



“A STUDY OF TEACHERS’ ATTITUDE TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AT SENIOR SECONDARY LEVEL”.

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ABSTRACT

The quality of ICT in schools can be improved by teachers' positive attitudes, and teachers' technological competence is a necessary prerequisite for developing this mentality. This study intends to evaluate teachers' Attitudes towards ICT teaching at senior secondary level schools located in the Saharanpur district. For the current study, a descriptive survey research design was used. 60 teachers from a few carefully chosen schools participated in the current study. The researcher created a questionnaire on attitudes towards ICT and demographic profile for respondents, which were employed as the study's administration tools. The study was conducted using a random sample of teachers from different senior secondary schools of U.P. Board. The statistical methods of mean, standard deviation, t-test, and correlation analysis were used to assess four null hypotheses at the 0.05 level of significance. The results demonstrate a significant positive link between teachers' attitudes towards ICT.

Keywords: ICT, Attitude towards ICT, Senior secondary schools.

INTRODUCTION:

Teachers now need more professional development and training as a result of effective ICT use in the classroom. For that ICTs are to be used effectively, instructors must be given the opportunity to learn new skills, consider integrating them into their current teaching practices and curriculum, and engage in the necessary supplementary lesson planning. ICTs, however, can be useful tools to help meet these increased needs by facilitating access to more and better educational content, assisting with routine administrative tasks, providing models and simulations of effective teaching methods, and enabling learner support networks in both face-to-face and distance learning settings, in real time or asynchronously. The teacher will be able to concentrate more on being a learner's facilitator by giving them one-on-one attention if

they have access to multimedia learning materials that encourage constructive concept development. ICT is used by teachers to more effectively and efficiently plan classes. Because teachers collaborate more while using ICT, planning and preparation of work are more effective. Teachers can collaborate more and share lesson plans with colleges because to ICT. It has been proposed that for ICT adoption to be successful, teachers' attitudes about using ICT in the classroom must change. Many academics (Atkins & Vasu, 2000; Gbomita, 1997; Moore & Benbasat, 1991; Roblyer & Knezek, 2003; Sugar, Crawley, & Fine, 2004) have examined the topic.¹

Information technologies offer the resources for knowledge creation, data collection, knowledge storage, knowledge use, communication, and collaboration. Kozma, R. B. (2003).² A recent study also shown that although teachers recognise the value of ICT in the classroom, they frequently encounter barriers. incorporating these technologies into the process of teaching and learning (Balanskat et al., 2006).³ Every nation seeks to integrate ICT into the curriculum, but having access to technology alone is insufficient to guarantee its effective usage. Despite the worldwide, There is significant variation among (and even within) countries with regard to specifically developed ICT curricula, resources, and teaching approaches, even in a context where the importance of ICT-related literacies has been universally recognized and widely regarded as building up (Blurton, 1999; Kozma, 2003). According to Donnelly (2010), effective use of ICT in the classroom is a difficult process that requires institutional support and practice (Baron and Harrari, 2005).⁴

According to the Indian Ministry of Education, using ICT in the classroom will make learning more engaging, scientifically sound, and easily understandable. (Cure and Ozdener, 2008; Foley & Ojeda, 2008; Karagiorgim & Charalambous, 2006) demonstrate that instructors have good attitudes towards using ICT.⁵ Early age was discovered to be a significant factor for teachers who had a favorable attitude towards using ICT (Shaunessy, 2007; Aduwa, 2008).⁶ This is because younger teachers have a greater amount of exposure to and experience with ICT in the classroom, which makes them feel more comfortable and engaged when using it (Hammond et al., 2008a). The "Net Generation," also known as "the digital natives," refers to children and teenagers born between 1982 and 1994 who grew up immersed in technology, which highlights the importance of integrating ICT in teaching and teachers' competence in using technology (Tapscott, 1998; Prensky, 2001a, 2001b; Oblinger & Oblinger, 2005).

ICT can be applied in a variety of ways to enhance teaching and learning in a variety of topic areas. A technology-based approach to teaching and learning provides a variety of engaging methods, such as educational videos, stimulation, data storage, database use, mind-mapping, guided discovery, brainstorming, music, and the World Wide Web (www), which will enhance and deepen the learning experience (Finger & Trinidad, 2002). Additionally, it aids teachers in developing engaging lesson plans that would encourage students to actively participate in their learning. Previous studies (Finger & Trinidad, 2002; Jorge et al., 2003; Young, 2003; Jamieson-Proctor et al., 2013) demonstrated that the use of ICT in education will improve the learning process and maximize the students' capacities in active learning.⁷ Three key stages—integration, enhancement, and complementary—have been recognized by Hermans, Tondeur,

Van-Braak, and Valcke (2008) as necessary for teachers to highly appreciate and consider ICT. The goal of the integration strategy is to increase student accomplishment and attainment by integrating appropriate ICT use in a specific subject area that calls for complex concepts and skills. The enhancement strategy involves heavily emphasizing the introduced issue utilizing ICT. Microsoft PowerPoint, for instance, can be used to present the subject in a highly unique and imaginative style that will encourage conversation and the exchange of ideas and views. Last but not least, a complementary method involves utilizing ICT to facilitate and promote students' academic progress. This method enables students to be more efficient and organized by allowing them to take notes on a computer, submit their work via email from home as long as the deadline is met, and look up information from a variety of online sources to complete the task assigned to them (Hermans et al., 2008).⁸

NEED AND SIGNIFICANCE OF THE STUDY

The teachers' attitude towards technology, and proficiency with technology are the most important factors in developing and maximizing the benefits of ICT in the teaching-learning process. Teachers must be aware and skilled in order to teach in today's classrooms, particularly when employing computers and other digital tools. Pathetically, research (Yildirim, 2007) reveals that teachers are reluctant to use technology, don't feel ready, and are afraid to include ICT into their classroom instruction.⁹ Their resistance to embracing technology as a component of their new teaching approaches is mostly the result of their negative attitudes towards technology (Summar, 1990).

OPERATIONAL DEFINITION OF THE STUDY

Attitude- more or less consistent organization of thoughts, feelings, and preconceptions that are influenced by a certain type of experience and feel ready to be responded adequately.

ICT- new method of sharing, displaying, and using knowledge electronically that is already available.

Teachers- Male & Female Teachers teaching at senior secondary schools.

OBJECTIVES OF THE STUDY

1. To study the levels of teachers' Attitude towards ICT according to their gender (Male & Female).
2. To differentiate between male and female teachers' Attitude towards ICT.
3. To differentiate between Arts and Science Teachers' Attitude towards ICT.
4. To find out the relationship between male and female teachers' Attitude towards ICT.
5. To find out the relationship between Arts and Science Teachers' Attitude towards ICT.

HYPOTHESES:

1. There is no significant difference between male and female teachers' Attitude towards ICT teaching at senior secondary level.
2. There is no significant difference between Arts and Science Teachers' Attitude towards ICT teaching at senior secondary level.
3. There is no significant relationship between male and female teachers' Attitude towards ICT teaching at senior secondary level.
4. There is no significant relationship between Arts and Science Teachers' Attitude towards ICT teaching at senior secondary level.

LIMITATIONS OF THE STUDY

1. Present study is conducted on 60 senior secondary school teachers only.
2. This study is confined to Saharanpur District only.
3. Gender and Subject stream variables are considered only in the study.

SAMPLE AND SAMPLING TECHNIQUE

A true and representative sample of 60 male and female teachers belonging to Arts and Science stream from senior secondary schools of U.P. Board situated in rural and urban areas and belonging to Saharanpur district is taken through the technique of simple random sampling.

STATISTICAL TECHNIQUES

In order to analyze the data, following statistical techniques are adopted.

Mean, Standard deviation, t – Test and Pearson correlation coefficient (r)

TOOL OF THE STUDY

Self-developed and validated questionnaire consisting 40 items are used to collect responses from the respondents. Personal data sheet is attached with research tool to obtain data for further analysis in the study.

COLLECTION AND ANALYSIS OF DATA

The questionnaire is given to the randomly selected teachers teaching at senior secondary schools in Saharanpur District. Importance and significance of the present study is clearly stated to the respondents. Data obtained from them are organized and analyzed statistically to interpret the result significantly.

OBJECTIVE – 1. To study the levels of teachers' Attitude towards ICT according to their gender (Male & Female).

Table – 1

PRESENTING DESCRIPTIVE STATISTICS OF MALE AND FEMALE TEACHERS TEACHING AT SENIOR SECONDARY LEVEL

S. No.	Variable	Category	N	Mean	S.D.	Description Level of Attitude
1.	Attitude towards ICT	Male	30	160	7.27	Neutral
2.		Female	30	161.1	5.89	Favorable

TEACHERS' ATTITUDE TOWARDS ICT

■ N ■ Mean ■ S.D.

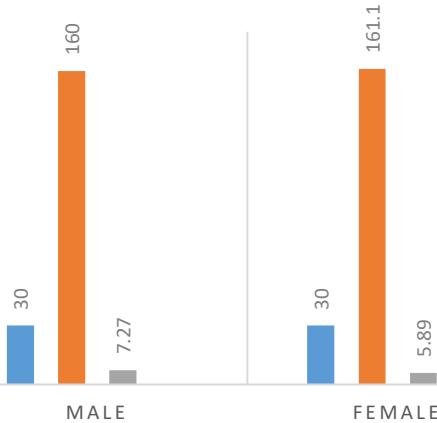


Table 1 describes that the mean value for male and female teachers' Attitude towards ICT is 160 & 161.1 respectively. Thus, it is interpreted that Attitude towards ICT of male teachers' teaching at senior secondary level is neutral while the female teachers' Attitude towards ICT is favorable.

OBJECTIVE – 2. To differentiate between male and female teachers' Attitude towards ICT.

HYPOTHESIS-1: There is no significant difference between male and female teachers' Attitude towards ICT teaching at senior secondary level.

Table – 2

Variable N = 30	MALE		FEMALE		SE _D	d	t	df	Significance
	Mean	SD	Mean	SD					
Attitude towards ICT	160	7.27	161.1	5.89	1.76	1.1	0.62	58	Insignificant at .01 level

Table 2 shows that the t - value for the score of male and female teachers' pertaining to their Attitude towards ICT was calculated as 0.62. Which is insignificant at both levels of significance. Hence, null hypothesis is not rejected, Therefore, it is interpreted that there is no significant difference between male and female teachers Attitude towards ICT at senior secondary level.

OBJECTIVE – 3. To differentiate between Arts and Science Teachers' Attitude towards ICT.

HYPOTHESIS-2: There is no significant difference between Arts and Science Teachers' Attitude towards ICT teaching at senior secondary level.

Table- 3

Variable N = 30	Arts Teacher		Science Teacher		SE _D	d	t	df	Significance
	Mean	SD	Mean	SD					
Attitude towards ICT	159.3	5.80	161.3	7.47	1.72	2	1.16	58	Insignificant at .01 level

Table 3 also shows that the t - value for the Arts and Science Teachers' Attitude towards ICT was estimated as 1.16. Which is insignificant at .01 and .05 levels of confidence. Thus, null hypothesis is accepted, And, it is interpreted that there is no significant difference between arts and science senior secondary teachers Attitude towards ICT.

OBJECTIVE – 4. To find out the relationship between male and female teachers' Attitude towards ICT.

HYPOTHESIS-3: There is no significant relationship between male and female teachers' Attitude towards ICT teaching at senior secondary level.

Table - 4

Variable	Mean of Male Teachers	Mean of Female Teachers	Correlation	Significance df = 28
Attitude towards ICT	160	161.1	+ .75	Significant at .01 level

It is stated from the above table that there is a positive and high correlation coefficient ($r = + .75$) between male and female teachers teaching at senior secondary level regarding their Attitude towards ICT. This 'r' value is significant at .01 level of confidence. Therefore, it is interpreted that there is a significant relationship between male and female senior secondary teachers' Attitude towards ICT.

OBJECTIVE – 5. To find out the relationship between Arts and Science Teachers' Attitude towards ICT.

HYPOTHESIS-4: There is no significant relationship between Arts and Science Teachers' Attitude towards ICT teaching at senior secondary level.

Table - 5

Variable	Mean of Arts Teachers	Mean of Science Teachers	Correlation	Significance df = 28
Attitude towards ICT	159.3	161.3	+ .80	Significant at .01 level

It is also presented in table 5 that there is a positive and high level correlation coefficient ($r = + .75$) between arts and science teachers teaching at senior secondary level regarding their Attitude towards ICT. The given 'r' value is significant at both levels of significance. Thus, it is inferred that there is a significant relationship between arts and science teachers' Attitude towards ICT senior secondary level.

RESULTS AND FINDINGS OF THE STUDY

1. Male teachers' level of Attitude towards ICT is found to be neutral, and female teachers teaching at senior secondary level is having favorable Attitude towards ICT.
2. The category Gender, male and female teachers' Attitude towards ICT is not significantly different at the teaching of senior secondary level.
3. The category stream, Arts and Science Teachers' teaching at senior secondary level is also not significantly different regarding their Attitude towards ICT.
4. There is a high positive correlation between male and female teachers' Attitude towards ICT
5. Arts and Science Teachers' Attitude towards ICT are also manifesting positively high level of correlation between them.

EDUCATIONAL IMPLICATIONS OF THE STUDY

ICT use in the classroom promotes critical and scientific thinking in both students and teachers. It encourages the learner to engage in educational activities whenever and wherever they choose. It promotes teacher collaboration and idea sharing for personal and professional development. ICT has also been used to increase access and the caliber of teacher preparation. ICT technologies improve instruction and assist learning through multi-modal courseware. They are integrated with pedagogical innovations to help students master higher-order thinking skills. ICT resources, including radio, television, the Internet, computers, laptops, tablets, and a variety of other hardware and software programs, can be used in the teaching-learning process. These resources may be useful for content, curriculum, instruction, and assessment. The three main stages of education in India are primary or elementary, secondary and senior secondary, and higher level. The application of ICT tools and techniques makes it simple to raise the quality of all three levels.

SUGGESTIONS FOR FURTHER RESEARCH

Further research suggestions are provided below:

1. The same study can be carried out by choosing teachers from other general degree institutions as well as the state's schools.
2. The same study can be conducted in the same state by expanding the sample size of teacher.
3. The same study can be carried out by choosing teacher from various training schools in additional districts.

There is a need to talk about the comparative impacts of a few additional categorical variables on teachers' attitudes towards ICT and other technical competency.

CONCLUSION

The researcher came to the conclusion that teachers of both gender share the same attitudes towards information and communications technology (ICT) in various senior secondary schools. Additionally, there are no differences between science, and arts teachers in terms of their attitudes towards ICT. On the other hand, it can be said that teachers of both gender possess the same level of technical proficiency in teaching at senior secondary level, proving that a person's gender has no bearing on a person's ability to use technology. The technological proficiency of teachers in the arts, and sciences is also equal.

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