

## **ATTITUDE OF SCHOOL TEACHERS TOWARDS ICT IN RELATION TO THEIR PERCEIVED SELF EFFICACY IN ICT**

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### **Abstract**

The present study aimed to investigate the attitude towards ICT of school teachers in relation to their perceptions about Self Efficacy in ICT. The study was carried out on a sample of 250 teachers from government and private schools situated in Chandigarh. One hundred and thirty teachers were selected from government schools and 120 from the schools managed privately. The data were collected by using Attitude towards ICT scale constructed by Cavas Bulent (2003) and Perceptions about self-efficacy in use of ICT developed by Gulbahar Yasemin and Guven. Ismail (2008). The findings revealed no significant gender difference existed in attitude as well as perceived self efficacy of school teachers. The teachers working in private schools were found to be having significantly favourable attitude and high level of perceived self efficacy than those working in government schools. It was also found that teachers with high level of self efficacy have favourable attitude than those with low level of self efficacy. On the basis of the findings of the study it is suggested that efforts should be made by the authorities to provide pre service as well as in-service training to teachers to enhance their skills in ICT so that they develop a positive outlook towards using ICT in their classrooms.

**Keywords: Attitude, School teachers, ICT, Self Efficacy**

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## Introduction

Modern age is termed as the era of knowledge explosion. Use of modern technological tools has led to the rise of information and communication technology. Now, ICT is being used in a number of fields. The field of education is not untouched by ICT. As ICT comes to dominate and transform our lives schools cannot remain impermeable to it. ICT is finding a place in schools across the world. The integration of ICT in education has become an important concern in both developed and developing countries. We cannot visualize education without the use of ICT.

In the Education and Training 2020 strategy framework, the European Commission has strongly emphasized the innovative use of ICT and identified it as a priority and catalyst for achieving transformation in education (Vanderlinde van Braak, 2010). The integration of ICT into education has been assumed as the new technological tools to revolutionize an outdated educational system (Albrini, 2006). Many countries including India have assigned huge budgets to improve ICT infrastructure in schools. Despite this huge spending a significant number of research studies illustrate that teachers do not use ICT in teaching and learning process for achieving educational goals.

Afshari, Bakar, Luan, Samah, & Fooi (2009) argued that “the most of the teachers neither use technology as an instructional delivery system nor integrate technology into their curriculum” (p. 77). Likewise, Yildirim (2007) noted that “the most of the teachers do not use ICT to promote pupils attainment in areas across the curriculum, but they use computers frequently for preparing handouts and tests” (p. 171).

Asan (2003) investigated awareness and perceptions about technology in education of primary teachers in Turkey. The findings of the study indicated lack of background knowledge among teachers to use technological skills. Also majority of teachers were found to be non users of computers in the teaching learning process. The study conducted by Cavas and Kesercioğlu (2003) designed to explore attitude of science teachers towards Computer Assisted Learning (CAL) found that the most of the teachers have positive attitude towards CAL with no gender differences.

Bandura (1997) describes perceived self-efficacy as, “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments.” When this concept is applied to the integration of information and communication technology in education,

self-efficacy is a belief how effectively a teacher uses technology in teaching learning process carried out by him/her.

In the modern life ICT is playing a vital role in education. For successful execution of ICT in the classroom, teachers need to develop an optimistic attitudes as well as self-efficacy towards using technological tools in educational settings. However, information regarding how much positive are such attitudes and how much are the teachers efficient on the use of ICT in education still remains scarce. This study examines the development of school teachers' ICT-related attitudes and their corresponding self-efficacy

### **Objectives**

1. To examine gender differences in the attitude of school teachers towards ICT .
2. To examine the difference in the attitude towards ICT of government and private school teachers.
3. To examine gender differences in perceived self efficacy in ICT among school teachers.
4. To make a comparison of government school teachers and private school teachers regarding their perceived self efficacy in ICT.
5. To examine the attitude towards ICT of school teachers in relation to their self efficacy in ICT

### **Hypotheses**

1. There exists no significant gender difference in attitude towards ICT of school teachers.
2. There exists no significant difference in attitude towards ICT of teachers from government and private schools
3. There exists no significant gender difference in perceived self efficacy in ICT among school teachers.
4. There exists no significant difference in self efficacy in ICT of teachers from government and private schools
5. There exists no significant difference in attitude towards ICT of school teachers with high and low levels of their perceived self efficacy in ICT

### **Method**

Descriptive survey method of investigation was employed to conduct the present study

### **Sample:**

The current study was conducted on a sample of 250 teachers from different senior secondary schools of Chandigarh. Out of these 250 teachers, 130 teachers were taken from Government and 120 from Private schools situated in the vicinity of Chandigarh. The sample was selected by simple random sampling technique

### Tools Employed

The study was conducted by employing following tools

1. Attitude towards ICT scale by Cavas Bulent (2003)
2. Perceptions about self-efficacy in use of ICT by Gulbahar Yasemin and Guven.Ismail (2008)

### Statistical Techniques

The obtained data was analysed by employing independent samples t test

### Results and Discussion

**Table 1: t-values between male and female school teachers in attitude towards ICT and perception about Self efficacy in ICT**

Variables	gender	N	Mean	S.D	t-value	Level of significance
Effect of ICT on Teaching and Learning (F <sub>1</sub> )	Female	212	71.11	8.96	0.81	NS
	Male	38	69.87	6.71		
Obstacles to ICT Implementation (F <sub>2</sub> )	Female	212	30.76	6.76	0.16	NS
	Male	38	30.95	4.24		
Attitude towards ICT	Female	212	101.69	12.48	0.41	NS
	Male	38	100.82	8.32		
Self efficacy	Female	212	22.19	4.03	0.78	NS
	Male	38	21.66	2.85		

An independent sample t-test was used to compare the mean scores of attitude of teachers regarding Effect of ICT on Teaching and Learning (F<sub>1</sub>), attitude of teachers regarding obstacles to ICT Implementation (F<sub>2</sub>), attitude as well as perceived self efficacy in ICT of school teachers by gender (male vs. female teachers). As depicted in Table 1, there were no significant differences between female and male mean scores of F<sub>1</sub> (Effect of ICT on Teaching and Learning), F<sub>2</sub> (Obstacles to ICT Implementation) and attitude towards ICT. Also, no differences were observed in perceived self efficacy between male and female teachers. The findings of the present study are in congruence with the studies conducted by (Gressard & Loyd, 1986; Woodrow, 1992) which have also found no gender differences in attitudes towards computers. The probable reason for this may be that now a day both male as well as female have equal exposure to technology so, phobia or anxiety about technology is now not dependent upon

gender. Thus, both male and female teachers in the present study were found to be displaying equal level of their attitude as well as self efficacy in usage of ICT.

**Table 2 t-values with regard to attitude towards ICT and perception about Self efficacy in ICT between teachers working in government and private schools**

Variable	Management	N	Mean	S.D	't'-value	Level of Significance
Effect of ICT on Teaching and Learning (F <sub>1</sub> )	Government	130	68.52	7.53	4.75	.01
	Private	120	73.53	9.09		
Obstacles to ICT Implementation (F <sub>2</sub> )	Government	130	31.31	6.43	1.3	Not significant
	Private	120	30.23	6.41		
Attitude towards ICT	Government	130	99.83	11.85	2.40	.01
	Private	120	103.43	11.78		
Self-efficacy	Government	130	21.00	3.28	4.94	.01
	Private	120	23.31	4.11		

An independent sample 't'- test was also employed to compare the mean scores of Factor 1, Factor 2 , attitude as well as perceived self efficacy in ICT of school teachers working in schools managed by government and privately managed schools. From the above Table 2 it is very clear that t value between school teachers working in Government and private schools has been found to be 4.75 for F<sub>1</sub> which is significant at .05 level while for F<sub>2</sub> the calculated t value is insignificant which implies that school teachers working in government and privately managed schools differ significantly with regard to their attitude towards implementation of ICT in teaching and learning with teachers in private schools showing more favourable attitude as compared to teachers in government schools, while they do not differ in their attitude regarding obstacles in implementation of ICT. However, significant difference is observed between school teachers working in Government schools and schools managed by private management with regard to their attitude towards ICT as t value of 2.40 is significant. Further, it is found from their mean scores that teachers in private schools possess more favourable attitude towards ICT as compared to teachers in government schools

The significant t value of 4.94 in the above Table also shows that teachers in government and privately managed schools also differ with regard to their perception about self efficacy in using ICT in the classroom in favour of teachers from private schools as the mean scores of

teachers working in private schools is significantly higher than mean scores of teachers working in government schools. Thus, we can say that teachers working in private schools perceive themselves to be more efficient in using ICT as compared to their counterparts working in government schools. The positive attitude as well as perceived self efficacy of teachers in private schools can be attributed to the fact that teachers working in private schools are more exposed to technology as compared to their counterparts working in government schools. The private school authorities regularly organize the faculty development programmes which are compulsory for all teachers. Also, it has been observed that privately managed schools provide more technological facilities in their schools as compared to government schools.

**Table 3 Mean differentials in attitude of school teachers with high and low levels of perceived self efficacy in ICT**

Attitude towards ICT	Level of Self Efficacy	N	Mean	S.D	't'-value	Level of Significance
Effect of ICT on Teaching and Learning (F <sub>1</sub> )	High	68	78.61	9.91	7.64	.01
	Low	68	67.62	6.56		
Obstacles to ICT Implementation (F <sub>2</sub> )	High	68	32.41	9.15	1.32	Not significant
	Low	68	30.78	4.38		
Attitude towards ICT	High	68	110.43	14.85	5.75	.01
	Low	68	98.40	8.82		

The t value between teachers with high and low levels of their perception about self efficacy is found to be significant at .01 level of significance (t=7.64) with regard to their attitude towards implementation of ICT in teaching and learning in favour of teachers with high level of self efficacy (Mean=78.61) showing more favourable attitude than the teachers with low level of self efficacy (Mean=67.62). Further, insignificant t- value (t=1.32) shows no significant difference between teachers with high and low level of self efficacy with regard to their attitude regarding obstacles in implementation of ICT . Also ,significant difference is observed between teachers with high and low level of self efficacy with regard to their attitude toward ICT with teachers perceiving high level of self efficacy (Mean=110.43) showing more favourable attitude than the teachers with low level of self efficacy (Mean=98.40). This implies that self efficacy in

ICT plays a great role in attitude of teachers towards using ICT in classrooms. It can be due to the reason that teachers who are more efficient in using ICT become more confident and they are able to understand the use of ICT in the classroom. So, they develop a positive attitude in using ICT in their classrooms.

### **Educational Implications**

The findings of the present study are of utmost importance for administrators, teachers as well as pre service teacher education programmes. It is revealed from the results of the present study that self efficacy has an impact on attitudes of teachers towards ICT. The teachers with high level of Self Efficacy have significantly positive attitude than teachers with low level of self efficacy. This suggests that the schools and administrators should organize regular faculty development and in service programme for the training of teachers in ICT so that they become more confident in using ICT and so develop positive attitude in implementing ICT in their classrooms.

Further it is suggested that ICT should be a compulsory component in the curriculum for teacher education programmes. The prospective teachers should be given practical training in using ICT during their teacher education to enhance their skills as well as confidence in using ICT in the class rooms efficiently.

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