EFFECTIVENESS OF AN ICT ENHANCED PROFESSIONAL DEVELOPMENT PROGRAM ON JOB PERFORMANCE AND JOB SATISFACTION OF SCHOOL TEACHERS: AN EXPERIMENT WITH WOMEN EMPOWERMENT

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Introduction

> *"By education I mean an all round drawing out of the best in child and man--body, mind and spirit."*- M K Gandhi

Education in the real sense is to humanize humanity and to make life progressive, cultured and civilized. It is very important for the progress of individual and society. It is through education that man develops his thinking and reasoning, problem solving and creativity, intelligence and aptitude; positive sentiments and skills, good values and attitudes. It is through education that he is transformed into human, social, moral and spiritual being. Man learns something every day and every moment. His entire life is education. Hence education is a continuous and dynamic process. It is concerned with ever-growing man in an ever growing society. Hence it is still in the process of evolution.

The place of teacher in society is important. He/she is the centre of transmitting intellectual traditions and technical skills from one generation to next generation and he/she is responsible for keeping the sight of civilization shining. In fact the standard of a country depends on their education and training. The pivot of whole education system is a *'teacher'*. As such from the very beginning all the education commissions have emphasized on the necessary aptitude and attitude of teachers. The money spent on teacher education is an investment because it increases the capability of the teachers to 'educate' by developing certain competencies in them.

A teacher must have knowledge of his subject methods and training depends upon the nature of his specialization. It is necessary to know which part of knowledge is essential. Education is always spoken in the same breath as instruction, training and teaching. But education encompasses all these:

While the term 'training' has a very limited scope, 'education' is a very broad term. Training is given in a formal way as it implies preparation under supervision. Training is merely a part of education to develop certain skills. Training is necessary for efficient work in a particular job. If a person is trained before employing him he may have effectiveness and still be low in efficiency. Training is essential for every teacher. Trained teachers can do much more than untrained teachers. Teachers are being trained in communication skills, teaching and handling of curriculum, subject content planning, classroom control, activity planning and execution and evaluation.

Need for Education of Teachers

Training in mastery of skills needed to be a good teacher is one of the aspects of education of teachers. Holistic education needs to develop character-disciplining the mind, body and the habits and attitudes. Only professionals who practice what they preach can be the role models to students. Education of teachers should involve development of proper attitude development of correct perspective, imbibing of values and morality, development of personality and internalisation of values into one's life style.

Humanistic program for teacher education seeks to develop a humane teacher possessing such qualities as spontaneity, acceptance of creativity and self realization. It would help him to develop compassion for weakness in individuals and sensitivity for the needs of human beings. Thus humanistic approach to teacher education will produce teachers able to exalt the continued process of education of human potential in our schools. Competence and professional skills are the very heart of the program of teacher education. An educated

teacher should possess such skills and competencies which makes his task easy useful and effective; possessing the right attitudes and values which make him a committed professional. The 21st Century skills demand developing ICT skills in teachers which help them to guide students to convert information to knowledge and then to wisdom. Technology integration to convert classrooms to constructivist learning environments is necessary. We need to train teachers in utilising the web resources for better student engagement and learning.

Rationale of the Study

More attention is being paid towards deeper involvement in the core activity of education which is teaching and learning. Attention has shifted from teaching to learning, and some have proposed the term "learning leader" over "instructional leader" (Richard DuFour, 2002). The National Association of Elementary School Principals (2001) defines instructional leadership as "leading learning communities". In learning communities, staff members meet on a regular basis to discuss their work, work together to problem solve, reflect on their jobs, and take responsibility for what students learn. They operate in networks of shared and complementary expertise rather than in hierarchies or in isolation. People in a learning community "own the problem" and become agents of its solution. Instructional leaders also make adult learning a priority; set high expectations for performance; create a culture of continuous learning for adults and get the community's support for school success. Blase and Blase, (2000) expressed instructional leadership in specific behaviours such as making suggestions, giving feedback, modelling effective instruction, soliciting opinions, supporting collaboration, providing professional development opportunities, and giving praise for effective teaching.

While reviewing the related literature in Indian context, the researcher wants to highlight the the role of our education department and government in this area and it was quite re-assuring to find that *NCF (2005)* developed by the NCERT and approved by the Central Advisory Board of Education, especially stresses the need to pay urgent attention to capacity building of head teachers/Principals and teachers on various aspects of school management, school environment and classroom process in the present context. It also provides strategies, provisions and POA to development the training package for strengthening Leadership Capabilities of Head teachers /Principals/Vice Principals of educational institutes.

The researcher also came across couple of privately funded excellent Programs, *UKIERI School Leadership Program and School Leadership Development Program - SLDP (2009),* working to build a sustainable school leadership development Program in India through

training head teachers/ Vice Principals and school administrators. However, they were limited to states like Rajasthan, Karnataka and Tamil Nadu. The Program was to be extended in states of Kerala, Maharashtra and Pondicherry.

Of the few studies that focused on in the area of educational leaders' preparation, Gafoor, Ali (2009) & Tyagi (2011**)** emphasized the use of distributed leadership to ensure control; and emancipatory leadership to make school a real part of the community and reiterated the value of the head as instructional leader and facilitator as recognized globally. Also, revealed that school-based instructional supervision by heads could bring about and sustain the professional development of teachers, crucial for student learning.

Based on the above limited studies and the other reviewed books, it was concluded that there is not enough accumulated body of knowledge and practice to foster the competencies expected from an educational leader /teacher for realizing the current visions on education in Indian context. Only a handful of researchers seems to have studied this emerging and vital leadership in the Indian context.

All the above discussion supports the need for undertaking the research in the area of capacity building of teachers and to study the impact of this training program on teachers' job performance and job satisfaction. The researcher developed a *Faculty Development Program*, four days' workshop for teachers aimed to equip the teachers with the essential instructional practices to improve student engagement and enhance academic achievements for all students, based on following themes:

- Integrating Thinking Skills in the Curriculum
- Thinking Skills for Exceptional Learners: Gifted & Slow learners
- Strategic Lesson Planning
- Qualitative Evaluation: Techniques & Tools for Assessment- focusing on rubrics
- Active Learning Strategies
- Learning Styles and Multiple Intelligences
- Discovery Learning and Co-operative Learning Strategies
- Application of Web-tools in Education- Story Jumper, Hot Potatoes, Mind Maple and other free Web-resources

Objectives of the study:

1. To develop and implement a *Professional Development Program* for the teachers of school education on the theme "Creating Constructivist Classrooms" and

2. To compare the job satisfaction of teachers of the experimental group and the control group before and after the implementation of the professional development program;

3. To compare the job performance of teachers of the experimental group and the control group before and after the implementation of the professional development program;

4. To study the perceived effectiveness of the *Professional Development Program* among the participant teachers;

Research Questions and Hypotheses of the Study

In pursuit of the objectives, the following **research question** was raised:

What is the perceived effectiveness of the Professional Development Program according to the participant teachers?

The following null hypotheses were formulated:

$H_0 1$. There is no significant difference in the job performance scores of teachers from experimental group and control group (as indicated by the difference in their pre- test and post- test scores on *Teachers Job Performance Scale*)

$H_0 2$. There is no significant difference in the job satisfaction scores of teachers from experimental group and control group (as indicated by the difference in their pre- test and post- test scores on *Teachers' Job Satisfaction Scale*)

Research Design of the Present Study

The present study is a mixed method research with embedded quasi experimental research design with an experimental group and a control group of school teachers selected from the same schools and seeking to assess the effectiveness of the *Professional Development Program* for its effectiveness in enhancing the job performance and job satisfaction of teachers.

Methodology

The qualitative part of the study assessed the perceived effectiveness of the through focus group interviews of the academic leaders and teachers and sought to answer the research questions of the study. The methodology for data collection included participant observation and grounded theory approach. The quantitative part of the study was a two group's pre-test post-test quasi experimental research design which can be represented as follows:

$$O_1 \qquad X \qquad O_3$$
$$O_2 \qquad C \qquad O_4$$

Participants of the Study

In the present study, the researcher made use of Purposive Sampling Technique**.** The participants were drawn from the English medium schools located in Mumbai city. These educational institutes were randomly selected and divided into 2 groups- the experimental group and the control group. Experimental group consisted 26 teacher volunteers. Control group consisted of 20 teacher volunteers. All teachers were women.The following table gives the details of the participants:

Details of Teacher Participants of the Study

Sr. No.	Participant Schools	Participant Teachers
	Experimental Group	
1	New English School and Junior College, Kherwadi, Bandra	5
2	SM Shetty School and Junior College, Powai	6
3	Datta Meghe World Academy, Airoli (CBSE School)	4
4	The Somaiya School, Vidyavihar	11
	Total	**26**
	Control Group	
5	Michael High School & Marceline Jr. College, Kurla	4
6	M D College, Parel	5
7	Podar International School, Kalyan	5
8	Sameerwadi School	6
	Total	**20**

Tools used for Data Collection in the Present Study

In the present study, researcher used the following tools:

a) *Teachers Job Performance Scale*

The researcher used Teachers Job Performance Scale to assess the effectiveness of teachers in discharging their duties as effective teachers.There are total 27 questions in the final scale. These questions were given as pre-test and later as post-test to the teachers of participant educational institutes to test their instructional practice. The participants were to Tick √ against column that was applicable to their instructional practices. To assess the responses objectively, the researcher also prepared the scoring key. The questions carried different

weightage in terms of scores: ranging from 4 to 1, 4 being the highest for the most desirable instructional practice for effective performance by an efficacious teacher.

b) *Teachers Job Satisfaction Scale*

Teachers Job Satisfaction Scale was used by the researcher to assess the job satisfaction among the teachers of participant educational institutes. There are total 52 questions in the final scale. The participants were to Tick (X) against that response that was CLOSEST to the response they would usually have to the given situations. To assess the responses objectively, the researcher also prepared the scoring key. The questions carried different weightage in terms of scores: ranging from 5 to 1, 5 being the highest level of job satisfaction being experienced by a teacher.

c) *Professional Development Module for Constructivist Classooms*

The crucial role that teachers play in nurturing and supporting each child's creative potential, their overall learning experience and outcome can't be stressed enough. A teacher can effectively contribute to this only when they exemplify creativity in their own teaching. Thus it becomes imperative to equip the teachers with the knowledge and competences required for change that we all seek in terms of students learning. The skills needed to promote learner-centred approaches, collaborative strategies, effective feedback, evaluation and the use of modern learning tools, particularly those based on ICT must be given importance while dealing with teachers' professional development.

In order to develop an instructional module based on above requirements, researcher hired *Mindsprings* Consulting Agency, a renowned organization that provides academic consulting for schools all over India. As the facilitators were already well-versed with the area of providing professional support to train teachers, module based on the researcher's requirement was developed with much of the inputs from them. The module primarily aimed to equip the teachers with the essential instructional practices to improve student engagement and enhance academic achievements for all students.

Overview of the Module:

The Professional Development Program comprised following activities:

DAY 1

SESSION TITLE	SESSION OUTCOMES
Thinking Skills for Exceptional Learners - Gifted & Slow learners Integrating Thinking Skills in the Curriculum	Why think? How do we think? Thinking and Education Types of Thinking Processes of thinking Complexities of the classroom Celebrating thinkers

SESSION TITLE	SESSION OUTCOMES
Strategic Lesson Planning Qualitative Evaluation Techniques & Tools for Assessment- focusing on rubrics	• The Testing Process • Types of Questioning • Rubrics And Marking Schemes • The Correction Process • The Reporting Process

DAY 3

SESSION TITLE	SESSION OUTCOMES
Multiple Intelligences and Learning Styles	What and Why? Classroom activities to cater to multiple intelligence and different learning styles in a classroom
Constructivist Learning Strategies	Active Learning Strategies Co-operative, Collaborative Learning & Guided Discovery
Jerk Technology	Strategies to keep learners alert and attentive during teaching-learning
Web-resources	Free sites and software for educational purpose

Data Collection

The ***Professional Development Program*** for teachers was conducted on different dates almost in the same months. The fourth day workshop on web tools was conducted after a gap of few months. The procedure followed with the experimental group is presented below:

The control group was administered the pre and post-tests on the same dates as the experimental group.

The researcher visited the participant institutes during the implementation of the program and after that for 2 months at random to observe the implementation process and to conduct interview with the participant teachers. The lessons were observed and observations were noted by the researcher in the Observation Sheet. The interviews were conducted using structured questions focusing on the participants' experience during and after the program. The quantitative part of the study was analyzed through Descriptive analysis and Inferential analysis done using 't' test.

Answering the Research Question:

What is the perceived effectiveness of the Professional Development Program according to the participant teachers?

All the teachers enjoyed the Professional Development Program as it brought in a plethora of information, knowledge and skills that definitely helped them to improve their professional effectiveness. They were especially happy with the nature of the program as it has a perfect blend of theory and practicals. According to the teachers the hands-on exercises conducted during the workshops helped them to clearly understand the process of application and increased their confidence to take up the implementation of these activities in their institutions. Lot of teachers said the sessions on 'Thinking Skills' and 'Multiple Intelligence and Learning Styles' were clearly an eye-openers and helped them to understand the learning pattern and progress of their students better.

Teachers reported that the 'skills of strategic lesson planning and questioning' also became very useful while planning learning activities. Teachers could guide their students to have more inquiry based learning through the skill of right questioning. Subject teachers appreciated the active learning strategies in subjects like Mathematics, Science, History and Languages.

The junior college teachers felt that it was very challenging for them to use co-operative and collaborative learning strategies in their classes due to large number of students in the class. They complained about the rigidity of the time table and lack of inclination on the part of the students in constructive utilization of such activities. However, they reported that they enjoyed using Jerk Technology techniques to keep the students alert during the class. Many of the school teachers too reported that they could easily use the techniques shared with them for keeping the students attentive and engaged in the learning.

All the teachers gave the feedback that the practical session on Web-tools in education has helped them a great deal to make use of the technology in their teaching as the software shared were free of cost, easy and practical to use. However, most of the teachers used these software's for revision classes as they wanted to try out the practicality and usability. These teachers said after the trial now they were more confident to use the shared web-resources for content transaction and other aspects of teaching-learning. All the teachers insisted that researcher should undertake more such projects and organize many more professional development programs for school and junior college teachers. It was quite evident from the feedback that the teachers felt the dire need of such programs in schools in the present context. It was also noted that the Principals of these schools were all encouragement for such programs and were very much willing to send the teachers for more such programs.

Verifying the Hypotheses of the study

$H_0$1. There is no significant difference in the job performance scores of teachers from experimental group and control group (as indicated by the difference in their pre-test and post-test scores on *Teachers Job Performance Scale*)

t test was used to find out the significant difference between the means of pre-test and post-test scores on job performance of teacher participants. The following table presents the results of the t test.

Table 2: Significance of the Difference between the Means of Job Performance Scores of Teachers in the Experimental and Control Groups

Variable	N = 46	N	Mean	SD	df	Table Value 0.05	Table Value 0.01	t value	LOS
Teachers' Job Performance	Control	20	0.90	2.77	44	2.021	2.70	6.94	0.01 level
	Experimental	26	7.54	3.71					

From the above table, it could be observed that the calculated t value is 9.25 which is higher than the table value at 0.05 and 0.01 levels. Therefore the null hypothesis is rejected at 0.01 level of significance.

Interpretation: There is significant difference in the job performance of teachers from experimental group and control group.

H$_0$2. *There is no significant difference in the job satisfaction scores of teachers from experimental group and control group* (as indicated by the difference in their pre-test and post-test scores on *Teachers' Job Satisfaction Scale*)

t test was used to find out the significant difference between the means of pre-test and post-test job satisfaction scores of teacher participants. The following table presents the results of the t test.

Table 4: Significance of the difference between the Means of Job Satisfaction Scores of Teachers in the Experimental and Control Groups

Variable	N = 37	N	Mean	SD	df	Table Value 0.05	Table Value 0.01	t value	LOS
Teachers' Job Satisfaction	Control Group	11	2.18	0.31	35	2.042	2.75	9.93	0.01 level
	Expt. Group	26	11.04	4.52					

From the above table, it could be observed that the calculated t value is 9.93 which is higher than the table value at 0.05 and 0.01 levels. Therefore the null hypothesis is rejected at 0.01 level of significance.

Interpretation: There is a significant difference in the job satisfaction of the teachers from experimental group and control group.

Findings of the Study

The answering of the research questions and verification of the hypotheses has led to the following findings:

1. There is significant difference in the job performance of the teachers from experimental group and control group.

2. There is significant difference in the job satisfaction of the teachers from experimental group and control group

3. In most of the cases it was a combination of teacher's intrinsic motivation and their institutional heads encouragement that played a vital part in teachers' actively participating in the development program and also the implementation of the learnings from the program.

4. Teachers are also very much aware that their instructional practices have a direct impact on the learning outcomes of their students, this awareness will always motivate them to give their best when it comes to educating the young generation.

5. As for students, they showed great enthusiasm and acceptance to the initiatives by their teachers. In fact they welcomed this change with an open heart as it brought a much needed break in monotony of their routine.

The findings are indicators to all the teachers and academic leaders that Professional Development Programs such as this helps the teachers to hone their skills and competencies not only in practical aspects of teaching learning but also theoretically, which is very essential to develop the deeper understanding behind certain instructional beliefs and practices. Also, the technology based session in such workshops are much appreciated by the teachers as they help them to connect with their students better by catering to the needs of young digital learners more effectively.

Conclusion:

Though there are few challenges along the way, such as working around rigid timetable, curriculum and continues assessments, institutional heads and teachers can work together and support each other to overcome these challenges as they did in this case. Based on the above findings researcher can confidently say that when the heads of the institutions are made capable of providing leadership and coaching in instruction it definitely motivates the

teachers to put in their best efforts to make teaching-learning not just effective but also enjoyable for learners resulting in better learning outcomes.

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