



## A STUDY OF ATTITUDE TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGY OF SECONDARY SCHOOL TEACHERS IN RELATION TO THEIR GENDER & TYPES OF SCHOOL

Nishi Tyagi<sup>1</sup>, Imrana<sup>2</sup>

1. Assistant Professor, Department of Education, SRM-University, Delhi-NCR  
Campus, Modinagar Ghaziabad, U.P, INDIA

2. M.Ed. Student, Department of Education, SRM University, Delhi-NCR Campus,  
Modinagar, Ghaziabad, U.P, INDIA

www.arseam.com

### Abstract

Information and communication technologies have not too long ago gained upsurge of curiosity. It is an enormous research area for many scholars all over the world. Their nature has tremendously changed the face of education over the last few decades. ICT have made teaching learning process extra pertinent for the learner. The present study was performed on a sample of a hundred secondary school teachers of secondary schools, affiliated to CBSE Board and UP Board in Modinagar, district Ghaziabad. The random sampling procedure was applied for opting for the sample of the schools and stratified random sampling approach for deciding on teachers as samples for the study. Attitude Scale towards information communication technology by Nasreen Fatima Islahi was used. The findings reveal that gender variations exist on attitudes towards ICT of secondary school teachers. The female teachers have more favourable attitude toward ICT than the male teachers at secondary level. The government school teachers showed higher attitude towards use of ICT in schooling as compared to private school teachers.

**Key Words:** Information Communication Technology, Attitude, Secondary School, Teachers.

### INTRODUCTION

The Information and Communication Technology in education is in a very promising stage. The employment of technology in education is not solely expected as a method of increased and extended educational strategies, however additionally the educational method during this century.

[Nishi Tyagi & Imrana / A Study of Attitude towards Information and Communication Technology of Secondary School Teachers In Relation To Their Gender & Types of School](#)

The proper and acceptable use of ICT within the field of educational provides each teacher and students numerous learning opportunities and with that improves their teaching and learning method. Teachers throughout the world ought to find out how to use and teach by incorporating trendy technologies in their instructions. it's additionally essential that teacher education establishments develop plans and techniques to train teacher and to be well-prepared with ICT skills and competencies to deal with the inflow of changes, as this initial training can verify the ways that they use it in their teaching-learning activities at the school and classrooms.

Teacher education has been also influenced via the ICT. Now ICT has emerged as an indispensable a part of our lives. During the last twenty five years, the use of ICT has essentially changed the practices and systems in the field of banking, tourism, share market, engineering, industry, and publish administrative centre. ICT is one of the major cutting-edge motives shaping the global economy and producing speedy changes in society. ICT is a powerful instrument for problem fixing, conceptual development and principal pondering that helps to make the training procedure a lot simpler for the teachers. Because of advantage explosion and significantly rapid altering ICT, the teachers regularly to find it as a substitute complex to manage with the brand new intellectual challenges being thrown up via the converted international and nearby context.

Hence, updating the competencies of ICT is the necessity of the hour. Even though teachers could have mastered the ordinary pedagogies in instructing their pupils, the changing world dictates that these are now not primary instrument, which is able to switch the gift isolated, teacher centred, and book-centred studying environment right into a rich student-centred atmosphere. This new finding out environment developed via ICT is known as Interactive learning ambience. According to Jaiswal (2011) the teacher education procedure empowered by way of ICT-driven infrastructure can have a best possibility to come up to the centre stage and ensure tutorial excellence, first-class guideline and management in a knowledge-based society.

At the present time, teaching is fitting probably the most challenging professions in India the place knowledge is expanding swiftly and far of it is on hand to students as well teachers at every time and anywhere. As teacher education is mainly directed towards preparing teachers, the quality of teacher education relies on the instructor ample. The teachers must accept the demands of contemporary world and adjust their ancient ideas and approaches consistent with the needs of

learners. In any other case the teachers will end up out-dated within the coming future and it'll deteriorate the quality of teacher education.

Essentially the most effecting innovation in the field of education is the combination information and communication technology in education. The educational institutions should cope with the all of the sudden growing demand for information and skill. Once cannot depend on best the same gigantic blackboard , an overhead projector and video- graphed concepts as either due to the fact that the transcription of curriculum is poor or the tools used in its transaction lack utility and skill. ICT encourages each impartial and collaborative learning even as extending and assisting the educational approach.

### **NEED AND SIGNIFICANCE OF THE STUDY**

We are residing in a continuously evolving digital world. ICT has an impact on nearly every part of our lives - from working to socialising, studying to taking part in. The digital age has converted the way young people communicate, network, seek support, access information and be trained. We have to recognize that young people are actually an internet populace and access is by way of a style of means significant of computer systems, television and cell phones technology turns into more and more embedded in our tradition, we need to provide our learners with significant and modern day experiences that enable them to effectively engage with technology and put together them for lifestyles after school. It's generally recognized that newcomers are inspired and purposefully engaged within the finding out method when ideas and advantage are underpinned with technological know-how and sound pedagogy.

Education has been benefited through computer technology in more than a few approaches and at various stages. From each the sociological and the economics a point of view, pc technology has made have an impact on instructing and learning. A number of institutions within the developed nations are providing guides through computer technologies similar to interactive multimedia, computer conferencing and the internet. So as to manage with the technological revolution in the educating-finding out system of the developed countries it is necessary to include this technological advancement within the Indian lecture room.

**Nishi Tyagi & Imrana / A Study of Attitude towards Information and Communication Technology of Secondary School Teachers In Relation To Their Gender & Types of School**

Experience has published that laptop technology strengthens the hands of the teacher, and makes one's educating potent. The interactive Multimedia application are adapted and used in unique school topics to supplement the classroom instructing. Animated teaching programmes might reduce by means of a mass of virtually any notion of mathematics science and even language, the strong use of science in instructing encourages a move away from the teacher-centred method. The interactive Multimedia ensures flexible learning; Flexibility is well-known within the degree of access to direction; the aspects of entry to; and exit from courses; the situation time and pace of learn; the shape and sample of interplay amongst novices teachers and resources; the kind and style of assets of the educating process and the methods used to measure the fulfilment and success. (DCAD,1997). Learning by way of multimedia is an energetic and engaged procedure. 'Learners are actively engaged in working at challenge and events they might be used "(Savery & Duffy, 1995). Therefore ICT be certain more flexible and learner-centred environment. The significance of this gain knowledge of in the discipline of education and technological know-how as it expands the ICT expertise base the inspiration of ICT is as a pedagogical tool most is new to most teachers and students in at secondary schools. The outcome of the study have many benefits first of all the be taught will likely be examine the attitude of teachers towards use of ICT in secondary schools for that reason the learn will be significance to educators who need to learn more about the use of ICT. The present be trained will likely be useful to create attention among teachers on the value of ICT and change their attitudes and practises via improving their experts practise in teaching.

The findings will serve as reference factor for education stakeholders in part of the world that will lead to improvement of earlier of education among secondary school teachers.

## **STATEMENT OF THE STUDY**

**A Study of Attitude towards Communication and Information Technology of Secondary School Teachers with respect to their Gender & Types of School.**

## **OBJECTIVES OF THE STUDY**

- To study the attitude towards Information Communication Technology with its dimensions of secondary school teachers in relation to their gender.
- To determine the attitude towards Information Communication Technology with its dimensions of secondary school teachers in relation to their Types of schools.

## **HYPOTHESES**

Keeping in view the objectives of the study, the following hypotheses will be formulated for the present study:

**1. There is no significant difference between the mean of Attitude scores towards Information Communication Technology of total male and female secondary school teachers.**

**1.1** There is no significant difference between the mean of attitude scores towards impact of IT of male and female secondary school teachers.

**1.2** There is no significant difference between the mean of attitude scores towards usefulness for students of male and female secondary school teachers.

**1.3.** There is no significant difference between the mean of attitude scores towards productivity for teaching of male and female secondary school teachers

**1.4** There is no significant difference between the mean of attitude scores towards teacher's interest and acceptance of male and female secondary school teachers.

**2. There is no significant difference between the mean of total Attitude scores towards Information Communication Technology of government & private secondary school teachers.**

**2.1** There is no significant difference between the mean of attitude scores towards impact of IT of government and private secondary school teachers.

**2.2** There is no significant difference between the mean of attitude scores towards usefulness for students of government and private secondary school teachers.

**2.3** There is no significant difference between the mean of attitude scores towards productivity for teaching of government and private secondary school teachers.

2.4 There is no significant difference between the mean of attitude scores towards teacher's interest and acceptance of government and private secondary school teachers.

### **Delimitation of study**

- The study was considered only new ICT such as computer technologies and Internet.
- The present study was confined only to the secondary school teachers teaching in secondary schools, affiliated to CBSE & U P board.
- Private & government schools located in Ghaziabad district was selected for the study.
- The present study was conducted only to the sample of 100 secondary teachers.
- The attitude towards ICT of secondary school teachers was measured only through administration of an **Attitude Scale towards Information Communication Technology** by **Nasreen Fatima Islahi**.

## **METHODOLOGY**

### **Research Design**

This study employed a descriptive survey design. Descriptive survey was used to gather precise information on the attitude of secondary school teachers towards use of ICT. It was selected because it was intended to gather information from cross section respondents and to gather data at a particular point in time, and use it to describe the nature of the existing conditions (Cohen, Manion & Morrison, 2000).

### **Population**

In the present study, the population comprised of the all secondary school teachers, teaching in the secondary schools affiliated to CBSE and UP board, located in Modinagar, Ghaziabad District,UP.

### **Sample and Sampling Techniques**

The present study was conducted on a sample of 100 secondary school teachers teaching in secondary schools, affiliated to CBSE Board and UP Board in Modinagar district Ghaziabad. The random sampling method was applied for selecting the sample of the schools and stratified random sampling method for selecting teachers as samples for the study. After a detailed study of all these methods and considering the variables selected for the research work, the stratified sampling method was found to be the most suitable. Present study was confirmed to sample of secondary school teachers 50 male teachers & 50 female teachers or 50 government teachers & 50 private teachers in Modinagar Ghaziabad District (U.P).

### Tool Used

For the present study the investigator used questionnaire of Indian adaptation of administration of an **Attitude Scale towards Information Communication Technology** by **Nasreen Fatima Islahi**.

### DATA ANALYSIS, INTERPRETATION AND DISCUSSION OF RESULTS

**Table- 1. Showing the mean differences between the total teacher attitude scores towards ICT of male and female secondary school teachers**

.Variable	Group	N	Mean	S.D	df	t-value
Attitude towards ICT	Male	50	96.68	7.69	98	6.75*
	Female	50	108.84	10.20		

\*Significant at 0.05 level

A perusal of table no.1 reveals that the mean value of teacher attitude scores of male and female secondary school teachers have been found 96.68 and 108.84 respectively and the standard deviation of male and female secondary school teachers have been found 7.69 and 10.20 respectively. The mean scores of female secondary school teachers are greater than the mean value of male secondary school teachers. The obtained 't'-value (6.75) is more than the value given in the table at 0.05 level of significance (df=98). Hence this hypothesis is stated as "There is almost no

significant difference between the mean of total attitude and total teacher Scores towards IT of male and female secondary school teachers” is rejected.

On the basis of result it can be said that both the groups, male and female teachers are differing significantly in term of their teacher attitude towards ICT. The female teachers have more favourable attitude towards ICT than the male teachers at secondary level. It means gender plays a very important role to form the attitude towards ICT.

**Table 2. Showing the mean differences between the teacher attitude scores towards impact of IT of male and female secondary school teachers.**

Variable	Group	N	Mean	S.D	df	t-value
Attitude towards Impact of IT	Male	50	22.36	3.07	98	1.19*
	Female	50	21.3	5.61		

\*Not Significant at 0.05 level

A perusal of table no. 2. Reveals that the mean value of teacher attitude scores of male and female secondary school teachers have been found 22.36 and 21.3 respectively and the standard deviation of male and female secondary school teachers have been found 3.07 and 5.61 respectively. The mean scores of female secondary school teachers are greater than the mean value of male secondary school teachers. The obtained ‘t’ value (1.19) is less than the value given in the table at 0.05 level of significance (df=48) the hypothesis –“There is no significant difference between the mean of attitude scores towards impact of IT of male and female secondary school teachers”. is accepted. It shows that both the groups have similar attitude towards Impact of IT.

On the basis of result it can be said that both the groups, male secondary school teachers and female secondary school teachers are not differing significantly in term of their attitude towards impact of IT.



**Table 3. Showing the mean differences between the attitude score towards usefulness for students of male and female secondary school teachers**

.Variable	Group	N	Mean	S.D	df	t-value
Attitude towards usefulness for students	Male	50	23.02	3.60	98	9.59*
	Female	50	27.24	3.14		

\* Significant at 0.05 level

A perusal of table no. 3. reveals that the mean value of teacher attitude scores of male and female secondary school teachers have been found 23.02 and 27.24 respectively and the standard deviation of male and female secondary school teachers have been found 3.60 and 3.14 respectively. The mean scores of female teachers is greater than the mean value of male secondary school teachers. The obtained 't'-value (9.59) is more than the value given in the table at 0.05 level of significance (df=98). Hence the hypothesis "There is no significant difference between the mean of attitude scores of male and female secondary school teachers usefulness for students". is rejected. It means both the groups have not same attitude towards usefulness for students.

On the basis of result it can be said that the groups, male secondary school teachers and female secondary school teachers are differing significantly in term of their attitude towards usefulness of students. The female secondary school teachers have more favourable attitude towards usefulness for students then the male secondary school teacher's. It means gender plays a very important role to form the attitude towards usefulness for students.

**Table 4. Showing the mean differences between attitude score towards productivity for teaching of male and female secondary school teachers**

Secondary School Teachers In Relation To Their Gender & Types of School

.Variable	Group	N	Mean	S.D	df	t-value
<b>Attitude towards Productivity for teaching</b>	Male	50	23.58	3.03	98	0.67*
	Female	50	26.18	3.00		

\* Not significant at .05 level

A perusal of table 4. reveals that the mean value of teacher attitude scores of male and female secondary school teachers have been found 23.58 and 26.18 respectively and the standard deviation of male and female secondary school teachers have been found 3.00 and 3.03 respectively. The obtained ‘t’-value (0.67) is less than the value given in the table at 0.05 level of significance (df=98) the hypothesis –“There is no significant difference between the mean of attitude scores towards productivity for teaching of male and female secondary school teachers”. is accepted. It means both groups have same attitude towards productivity for teaching.

On the basis of result it can be said that both the groups, male secondary school teachers and female secondary school teachers are not differ significantly in term of their attitude towards productivity for teaching.

**Table-5. Showing the mean differences between attitude score towards teachers interest and acceptance of male and female secondary school teachers**

.Variable	Group	N	Mean	S.D	Df	t-value
<b>Attitude towards teachers interest and acceptance</b>	Male	50	29.22	4.04	98	0.84*
	Female	50	27.64	4.64		

\*Not significant at 0.05 level

A perusal of table no. 5. reveals that the mean value of teacher attitude scores of male and female secondary school teachers have been found 29.22 and 27.64 respectively and the standard deviation of male and female secondary school teachers have been found 4.04 and 4.64

respectively. The obtained 't'-value (0.84) is less than the value given in the table at 0.05 level of significance (df=98) the hypothesis –“There is no significant difference between the mean of attitude scores towards teachers interest and acceptance of male and female secondary school teachers” is accepted. It means both groups have same attitude towards teacher’s interest and acceptance.

On the basis of result it can be said that both the groups , male secondary school teachers and female secondary school teachers are not differ significantly in term of their attitude towards teachers interest and acceptance.

**Table-6. Showing the mean differences between the total teacher attitude scores towards Information Communication Technology of government and private secondary school teachers.**

Variable	Group	N	Mean	S.D	df	t-value
Attitude towards ICT	Government	50	101.76	31.73	98	7.91*
	Private	50	90.68	17.85		

**\*Significant at 0.05 level**

A perusal of table no. 6. reveals that the mean value of teacher attitude scores of male and female secondary school teachers have been found 101.76 and 90.68 respectively and the standard deviation of government and private schools have been found 31.73 and 17.85 respectively. The mean scores of government school teachers are greater than the mean value of private school teachers. The mean value shows that the both groups have major difference. The mean value shows that the both groups have major difference. The obtained 't'- value (7.91) is more than the value given in the table at 0.05 level of significance (df=98). Hence the hypothesis –“There is no significant difference between the mean of total teacher attitude scores towards ICT of government and private school teachers”. is rejected. It means both groups have not similar attitude towards ICT.

On the basis of result it can be said that the groups, government school teachers and private school teachers are differing significantly in term of their attitude towards ICT. The government school teachers have more favourable attitude towards use of ICT than private school teachers. It means Types of school plays a very important role to form the attitude of ICT.

**Table-7 Showing the mean differences between the teacher attitude scores towards impact of IT of government and private school teachers**

.Variable	Group	N	Mean	S.D	df	t-value
Attitude toward Impact of IT	Government	50	22.44	2.75	98	1.35*
	Private	50	21.22	5.18		

**\*Not Significant at .0.05**

A perusal of table no.7. reveals that the mean value of teacher attitude scores of government and private secondary school teachers have been found 22.44 and 21.22 respectively and the standard deviation of government and private school teachers have been found 3.75 and 5.81 respectively. The obtained 't'- value (1.35) is less than the value given in the table at 0.05 level of significance (df=98) So the hypothesis –“There is almost no major difference between the mean of attitude scores towards impact of IT of secondary school teachers”. is accepted. It means both groups have similar attitude towards impact of IT .

On the basis of result it can be said that both the groups , government secondary school teachers and private secondary school teachers are not differ significantly in term of their attitude towards impact of IT.

**Table-8 Showing the mean differences between the teacher attitude scores towards usefulness of government and private school teachers**

Variable	Group	N	Mean	S.D	df	t-value
Attitude towards usefulness for student	Government	50	26.66	3.57	98	4.48*
	Private	50	25.02	3.16		

\*Significant at 0.05 level

A perusal of table no. 8 reveals that the mean value of teacher attitude scores of government and private school teachers have been found 26.66 and 25.02 respectively and the standard deviation of government and private school teachers have been found 3.57 and 3.16 respectively. The mean scores of government school teachers are greater than the mean value of private school teachers. The mean value shows that the both groups have major difference. The obtained 't'-value (4.48) is greater than the value given in the table at 0.05 level of significance (df=48) the hypothesis –“There is no major difference between the mean of attitude scores towards usefulness for students of government and private school teachers”. is rejected.

On the basis of result it can be said that the groups, government school teachers and private school teachers are differing significantly in term of their attitude towards usefulness for students. The government school teachers have more favourable attitude towards usefulness for students than the private school teachers. It means Types of school plays a very important role to form the attitude towards usefulness for students.

**Table-9 Showing the mean differences between the teacher attitude scores towards productivity for teaching of government and private school teachers**

Variable	Group	N	Mean	S.D	df	t-value
Attitude toward productivity for teaching	Government	50	22.54	3.03	98	7.93*
	Private	50	27.22	2.99		

\*significant at 0.05 level

**Nishi Tyagi & Imrana/ A Study of Attitude towards Information and Communication Technology of  
Secondary School Teachers In Relation To Their Gender & Types of School**

A perusal of table no.9 reveals that the mean value of teacher attitude scores of government and private school teachers have been found 22.54 and 27.22 respectively and the standard deviation government and private school teachers have been found 3.03 and 2.99 respectively. The mean scores government school teachers is greater than the mean value of private school teachers. The mean value shows that the both groups have major difference. The obtained ‘t’- value (7.93) is more than the value given in the table at 0.05 level of significance (df=98) the hypothesis –“There is no Significant difference between the mean of attitude scores towards productivity for teaching of government and private school teachers”. is rejected. It means both groups have differ attitude towards productivity for teaching.

On the basis of result it can be said that the groups, government school teachers and private school teachers are differing significantly in them of their attitude toward ICT. The government school teachers have more favourable attitude towards productivity for teaching than the private school teachers. It means Types of school plays a very important role to form the attitude towards productivity for teaching.

**Table 10. Showing the mean differences between the total teacher attitude scores towards teachers interest and acceptance of government and private school teachers**

<b>Variable</b>	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>S.D</b>	<b>df</b>	<b>t-value</b>
<b>Attitude toward teachers interest and acceptance</b>	Government	50	30.62	4.56	98	1.41*
	Private	50	29.4	4.14		

\*Not significant at 0.05 level

A perusal of table 10. reveals that the mean value of teacher attitude scores of government and private school teachers have been found 30.62 and 29.4 respectively and the standard deviation of government and private school teachers have been found 4.56 and 4.14 respectively. The obtained ‘t’- value (1.41) is less than the value given in the table at 0.05 level of significance (df=98) so the hypothesis states that “There is no major difference between the

mean of attitude scores of government and private school teachers". is accepted. It means both groups have same attitude towards teacher's interest and acceptance.

On the basis of result it can be said that both the groups, government secondary school teachers and private secondary school teachers are not differ significantly in term of their attitude towards teacher's interest and acceptance.

## FINDINGS

Findings are systematically arranged here in accordance with the hypothesis has mentioned on next page-

- There is significant difference is found between the mean of Attitude scores towards Information Communication Technology of male and female secondary school teachers. It means Information Communication technology is affected or determines by their gender.
- No significant difference is found between the mean of attitude scores towards impact of IT of male & female secondary school teachers.
- There is significant difference is found between the mean of attitude scores towards usefulness for students of male & female secondary school teachers.
- No significant difference is found between the mean of attitude scores towards productivity for teaching of male & female secondary school teachers.
  - No significant difference is found between the mean of attitude scores towards teachers interest and acceptance of male & female secondary school teachers.
  - There is significant difference is found between the mean of Attitude scores towards Information Communication Technology of Government & private secondary school teachers. It means Information Communication technology is affected or determines by their Types of school.
  - No significant difference is found between the mean of attitude scores towards impact of IT Government & private secondary school teachers.
  - There is significant difference is found between the mean of attitude scores towards usefulness for students Government & private secondary school teachers.

Nishi Tyagi & Imrana/ A Study of Attitude towards Information and Communication Technology of Secondary School Teachers In Relation To Their Gender & Types of School

- There is significant difference is found between the mean of attitude scores towards productivity for teaching Government & private of secondary school teachers.
- No significant difference is found between the mean of attitude scores towards teachers interest and acceptance Government & private secondary school teachers .

## CONCLUSION

This study was confined to seek out the attitude toward of information & communication technological know-how among the many secondary school teachers. It used to be determined that female teachers have more favourable attitude towards ICT than the male teachers it was additionally located female teachers viewed that ICT is very valuable for the students as in comparison with the male.

Government teachers have more positive viewpoint towards ICT than the private school teachers. It used to be relatively stunning for us as we all know that in private school teachers have extra opportunities to make use of the ICT in the classroom but it was observed that they've negative attitude towards it but on the other hand private school teachers believe that ICT raises the productiveness of teaching as compared to govt. teachers.

Considering that how quick the arena are relocating within the development, procurement and of knowledge and communication technology, will have to make instant step to seize up if it want to preserve in track. ICT bring lot of advantages, and ICT bring a quality have an effect on for human and companies day-to-day existence. Accordingly, ICT development is the first-class choice in helping to stay in the monitor, and for this reason ICT development is predominant for future. The results of this study indicated that there was once a high and negative correlation between teachers attitude in the direction of ICT teaching and instructing time in the class. It may be said that, ICT reduces time required for instructing and the enormously confident correlation between the attitude toward ICT teaching within the class. Amazing ICT teaching approaches expand the student engagement within the class reduce teaching time. This study examines the level of ICT use in and the attitudes of teachers in the direction of the use of ICT for the educational functions. The be trained contributed to the existing body of study concerning the utilization of ICT for academic purposes in establishing countries. The gain knowledge of recommends that future researchers ought to keep in mind the in-depth qualitative



studies akin to classroom observations and in-depth interviews to examine the level of ICT use by way of teachers.

## EDUCATIONAL IMPLICATIONS

Research is no value until its findings are applied for anything which may have some practical importance can also be derived from the findings of the present investigation. Findings of the present study will serve as the basic data for the further studies related to information & communication technology.

This study promotes to the policy makers and helpful to give direction for the use of information & communication technology and heads of institutions for improving information & communication technology awareness for the teachers. By the following of study the faith of the researcher is that the teachers will be benefitted from the findings of the study. Since the study provides the basis for awareness and better understanding of their current attitude of information & communication technology.

## REFERENCES

- Panda, B.N. (1997). Teacher Education, New Delhi, APH Publishing Corporation.
- Webb, M. E. (2005). Affordances of ICT in science learning: Implications for integrative pedagogy. *International Journal of Science Education*, 27, 6, 705-735.
- Goel, D.R. (2006). Quality Concerns in Teacher Education, Vadodara, CASE, MSUB.
- Mohan, R. (2006). Research Methods in Education, Hyderabad, Neelkamal Publications Pvt. Ltd.
- Mangal, S.K. (2007). Statistics in Psychology and Education, New Delhi, Prentice-Hall of India Private Limited.
- Haseen, T. (2008). Current Challenges in Education, Hyderabad, Neelkamal Publications Pvt. Ltd. 99- 124.
- Lau, B. T. & Sim, C. H. (2008). Exploring the extent of ICT adoption among Secondary school teachers in Malaysia. *International Journal of Computing and ICT Research*.

**Nishi Tyagi & Imrana / A Study of Attitude towards Information and Communication Technology of  
Secondary School Teachers In Relation To Their Gender & Types of School**

- Haseen, T. (2008). Current Challenges in Education, Hyderabad Neelkamal Publications Pvt. Ltd.99-124.
- C. H. (2008). teachers In Malaysia. *International Journal of Computing and ICT Research*.
- Jaiswal, D. (2011). Role of ICT in Teacher Education. *Eduttract*, 10(11). Pp.
- Panda, B.N. (1997).Teacher Education, New Delhi, APH Publishing Corporation.
- Webb, M. E. (2005) Affordances of ICT in science learning: Implications Forintegra pedagogy. *International Journal of Science Education*, 27, 6, 705-735.
- Goel, D.R. (2006).Quality Concerns in Teacher Education, Vadodara, CASE, MSUB.
- Mohan, R. (2006). Research Methods in Education, Hyderabad, Neelkamal Publications Pvt. Ltd.
- Mangal, S.K. (2007). Statistics in Psychology and Education, New Delhi, Prentice-Hall of India Private Limited.
- Haseen, T. (2008).Current Challenges in Education, Hyderabad, Neelkamal Publications Pvt. Ltd.99-124.
- Lau, B. T. & Sim, C. H (.2008) Exploring the extent of ICT adoption among Secondary school teacher In Malaysia. *International Journal of Computing and ICT Research*.
- Haseen, T. (2008).Current Challenges in Education, Hyderabad, Neelkamal Publications Pvt. Ltd. 99-124.
- Lau, B. T. & Sim, Exploring the extent of ICT adoption among Secondary school. C. H. (2008) teachers In Malaysia. *International Journal of Computing and ICT Research*.
- Jaiswal, D. (2011). Role of ICT in Teacher Education. *Eduttract*, 10(11). Pp.
- British Education Commission & Technology Agencies (Becta) (2004). A Review of Research Literature on Barriers to the Uptake of ICT byTeachers. Retrieved September 3, 2010, from <http://www.becta.org.uk>
- Bulent, C., Pinas, C., Baham, K., & Tarik, K. (2009). Science Teachers' Attitude toward ICT in Education. *Turkish Online Journal of Educational Technology*, 8(2).
- Fanciová, J., & Prokop, P. (2008). Students' Attitude toward Computer Use in Slovakia. *Eurasia ournal of Mathematics, Science and Technology Education*, 4(3):255-262.
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude Intention and Behavior: An Introduction to Theory and Research*. Reading M. A: Addison-Wesley.
- Fraenkel, J. R., & Wallen, N. E. (1993). *How toDesign and Evaluate Research in Education*. New York: McGraw Hill.

- Gall, D. M., Gall, P. J., & Borg, W. (2007). Educational Research: An Introduction. (8th Ed.). New York: Longman.
- Guofang, L., & Xiaopeng, N. (2010). Elementary Teachers' Belief and Use of Technology in China. A Survey study. *International Journal of Technology in Teaching and Learning*. 6(2):116-132.
- Hennessy, S., Harrison, D., & Wamakote, L. (2010). Teacher Factors Influencing Classroom Use of ICT in Sub-Saharan Africa. *Itupale Online Journal of African Studies*. 2(1) 39-54. Retrieved January 7, 2012.
- Hopkins, W.G. (2000). Quantitative Research Desig: Sport Science. 4(1). Retrieved , 2011 from [www.sportsci.org/jour/0001/wghdesign.html](http://www.sportsci.org/jour/0001/wghdesign.html).
- Karen, B. (2002). Research on Professional Development for Teachers of Mathematics and Science: the State of the Scene. *School Science and Mathematics*, 99(5), 258-272.
- Katahoire, A. R., Baguma, G., & Etta, F. (2004). Schoolne Uganda Curriculmet. (in *Information and Communication Technology Development in Africa*. (Ed.), 215-247. Ottawa International Development research Centre, 200.