CHAPTER 6
SUMMARY AND EDUCATIONAL IMPLICATIONS

6.1 NEED OF THE STUDY

Schools and school systems have been using ICT for more than two decades to address goals ranging from the teaching of programming to increasing participation in distance education to supporting language-acquisition in early childhood. Over the course of this period, advances in hardware, software, and networking have amplified the potential that ICT holds for schools. Concurrently, the influence of systemic factors—including curricula, teacher capacity, infrastructure, and assessment—has become clearer, and has shaped both achievements and expectations. (Gaible, 2009)

Globalization is the networking of the world through the global network, to develop global economy. Hence people around the globe are more connected to each other than ever before. Undoubtedly, the use of ICT is inevitable and ICT skills are very necessary to participate in the knowledge societies and economies (Oye, Tahad and Rahim, 2012). ICT implementation and adoption have enabled and presented opportunities for new ways of working, and for organising and managing work. Some researchers have focused on the idea that there is a shift from an industrial to an information society in response to globalisation and ICT implementation. This was believed to be driven by economic and social changes and increased employment in knowledge-intensive jobs in the 1980s and 1990s. The information society may be characterised by a highly skilled, knowledge-driven workforce employed in flatter organisations (Miles, 1996). This shift has been argued to mark the move towards ‘fluid careers’ (Bimrose, 2006). Sung and Ashton (2006) highlighted various successful cases where ICT adoption have been central to new working practices by, for instance, enabling communication, stimulating innovation and supporting to new product development and services.
Today India is actively promoting the use of ICT in the education sector. The country's decision makers, at both the central and state levels, have chosen the use of newer computer and internet-based ICTs for education. A key element that seems to be left out in the application of ICT users and the real agents of change within the classroom arena is widely accepted that unless teachers develop positive attitudes towards ICT, they will not use them in their teaching practice. (Reddi & Sinha, 2003). Our findings show that the motivational factors which correlated most positively with ICT use were: perceived ability to use IT; level of resources available and their satisfaction with IT; and whether using IT in teaching is considered to be interesting and enjoyable. The most significant negative factor was difficulties experienced in using IT. We also found that a whole range of other motivational factors attributed by the teachers to using ICT, such as: making the lessons more interesting for the teacher, increasing pupils' motivation, improving presentation of materials, making the teaching more enjoyable, improving the content of the lesson, and making the lessons more fun for the pupils were considered by the teacher respondents to contribute to pupils' learning. (Cox and Cox, Preston, 1999)

Therefore, it is in this background that the investigator undertook the present study.

6.2 STATEMENT OF THE PROBLEM

"TEACHERS’ ATTITUDE TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN RELATION TO GENDER, MOTIVATION, COMPUTER COMPETENCE AND COMPUTER ANXIETY"

6.3 OBJECTIVES OF THE STUDY

1. To study government and private school teachers' attitude towards ICT.
2. To study male and female teachers' attitude towards ICT.
3. To study interaction among gender, school type, and academic streams with regard to teachers’ attitude towards ICT.
4. To study government and private school teachers' attitude towards ICT in relation to Motivation.
5. To study government and private school teachers attitude towards ICT use at different levels of Motivation.

6. To study government and private school teachers attitude towards ICT in relation to Computer competence.

7. To study government and private school teachers attitude towards ICT use at different levels of Computer competence.

8. To study government and private school teachers attitude towards ICT in relation to Computer Anxiety.

9. To study government and private school teachers attitude towards ICT use at different levels of computer anxiety.

6.4 HYPOTHESES OF THE STUDY

Hypotheses related to teachers’ attitude towards ICT in relation to Gender

2x3 ANOVA was employed for analyzing teachers’ attitude towards ICT scores with respect to gender.

- **H1** - There will be no significant relationship between attitude towards ICT of government and private school teachers.

- **H2** - There will be no significant relationship between attitude towards ICT of male and female school teachers.

- **H3** - There will be no significant relationship between attitude towards ICT of Language, Social Science and Science teachers.

- **H4** - There will be no significant interaction between academic streams and gender.

- **H5** - There will be no significant interaction between school type and gender.

- **H6** - There will be no significant interaction between academic streams and school type.

- **H7** - There will be no significant interaction between gender academic streams and school type with respect to teachers’ attitude towards ICT.
• **H8**-There will be no significant relationship between government and private teachers’ attitude towards ICT with regard to Motivation

• **H9** – There will be no significant relationship between government and private teachers’ attitude towards ICT with regard to high and low Motivation.

• **H10**- There will be no significant interaction between school type and high and low Motivation with respect to teachers attitude towards ICT,

• **H11** There will be no significant relationship between government and private teachers’ attitude towards ICT with regard to computer competence.

• **H12**- There will be no significant relationship between government and private teachers’ attitude towards ICT with regard to high and low computer competence.

• **H12** There will be no significant interaction between school type and high and low computer competence with respect to teachers attitude towards ICT,

• **H13**- There will be no significant relationship between government and private teachers’ attitude towards ICT with regard to computer Anxiety.

• **H14**- There will be no significant interaction between school type and high and low computer with respect to teachers attitude towards ICT,

• **H115**- There will be no significant interaction between school type and high and low computer with respect to teachers attitude towards ICT,

6.5 DESIGN OF THE STUDY

A research design is the detailed plan of the investigation. In fact, it is the detailed procedures of testing hypotheses and analysis of data. So a research design may be defined as sequential steps taken ahead of time to ensure relevant data collection and objective analysis of hypotheses with respect to research problem.
Descriptive method of study was employed for the present study as this method is concerned with surveying, describing and investigating the existing phenomena, issues, conditions or relationships that exist.

The method enabled the researcher to study Chandigarh school teachers’ attitude towards ICT with respect to gender, motivation, and computer competence and computer anxiety.

2x2x3 ANOVA was employed for scores on gender school type and academic discipline in relation ICT.2x2 ANOVA was employed for scores on ICT, motivation, computer competence and computer anxiety. The independent variable in each of the design is teachers’ attitude towards ICT. The dependent variables in each of it were Gender, Type of school, Type of Stream, for levels of computer competence, and for different levels of computer anxiety.

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6.6 Tools used

For every type of research, we some tool of measurement. For present study, after selection of sample, the standardized tools were chosen for collection of data. These are

1. Demographic data sheet (developed by the investigator)
2. Scale of teachers’ attitude towards ICT (developed by the investigator)
3. Computer competency scale (Ziba, 2013)
4. Computer anxiety scale (Embi, 2007)
5. Teachers’ motivation diagnostic questionnaire (Mathews & Holmes, 1992)

Statistical Techniques

The following statistical techniques were employed to analyses data.

- 2x2x3 ANOVA was employed to for analysis of the Teachers’ attitude towards ICT with regard to gender and school types and different academic disciplines of.
- 2x2 ANOVA was employed to for analysis of the Teachers’ attitude towards ICT with regard to school types and different levels of Motivation of teachers.
- 2x2 ANOVA was employed to for analysis of the Teachers’ attitude towards ICT with regard to school types and different levels of computer competence of teachers.
- 2x2 ANOVA was employed to study the impact of school types and different levels of computer anxiety of teachers of teachers.

6.7 Processing of Data

The raw data was treated and processed by using SPSS (statistical package for Social Sciences 17.0).

6.8 Delimitation of the Study

1. This study is delimited to 480 Government and Private school teachers of Chandigarh.
2. The study is delimited with regard to variables of teachers’ attitude towards ICT, gender, motivation, computer competence and computer anxiety.
6.9.1 FINDINGS OF THE STUDY

1. Findings related to teachers’ attitude towards ICT in relation to Gender

(i) Government and private school teachers exhibited difference between their attitude towards ICT.

(ii) Private school teachers use more often than govt school teachers ICT.

(iii) Male teachers use computers more than female teachers.

(iii) There was no difference of attitude of government or private school teachers in relation to their streams.

6.9.2 FINDINGS RELATED TO COMPUTER COMPETENCE

• Significant difference is found between government and private school teachers.

• Private school teachers are more competent in ICT. Because they get more trainings on ICT. Also they often do their routine work on computers.

• Private school teachers exhibited high level of computer competence

6.9.3 FINDINGS RELATED TO MOTIVATION

• Government school teachers are more motivated than the private school teachers. Because they want to learn computers. They are financially satisfied.

• Government school teachers have higher levels of motivation then the private schools.

6.9.4 FINDINGS RELATED TO COMPUTER ANXIETY

• No significant difference was there in relation to computer anxiety of government and private school teachers.

EDUCATIONAL IMPLICATIONS

The results of this study suggests that teachers have positive attitude towards ICT, but they have less motivation and computer competence to use it. In order to
compete with the developed countries educational outputs our country needs to take more steps in the field of ICT.

1. More training programmes could be conducted for teachers.

2. Minimum level of computer competency should be fixed for teaching profession.

3. E-learning should be introduced at school level.

4. Competitions may be conducted among school teachers to give them better knowledge of their computer competency.

5. Internet availability should be must in all schools.

6. Trainings for using ICT in accordance with their syllabi should be suggested to them.

7. More smart schools needs to be opened up.

8. Smart education training should be part of pe-service teacher trainees.

SUGGESTIONS FOR FURTHER RESEARCH

1. This study only focus on relation of ICT with gender, School Type and Streams. Further research could be conducted rural and urban teachers.

2. Present study considered variables like motivation, computer competency and attitudes towards ICT. Further research may include socio-economic status, emotional intelligence and computer literacy, computer usage, computer access etc.

3. The study could be done on polytechnic students.

4. The study may also compare residential and non residential school teachers’ computer anxiety and computer competence.