



ATTITUDE TOWARDS ICT INTEGRATION IN EDUCATION AMONG SECONDARY SCHOOL TEACHERS

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Abstract

The introduction of technology to the field of education has completely changed the conventional way of teaching and learning by modifying and making the enormous use of technology in the field of education. In order to make the best use of our resources, it is essential that all persons engaged in the educational enterprise and especially the teacher should understand adequately the dynamics and mechanism of educational technology and provide the best possible education to the students. Also, the favourable attitude of teachers' towards using new technology in teaching will certainly make teachers use them in appropriate situations in teaching and thus measuring of teachers' attitude towards using new technology in teaching is very much needed. The purpose of the current study is to understand teachers' attitudes and also to examine the factors that encourage or impede teachers from integrating technology in educational practice. In the present study cluster random sampling procedure was adopted. The sample comprises of 200 teachers of the Government Aided and Private Secondary Schools of districts Jalandhar only.



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INTRODUCTION

The function of education is to teach one to think intensively and critically. Technology helps in disseminating education globally with ease of access. India's need for education is diversified and extensive, as it requires individuals who are equipped with specific knowledge to assume development responsibilities. Over the past years, a number of studies have shown benefits from the use of technology in education. It is only through education and the integration of technology in education that one can teach students to be participants in the growth process in this era of rapid change. Smart classes, audio visual aids, virtual classes, e-learning, education through social media, web references etc., all concepts is technology evolved and commonly used. The role of technology in education is vital, and the question is no longer if technology enhances learning, but rather how do we improve our use of technology to enhance learning? No doubt this question can only be answered by knowing our teachers' attitude towards integration of technology.

INTEGRATED TECHNOLOGY

Integrated Technology literally means incorporating technology and technological aids in education in such a manner that enhances student learning. Technology integration indicates using computers effectively and efficiently in the general content areas to allow students to learn how to apply computer skills in meaningful ways.

The demands of the 21st century information rich and knowledge based society make it essential for both teachers and students to utilize technology effectively. Today children are living in digital era. They have so many e-learning platforms in their hands. They are using laptops, iPods, smart phones and computers. They have 3G and 4G networks to catch the internet. With the help of multimedia, the advancement of technology initiates children to get multiple intelligence. In order to satisfy the needs of learners the teachers should learn the emerging pedagogy which is ICT enabled. Various studies also support the changing trends in integrating technology in education.

The significant role of ICT in school education has been highlighted in the National Curriculum Framework (NCF), 2005. Use of ICT for quality improvement also figures in Government of India's flagship programme on education, Sarva Shiksha Abhiyan (SSA). Again, ICT figured comprehensively in the norm of schooling recommended by Central Advisory Board of Education (CABE), in its report on Universal Secondary Education in 2005. The Information and Communication Technology (ICT) in schools have been subsumed in the Rashtriya Madhyamik Shiksha Abhiyan (RMSA). Now ICT in Schools is a component of the RMSA. The Information and Communication Technology (ICT) in Schools was launched in December, 2004 and revised in 2010 to provide opportunities to secondary stage students to mainly build their capacity on ICT skills and make them learn through computer aided learning process.

There are provisions for in-service (induction and refresher) training for all teachers in secondary and higher secondary schools to enable them to impart ICT enabled teaching. 150 smart schools would be set up by State Government and UTs at the district level using a grant of Rs. 25 lakh for a school and a recurring grant of Rs. 2.5 lakh per year. This would enable provision of at least 40 computers in each such school. There is a provision to strengthen SIETs to contribute to e-content development. Under the ICT in Schools, to promote computer enabled learning and usage of ICT in teaching in Government and Government aided Secondary and Higher Secondary Schools has provision for instituting the National Award for innovative use of ICT to motivate the Teachers and Teacher Educators for innovative use of ICT in teaching-learning. The National Award for Teachers using ICT

for innovation in education for the year 2010-2015 was given away to the 61 awardees along with the National Teacher Award on Teachers Day.

ROLE OF TEACHERS' ATTITUDE IN INTEGRATING TECHNOLOGY IN EDUCATION

Teachers constitute the key element in this transformation based on the adoption of ICT learning and teaching tools in schools. Integrating technology in the curricula requires an investment both in these technologies and in trained personnel. The transition from rote learning to tech-based education is clearly evident. Smart Boards, CDs, and e-learning, e-tab are now part of everyday education. A multitude of communication technology tools available to teachers can provide effective and innovative ways to engage students who appear to prefer communication in this manner.

The productive use of the technology depends on a teacher's attitude towards integrating technology. Some teachers are often resistant of using technology in classroom. So, the development of positive attitude towards technology in teachers is considered to be a key factor in fostering technology integration and enhancing the quality of learning and teaching using *ICT*. Teachers are using its tools such as computer, projector, TV and video, overhead projector and internet. Due to burst of knowledge in education field, teachers are accessing online resources, creating desktop publishing documents and developing multimedia presentations for making their teaching effective and providing the students with up to date knowledge so that they compete in the present scenario of cut throat competition.

STATEMENT OF THE PROBLEM

The problem at hand is stated as follow:

STUDY OF ATTITUDE TOWARDS ICT INTEGRATION IN EDUCATION AMONG GOVERNMENT AND PRIVATE SECONDARY SCHOOL TEACHERS

OBJECTIVES OF THE STUDY

The current study has the following objectives:

1. To find out the attitude of secondary school teachers towards integrated technology in education
2. To compare the attitude of secondary school teachers on the basis of :
3. Types of Schools (Government & Private)
4. Academic Stream (Science & Humanities)

TOOLS USED

Keeping in mind, the demand and objectives of the study, the following tools were used for collection of data:

- Attitude Towards ICT Scale developed by Mehra & Far (2013)
- A self-constructed opinionnaire was used to check belief and frequency of usage of various ITE tools.

CONCLUSIONS

The results revealed many facts and finding upon which we can draw some conclusion.

(A) Conclusion Drawn From ICT Attitude Scale

1) Comparison of mean scores of attitude towards the integrated technology in education among government and private secondary school teachers

Summary of Mean, SD and t-value on attitude toward technology in education on scores of government and private secondary school teachers.

Category	Group	N	Mean	SD	t – Value
Type of Institution	Private	100	229.51	20.42	11.44**
	Government	100	201.75	20.42	

**Significant at 0.01 level:

It is found that there is significant difference of attitude towards the integrated technology in education among government and private secondary school teachers.

- The private schools secondary teachers may have highly favourable attitude due to availability of resources and staff.
- The government schools secondary teachers hesitates and may have less favourable attitude towards integrated technology due to non-availability of hi-tech resources and lack of maintaining staff.

Yadav, R. (2015) had found somewhat similar results in her study of attitude of secondary school teachers of Rewari district towards the use of information communication technology in education. Private School teachers showed greater attitude towards use of ICT in education as compared to government school teachers.

2) Comparison of mean scores of attitude towards the integrated technology in education among science and humanities secondary school teachers

Summary of Mean, SD and t-value on attitude toward technology in education on scores of science and humanities secondary school teachers

Category	Group	N	Mean	SD	t – Value
ICT	Science	100	219.90	22.10	2.789**
	Humanities	100	211.36	21.25	

**Significant at 0.01 level

It has been found that there is significant difference of attitude towards the integrated technology in education among science and humanities secondary school teachers.

- Science teachers use more technology in classroom to explain and relate due to technical and abstract concept.
- Humanities Teachers use creative and realistic approach for authenticity and accuracy. Further, more awareness about the use of technology in their field is required.

This result is supported by the study done by Cavas, Cavas, Karaoglan & Kislal in 2009 who explored the relationship between teachers' attitudes and factors which are related Singh, K.S.(2012) also studied teachers' attitude towards ICT among teacher training institutes of Manipur state in India. Teachers of five training colleges affiliated to Manipur University constituted for sample of the study. The study revealed that there is significant difference between arts and science teachers' attitude towards use of ICT. Science teachers show more interest than arts teachers.

(B) Conclusions Drawn From Opinionnaire

1. Awareness and Beliefs about Various Tools of ITE

From the responses and results towards the items related to this aspect, it has been found that the teachers are not much aware about the usage of various tools of ITE. Moreover, skill training and hands on experience is required to form positive beliefs towards ITE.

2. Students participation & achievement

From the responses of secondary school teachers towards the statements related to this dimension, it is found that students show more interest and are enthusiastic about ITE, which in turn motivate the teacher to make use of technology aids in classrooms. Teachers are aware that use of ITE enhances learning and brings improvement. However, a fear of decreasing role of teacher is also found somewhere deep in .

3. Inclination for usage

From the responses of secondary school teachers towards the statements related to this dimension, it is found that teacher know the importance of ITE and are keen to update them and classrooms with it. However, lack of maintenance, supporting staff and training on handling of equipment make this job tiresome to them. But with little training, support and encouragement will motivate them for its usage.

EDUCATIONAL IMPLICATIONS

This study revealed that majority of the secondary school teachers are at a moderate level of use of ITE. In order to make teachers reach a higher level of use of ITE, there is a need to implement more ITE resources and to provide opportunities to them to utilize and integrate technology to its fullest potential in their classrooms.

- There should be collaboration in working of the Principal, teachers, administration and society for high level of morale development in teachers and also to encourage new modes of ITE.
- Training programs should be run by administration bodies to make teachers competent in using emerging technology in their classrooms.
- Along with science, humanities teachers should also encourage and motivate for the use of ITE. For example, in Language Teaching, the use of technology should be promoted as it enhances listening, reading, and comprehension ability in students.
- Teachers should be encouraged and motivated by giving some awards and incentives on integrating technology in their classroom by principal and administration to develop positive attitude towards ITE.
- Most importantly, every classroom in government schools should be equipped with computer, projector and sound system.
- Along with this, internet facility should be provided to all teachers and classrooms.
- Efforts should be made by the state and the central government to support teachers in all possible ways to enhance use of technologies in the classrooms.

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