantly, the learner-centered approach has helped correct for the problem of equity in Indian higher education. As India's enrolment numbers grow, and access to higher education expands, the learner-oriented method has helped sensitize educators to difference in learning styles and student expectations that result from diversity in student backgrounds. By placing the student at the centre of the learning process, the approach on the one hand has enabled institutions to devise new and innovative ways to reach diverse learners, and on the other, helped students discover and exercise their distinctive learning styles to chart an educational pathway that is personally meaningful and relevant.

Following are the suggestions for measures that could move universities in this direction:

1. Formally recognize and reward faculty members who successfully integrate their teaching and research.
2. Establish faculty development programs in both teaching and research at the school or college level, including ways to integrate the two domains.
3. Promote involvement in research for a broad spectrum of undergraduates, and make sure there is meaningful contact between the researchers and their advisors:
4. At the national level, government and philanthropic research funding agencies should stipulate in their proposal evaluation criteria that a subset of the projects they fund must have measurable impacts on undergraduate education.
5. Encourage faculty members to use inductive teaching methods (e.g., inquiry-based, problem-based, and project-based learning); provide faculty development programs that prepare them to do so; recognize and reward those who use the methods effectively; and assess the effectiveness of the methods for integrating research and teaching.

This paper highlights the importance of promoting a strong link between faculty research and undergraduate teaching, while demonstrating that—despite widespread opinion to the contrary—the evidence for the existing link is weak at best. The state of the research-teaching nexus affects the quality of the education provided by universities across the research spectrum. Weak linkages between teaching and research are also an issue at colleges with strong teaching missions, since expectations for research have been rising steadily there as well. We believe, however, that research has a clear *potential* to make significant contributions to the quality of undergraduate education.

### **References**

- Colbeck, C.L., "Merging in a Seamless Blend: How Faculty Integrate Teaching and Research," *Journal of Higher Education*, Vol. 69, 1998 pp. 647–671.
- Pocklinton, T., and A. Tupper, *No Place to Learn*, Vancouver, Canada: UBC Press, 2002.
- Jenkins, A.H., and M. Healy, *Institutional Strategies to Link Teaching and Research*, York, U.K.: The Higher Education Academy, 2005.
- Neumann, R., "Perceptions of the Research-teaching nexus: A Framework for Analysis," *Higher Education*, Vol. 23, 1992, pp. 159–171.
- Prince, M.J., and R.M. Felder, "The Many Faces of Inductive Teaching and Learning," *Journal of College Science Teaching*, Vol. 36, 2006, 14–20, <http://www.ncsu.edu/felder-public/Papers/Inductive> (JCST)
- Badley, G., "A Really Useful Link Between Teaching and Research," *Teaching in Higher Education*, Vol. 7, 2002, pp. 443–455.
- Elton, L., "Research and Teaching: Conditions for a Positive Link," *Teaching in Higher Education*, Vol. 6, 2001, pp. 43–56.
- Brew, A., "Teaching and Research: New Relationships and Their Implications for Inquiry-Based Teaching and Learning in Higher Education," *Higher Education Research & Development*, Vol. 22, 2003, pp. 3–18.
- Pascarella, E.T. and Terenzini, P.T., "How College Affects Students: A Third Decade of Research," San Francisco: Jossey-Bass, 2005.
- Seymour, E., Hunter, A., Laursen, S.L. and Deantoni, T., "Establishing the Benefits of Research Experiences for Undergraduates in the Sciences: First Findings From a Three-Year Study," *Science Education*, Vol. 88, 2004, pp. 493–534.
- Heath, T., "Predicting the Educational Aspirations and Graduate Plans of Black and White College and University Students: When Do Dreams Become Realities?" *Association for the Study of Higher Education Annual Meeting*, Minneapolis, MN, 1992.
- Nagda, B.A., Gregerman, S.R., Jonides, J., von Hippel, W. and Lerner, J.S., "Undergraduate Student-Faculty Research Partnerships Affect Student Retention," *Review of Higher Education*, Vol. 22, 1998, pp. 55–72.
- Lopatto, D., "The Essential Features of Undergraduate Research," *Council on Undergraduate Research Quarterly*, 2003, pp. 139–142.

## MEANINGFUL LEARNING WITH TECHNOLOGY

*Dr. Parth Sarthi Pandey, Principal, Gandhi Vocational B.Ed. College, Guna, (M.P.)*

*Dr. Neeta Pandey, Asst. Teacher, P.S. Bhati, Allahabad, (U.P.)*

### **Abstract**

*In Meaningful Learning with Technology, the author demonstrates how to employ technology to engage in meaningful learning. By means of the deployment of the idea and the techniques in the book, learning processes such as inquiring, experimenting, writing, designing, visualizing, communicating, community building, modeling and assessing are supported and enhanced. It is exemplary that the book, through the coverage of various examples from teaching community and classrooms, provide educational professionals with a rich toolkit to use technology in the process of teaching and learning with a wide variety of learner characteristics.*

### **Introduction**

Learning as a natural and adoptive human process. In order for learning to be constructively meaningful, learning should be active, constructive, intentional, authentic, and cooperative. When the learner begins to reflect upon the learning object or the problem, the learning becomes meaningful according to the authors. When the technology is engaging and facilitating the learner, then it helps meaningful learning. The authors present that technology supports meaningful learning by representing the ideas, understanding and believes of learners, producing organized knowledge by multimedia tools, by providing access for the needed information, by helping to compare ideas and world views, by representing the real world problems and contexts and thus achieving the authenticity, also simulating them, by representing the views of others, by defining the problems for learner thinking, by helping collaboration with others, by building consensus among the members of the community by discussing and arguing, by supporting the discourse among knowledge building communities, by helping articulate and represent what they know, by supporting the construction of the personal meaning, and supporting by mindful thinking.

Consequently, according to the author, by sheer use of technology as a delivery means, for example, is not helpful for meaningful learning. Rather, technology must be used in the constructivist manner. The authors claim therefore that the nature of tasks and tests in a learning setting defines the nature of learning. Hence, it must be used in a meaningful manner in that it should support the above-mentioned framework. In order to achieve meaningful learning framework, the authors suggest the standards of international society for technology in education, partnership for 21st century skills and the technological and pedagogical content knowledge. Through some such procedures, the authors argue that the construction of meaningful knowledge and critical thinking will be accomplished.

In order to have a meaningful inquiry by means of technology, the inquirer must have a conscious and intentional goal and an output to search for. For this reason, planning, use of proper strategy,

evaluation and triangulation of information are necessary. Technology has gained a momentous impact through tablet computing, cloud computing, portable laptops and mobile equipment. All these are much more effective and meaningful if they are directed towards specific inquiries. For this reason, pattern recognition and goal setting are needed. When learners have purposeful questions and cases, the use of technology becomes a constructive and meaningful tool for reasoning prudently about the issue at hand. Learners, moreover, should differentiate the fiction from facts. Technology is useful for collecting, analyzing and interpreting data if the learners are guided properly and consciously set out to solve a problem or deal with a task. As an example, the authors illustrate the effect and handiness of a web-quest whereby the learners consciously improve their reasoning both deductively and inductively. In addition, they hold that today the learners are not digital but mobile. Thus, a new paradigm of education is at work. Therefore, internet-based inquiry should be used for knowledge construction and meaning making by facilitating learners with intentional, authentic, cooperative, active and intentional projects.

Together with its flexibility, the authors indicate technology has become an integral part of our lives. Even though the Internet today is a vast source of information, the learners must have a meaningful task and project to use it properly. For this reason, understanding the intentional outcome is necessary, because understanding requires thinking, meta cognitive skills come into play. In the end, when information is purposefully manipulated and reconstructed in meaningful and authentic learning tasks, the Internet becomes a powerful educational tool. Internet explorations are most effective when learners clearly articulate a purpose for their exploration. As a result, both developing and learning from web-quest involve synthesizing information and applying logical thinking. Provided that the problem is generated by learners, developing a web quest requires designing the tasks, the activities, the interface and the procedures. To sum up, what underlies all of these is the meaningful information literacy so put the author.

Technology provides the usages of simulations, games, micro worlds, virtual labs and virtual worlds in cause-effect related tasks and projects. The author also suggest the use of Logo program as a support for some such environment for the causal experiments. While Logo program provides a computerized setting for a condition such as the experiment with animals like turtles, micro worlds approach provide a condition for the as if attitude. The authors discuss the cases from interactive physics to the understanding of calculus.

Technology, when meaningfully used, helps learners implement, pursue, observe, manipulate, repeat, represent, interact, interpret and observe the experimental settings in the tasks and projects. By the use of technology, learners improve their causal reasoning, exploring, experimenting, explaining and predicting skills according to authors. This furthers the 21st century scientific skills of learners such as inferencing. To reiterate, when properly and meaningfully applied, technology helps the learners improve their cause and effect and probing skills by supporting, representing and facilitating the experimental settings.

Today, social media such as Skype, Facebook and the like enable learners and individuals to communicate and to learn in many environments. Learners deal with multi-tasking by means of computers, mobile devices, instant messaging, video web conferencing, interactive video conferencing and Twitter. Furthermore, by means of Google Talk, Skype, and Messenger, communication is possible at any time. Also, through Slideshare, Google Docs, Prezis, and Power Point options, learning, teaching, presenting and sharing have become a complex phenomenon. Therefore, the use of technology for communication and the community building must be constructed in the principles of constructivist paradigm so that the learners can deplore those tools to enrich their lives and the lives of others.

The author indicate that knowledge forum, wiki spaces, think quest, global school network, computer chronicles are the illustrations of collection, analysis, interpretation of data and cooperation among communities. Also, circles have become essential. The author mention the three circles as the learning circles, study circles and quality circles. When the constructivist principles of active, collaborative, intentional, authentic and practical involvement are at work, knowledge building and sharing become much more meaningful and effective. According to the authors, a community is a social organization, sharing values, goals, and knowledge.

A learning community occurs when learners share common interests. The sophistication of technology alone does not form a community. The point is that how well the technology supports collaboration, sharing, learning, and earning. Therefore, the facilitators and the schools should continually motivate and scaffold the learners along the lines of learning communities with the help of technology. Today, the connectivist nature of technology and media has presented an unusual possibility of creativity and innovation. Thus, learning communities can be a way of enhancing the school systems. Mindful employment of technology for knowledge building communities is to be considered as a crucial point.

Writing is a complex task. It requires the definition of a main idea. It also requires supportive points, examples, and coherence. Today, with the advent of many technological tools, active, cooperative, intentional and more effective writing is possible. The main tool the authors present is concept map or semantic network. A concept map is a tool to organize the ideas, concepts and writing. It has nodes and links. By means of these links and nodes, it is much easier to practice writing.

The authors also mention Wordle, blogging, scholastic.com and Biocs as other useful tools for writing with technology. Even with the use of these tools, the mindfulness of the task is essential for an exercise to be active, intentional, constructive and authentic. Collaborative writing is the writing, done by multiple writers. The authors discuss how Google Docs today makes this task easier. Collaborative writing can be either synchronous or asynchronous. Writing in the end, as the authors state, improves by multiple revisions and high quality feedbacks.



The author hold the view that if you cannot model it, you cannot understand it. Thus, in you take up the modeling with technology. They show the examples of Semantica and mindmaster.com as the tools for modeling. Science requires construction and modeling. According to the authors, external models are the representations of mental models. Hence, there are both internal and external models. In addition, qualitative and quantitative models are often used in scientific inquiry. Moreover, modeling helps understanding, conceptualizing, representing, and presenting. Concept map is a good method for spatial modeling or representation. The mission of the constructivist approach is to foster the activities that enable meaningful with technology.

In a complex world, using and understanding systems thinking is inevitable. To do so, modeling is necessary. According to the authors, mind tools should be viewed as constructively to make meaning making and modeling more intelligently since the models are to represent reality.

Author indicates that especially science and mathematics related tasks and projects are great subjects to be dealt with visual tools. When it comes to mathematics, the use of Excel, Mathematica and Mat lab are great visualizing tools. Also, graphics and diagrams are wonderful means of visual representation techniques.

As far as the educational or learning environments are concerned, the authors suggest the use of videos to make the process more visual and constructive as well as meaningful. They give the example of vimeo.com. When it comes to geographical subjects, the authors suggest the uses of Google Maps and Google Earth. In a nutshell, in terms of educational settings, video is an effective tool to construct, learn, share and interact as a visualizing tool with technology.

Authentic learning is also complex. As a complex phenomenon, the criteria for assessing meaningful learning are also prescribed as authentic. The author express that meaningful learning with technology must be assessed in terms of performance. In other words, whatever the task is, it must be assessed in terms of its being accomplished. By definition, assessment is the evaluation of data at hand.

Meaningful learning with technology, according to the author, must be assessed by technology-based methods. For it, they suggest the use of rubrics. A rubric is a code or a set of codes, designed to govern action. In education, the term has become a tool to represent a set of scales to assess complex performances. By means of a rubric generator, rubrics can be created. An effective rubric provides information and feedback from a multi-dimensional perspective of a complex task or an activity, such as e-portfolio.

In conclusion, rooted in the constructivist tradition, the author in this paper, from design to writing, from experimenting to modeling, from assessment to visualizing, provide a rich catalogue of theory and practice of procedural account of constructivist learning and making meaning out of it.

**References**

- Coombs, P. H. (1985). *The world crisis in education: The view from the Eighties*. New York: Oxford.
- Eraut, M. (2000). *Non-formal learning and tacit knowledge in professional work*. *British Journal of Educational Psychology*, 70(1), 113-136.
- Hemingway, E. (1926). *A clean well-lighted place*. Retrieved December 14, 2009 from <http://www.mrbauld.com/hemclean.html>.
- Livingstone, D.W. (1999). *Exploring the icebergs of adult learning: Findings of the first Canadian survey of informal learning practices*. *Canadian Journal for the Study of Adult Education*, 13(2), 49-72.
- Livingstone, D.W. (2001). *Adults' Informal Learning: Definitions, findings, gaps and future research*, NALL working paper No. 21, OISE/UT, Toronto. Retrieved July 28, 2008 from <http://www.oise.utoronto.ca/depts/sese/csew/nall/res/21adultsifnormallearning.htm>.
- Reeves, T.C., Herrington, J. & Oliver, R. (2004). *A development research agenda for online collaborative learning*. *Educational Technology Research and Development*, 52(4), 2004, 5365.
- Richardson, W. (2008, December). *World without walls: Learning well with others: How to teach when learning is everywhere*. *Edutopia*. Retrieved December 14, 2009 from <http://www.edutopia.org/collaboration-age-technology-will-richardson>.
- Selman, G., Cooke, M. Selman, M., & Dampier, P. (1998). *The foundations of adult education in Canada*. (2nd ed). Toronto: Thompson Educational Publishing.