



DO TEACHER ATTITUDES IMPACT TEACHING THROUGH INFORMATION TECHNOLOGY

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Abstract

Teachers' styles, and mainly their attitudes, are strong context outcomes, rooted in experience and do not become automatic routine conducts, in the sense that they are developed via very slow interactions and become well established constructs for each individual only after some time. In that sense attitudes can be modified only by each individual, when he/she becomes aware, via elements and evidence, that new postures would be better to deal with the world around. In the present study data regarding the attitude of teachers towards information technology was gathered with the help of survey method. All the school teachers of districts Bilaspur and Hamirpur of Himachal Pradesh constituted the population of the study. In order to ensure high quality of research, selection of a good sample is must. For this purpose sampling was done at two stages. At the first stage 14 schools were selected and in the second stage 150 teachers were selected randomly from the each selected school. Keeping in view the nature of the present study the investigator used the standardized tool, "Attitude towards Information Technology Scales. The reliability of the tool is 0.88. To find out the significance of difference between the various groups 't'-test was applied. The findings of the study revealed that gender-wise, locality-wise, school teachers do not differed significantly in their attitude towards information technology.

Keywords: *Teachers, information, technology, internet and communication medium.*



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Introduction

ICT is an acronym that stands for 'Information and Communication Technology' and refers to technologies that provides access to information through Telecommunications. It mainly includes the Internet, wireless networks, cellular phones, and other communication mediums. ICT covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form. Information technology (IT) is the application of computer and telecommunication equipment to store, retrieve, transmit and manipulate data. The term is commonly used as a synonym for computers and computer network. Education provides us with information, and then we have to learn and process this information for our own use. It is very important to make education accessible at any time by everyone; this will help in reducing on the level of illiteracy. Information technology has the ability of speeding up information delivery, so this ability can be used in improving our education environment.

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With the implementation of information Technology, costs of accessing educational material are cut down and it makes it easy for students to learn from anywhere. It is evident that information technology has affected changes to the methods, purpose and the perceived potential of education. Many schools, technology developers, and researchers now use technology to “enhance” education by making the achievement of traditional objectives more efficient. Many intelligent tutors and software programs in mathematics and science fit together under this strategy. Objectives for education are not re-conceptualized, the computer is conceived of as mean for “delivering” key components of instructional activity, not for redistributing intelligent make apparent how the exploitation of external resources and changing attitude towards the integrity of their use, change the properties of what one “need to know”. The rapid growth in Information communication and Technologies (IT) have brought remarkable changes in the twenty-first century, as well as affected the ands or modern societies. IT is becoming increasingly important in our daily lives and in our educational system. Therefore, there is a growing demand on educational institutions to use IT to teach the skills and knowledge students need for the 21st century. Today’s educational institutions try to restructure their educational curricula and classroom facilities, in order to bridge the existing technology gap in teaching and learning. This restructuring process requires effective adoption of technologies into existing environment in order to provide learners with knowledge of specific subject areas, to promote meaning full learning and to enhance professional productivity. According to Hogg and Vaughan (2005) ‘an attitude is defined as a relatively enduring organization of beliefs, feelings, and behavioral tendencies towards socially significant objects, groups, events or symbols.’ Allport (1935) mentioned that an attitude is a mental or neutral state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related. Social psychologists distinguish and study three components of the responses: (a) cognitive component: -the knowledge about an attitude objects, whether accurate or not; (b) affective component:-feelings towards the object and (c) co-native or behavioral component, the action taken towards the object. Muller and his colleagues (2008) related technology training to successful integration of technology in the classroom. Teacher’s personality is a powerful intrinsic motivational factor which influences e-learning technology acceptance. It represents a set of characteristics which make every teacher unique in education process and it is strongly influenced by the surroundings. The

most commonly studied teacher's features are: self-efficacy and anxiety, more often approached from the technical aspect. Computer anxiety is closely connected to the teacher's attitude; author suggests the possibility of understanding computer self-efficacy as a construct of perceived ease of use (Timothy, 2009). Copeland (2014) 'ICT in Education is important. ICT is one of the key skills needed to access and enrich learning of all kinds. It's all about communication, and in the world in which our children are growing up, it is vital: whatever they do, they will have to be ICT-literate. ICT connects all areas of the curriculum. The internet can be a powerful resource; if children aren't connected at home school provision becomes even more important. ICT should be seen as an essential skill because if you aren't using it all the time, you forget how to.

Review of Related Literature

The focus of the present chapter is to review the research work that has already done in the area of Information Communication Technology (ICT), so as to gain a comprehensive understanding with respect to the objectives, nature, structure, presentation and effectiveness of ICT programmes and also to identify the explored areas that need to be studied with reference to various dimension of ICT programmes. An attempt was made to scan through the related literature from various resources. Papert (1980) found that a complementary relationship exists between technology and constructivism, the implementation of each one benefiting the other. Recent attempts by educators to integrate technology in the classroom have been within the context of a constructivist framework. Laird (1985) found that the vast majority of knowledge held by adults (75%) is learned through seeing. Hearing is the next most effective (about 13%) and the other senses - touch, smell and taste account for 12% of what they know. He claims that the use of the Internet for research or producing a website to publish their project results can enhance students' organizational skills, connect them with a real audience and foster a better understanding of the World Wide Web. Nason (1996) found that when students worked collaboratively in a small group to generate a format-free computer database, it was a very effective way of establishing a knowledge building community within a primary school classroom. Bates (1997) reported lack of training and skills as obstacle to ICT use in institutions of higher learning in Tanzania. Sandholtz et al. (1997) reported that there were positive changes in student attitude. Their interest and motivation typically extended to the last week of school and as students became involved in working on computers, the time they spent on assignments and projects often increased. Dix

(1999) found that, although there is no significant difference in achievement with either method, use of computers in mathematics does appear to positively influence student motivation. Farrell (1999, cited in Sife et al, 2007) reported that ICT training and workshops are needed not only to improve the skills of the instructors, but also as a means of getting them involved in the process of integrating ICT in teaching and learning. Knezek et al. (2000) reported that educators with higher levels of skill, knowledge, and tools would exhibit higher levels of technology integration in the classroom. Mooij et al. (2001) found that teachers' competence and confidence in their skills were one of the main factors to influence teachers' willingness to integrate technology in their teaching and learning process. They claimed that educators' lack of knowledge is a serious barrier to integrate ICT into secondary schools. Educators must attain and maintain an assured degree of technological competence to make instructional strategies more effective. Blackmore et al. (2003) found that using ICT in learning offers advantages and opportunities to increase students' motivation, helps students to solve problems, and increases students' attention span. Deaney et al. (2003) found that students viewed ICT resources as helpful in tasks and presentations, and also useful in refining project reports and trial options. They associated ICT with change in the study environment and classroom relations; ICT applications raised interest and increased motivation on their part. Nevertheless, whilst the participants valued independent study and the challenge of ICT, they were concerned that this reshaping of learning might be displacing valuable teaching. Peansupap et al. (2005) found that lack of ICT skills as a key barrier to adopting and using ICT applications in Australian construction organizations. They indicated that the failure of ICT change derives from the traditional beliefs of managers and ICT experts that technology is a magic bullet and so neglect role of people in any change management task. Solving technical issues can minimize users resistance to technological innovation and thus, ICT implementation success is often realized by managers who understand the management of technological change. Thus, if teachers perceive ICT as a beneficial tool, compatible with their current activities, easy to use and have observable outcomes, they could demonstrate positive attitude towards ICT. This can positively influence ICT Implementation in institutions of higher learning. UNESCO (2005) reported that teachers, professors, technical and administrative staff must be given training that enables them to integrate new information and communication technologies into their teaching programs. The lack of technical skills of maintaining the functionality of computers

confused teachers to integrate ICT in the classroom. Aryatuha (2007) found that the availability of computer hardware and software should be accompanied with training of the users and constant technical support. Without this, even though high quality hardware and software are available, they could be wasted or remain underutilized by the users. Malcolm et al. (2008) reported that lack of professional development programs for teachers to upgrade their skills on emerging technologies is a barrier to ICT implementation administrators. Afshari et al. (2009) found the effective use of computers by teachers depends not only on their attitudes, but also on the training they have received Teachers competence presupposes: positive attitudes to ICT, understanding of educational potential of ICT, ability to use ICT effectively in the curriculum and ability to manage ICT use in the classroom. Wolcott et al. (2011) found that faculty who wanted to participate were least influenced by extrinsic motivations such as monetary support, course release time, and tenure and promotion credit. Furthermore, some universities who did not provide faculty release time to develop online courses have had other staff members do this work, as with instructional designers, multimedia developers, and technology experts. Reid (2013) found that determined online instructors moved through different phases of their online learning experience, and their needs changed at each stage. Furthermore, considering educational leaders were responsible for the quality of online programs and instruction they also needed to engage in professional development, and experiment with online learning environments, infrastructures, and technologies. Menon (2015) revealed that there exists no significant difference in attitude of secondary school teachers belonging to urban and rural area towards use of ICT. Further results showed that there exists no significant difference in attitude of secondary school teachers towards ICT in classroom teaching. Yadav (2016) found that the Female teachers showed more attitudes towards use of ICT as compared to male teachers and that the Private School teachers showed greater attitude towards use of ICT in education as compared to government school teachers.

Rationale of the Study

The world of education is changing as the modern world continues to grow. With so much progress happening, it's important that education be able to reach students in new ways so that their students are prepared for the future. The students of today are the leaders, inventors, teachers and businessmen of tomorrow. Without the proper skills, these students will not have the preparation needed to survive. With so much focus paced on education it can

sometimes be difficult to hold a job and still get the training needed to get a better job. Information technology plays a key role in student being able to keep their jobs and go to school. Now most school offer online classes that can be accessed on computers or laptop, tablets and even mobile phones. A busy student at work can easily check in or submit assignments while on their lunch break. Teachers need to be prepared by staying up to date with information technology and this can mean more than just reading about the latest gadgets. Learn how to teach with technology with online class. Using technology teachers can prepare their students for future flooded with gadgets including tablet, mobile phone, computers and so much more. It is only possible when the teacher have right attitude towards information technology. Teachers attitude towards information technology have a marked influence on their readiness to utilize technology in their teaching strategy. If the teacher has confidence in using the technology, they will possess a positive attitude which may greatly influence their teaching and learning process. However, if teachers are reluctant to use computers, then changing teacher's attitude could possibly be one way of overcoming this problem. Thus, the successful use and application of computer in the education system may very much be related to dependent upon, teachers attitude towards IT. A perusal of research studies reveal that teachers attitude towards IT is important for integrating IT in education. Teacher's attitude has been found to be a major predictor of implementing new technologies in instructional setting and teachers remain a key component in integration of technology in education setting. The purpose of this study was therefore, to determine attitude of school teachers towards the use of IT. Keeping in view the importance of this area in education and review of related literature also revealed that to study this area is very much needed in the present context.

Objective of the Study

The following objectives were framed in this study:

1. To study the difference in the attitude of male and female secondary school teachers towards information technology.
2. To study the difference in attitude of rural and urban secondary school teachers towards information technology.

Hypothesis of the Study

The following hypotheses were achieved in this study:

1. There is no significant difference in the attitude of male and female secondary school teachers towards information technology.
2. There is no significant difference in the attitude of rural and urban secondary school teachers towards information technology.

Methodology

In the present study data regarding the attitude of secondary school teachers towards information technology was gathered in order to make comparison between male and female, rural and urban teachers of government school. Hence survey method under the descriptive method of research was used in present study. All the secondary school teachers of districts Bilaspur and Hamirpur of Himachal Pradesh constituted the population of the study. It included the teachers teaching classes from 6th to 10th standard in secondary schools. In order to ensure high quality of research, selection of a good sample is must. A good sample must have three characteristics (i) freedom from bias (objectivity) (ii) representativeness and (iii) adequacy in terms of its size. For the present study sampling was done at two stages. At the first stage 14 schools were selected out of the total secondary schools in two districts Bilaspur and Hamirpur. In the second stage 150 teachers were selected randomly from the each selected school. Keeping in view the nature of the present study the investigator used the standardized tool, "Attitude towards Information Technology Scales. The reliability of the tool is 0.88. To collect the related data, investigator personally visited the sampled secondary schools. A rapport was established with the subjects so as to get their free frank views/opinions on various items pertaining to Information Technology. The researcher personally administered the scale to each individual and collected the required information about the present study. The information was tabulated in a systematic manner to arrive at certain conclusions for the study. Since the data from the scale was available in the form of scores, so as to find out the significance of difference between the various groups 't'-test was applied.

Analysis and Interpretation of Data

The inferences are important for the future scholars and investigators to know about the problem and its solutions. Therefore the data have to be analyzed and interpreted carefully otherwise it serves no useful purpose. The analysis and interpretation of the data obtained with the help of tool is given as under. Table 1 given below provides the summary of

statistical calculation for obtaining ‘t’ value with regard to comparison of male and female secondary school teachers on their attitude towards information technology.

Table – 1 Comparison on attitude towards information technology among male and female School Teachers

Sr.	Group	N	Mean	S.D.	df	‘t’ Value
1.	Male	65	119.78	13.68	148	0.356 *
2.	Female	85	118.98	13.53		

*** The mean difference is not significant at .05 Level.**

Table 1 shows that ‘t’ value (0.356) is not significant at .05 level of significance. From table 1, it is clear that the 't' value 0.356 is not significant at 0.05 level of significance. This implies that there exists no significant difference in the attitude of male and female secondary school teachers towards information technology. Hence the null hypothesis that “There is no significant difference in the attitude of male and female secondary school teachers towards information technology” is accepted. This implies that male and female teachers possess almost same level of favourable attitude towards information technology.

Table 2 given below provides the summary of statistical calculation for obtaining ‘t’ value with regard to comparison of rural and urban teachers on their attitude towards information technology.

Table – 2 Locality-wise Comparison on attitude towards information technology among Rural and Urban School Teachers

Sr.	Group	N	Mean	S.D.	df	‘t’ Value
1.	Urban	59	119.62	13.46	148	0.631 *
2.	Rural	91	118.22	12.86		

*** The mean difference is not significant at .05 Level**

Table 2 indicates that ‘t’ value (0.631) is not significant at .05 level of significance. It is clear that the 't' value 0.631 is not significant at 0.05 level of significance. This implies that there exists no significant difference in attitude of rural and urban secondary school teachers towards information technology. Hence the null hypothesis that “There is no significant difference in the attitude of rural and urban secondary school teachers towards information technology” is accepted. This implies that rural and urban secondary school teachers have possessed almost same positive attitude towards information technology.

Findings

1. There exists no significant difference in the attitude of male and female secondary school teachers towards information technology.
2. There exists no significant difference in the attitude of rural and urban secondary school teachers towards information technology.

Educational Implications

This study examines the level of ICT use in and the attitudes of teachers towards the use of ICT for the educational purposes. It mainly aims on following areas such as; Teachers attitudes, ICT attitudinal characteristics and use level, No gender differences in attitude towards information technology. The current study has contributed to the research about the use of information and communication technology in the process of teaching and learning in the secondary school teachers of Shimla. The findings of this research have given more attention to the level of ICT use in order to increase and encourage the use of ICT tools in urban and rural secondary schools in particular. The study contributed to the existing body of research regarding the utilization of ICT for educational purposes in among schools of Shimla. The computer knowledge is very necessary for teachers. Teachers need to perceive ICT as primarily a tool for teaching and learning across the curriculum for more effective and progressive teaching-learning to occur in the classrooms and eventually in the individual lives too.

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