CHAPTER VI

SUMMARY AND CONCLUSIONS

6.1 Need of the Study

Globalization and technological change processes have created a new global economy “powered by technology, fueled by information and driven by knowledge” (Tinio, 2002). Gaible (2009) affirms that ICT occupies a complex position in relation to globalization. The emergence of this new global economy has serious implications for the nature and purpose of educational institutions. Thornburg (2000) notes that as the shelf-life of information continues to shrink and access to information continues to grow exponentially, educational institutions cannot remain mere venues for the transmission of a prescribed set of information from teacher to student over a fixed period of time. Rather, they must promote “learning to learn”, i.e., the acquisition of knowledge and skills that make possible continuous learning over the lifetime. “The illiterate of the 21st century,” according to futurist Alvin Toffler, “will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn” (Tinio, 2002).

Concerns over educational relevance and quality coexist with the imperative of expanding educational opportunities to those made most vulnerable by globalization. Global changes also put pressure on all groups to constantly acquire and apply new skills. Information and communication technologies (ICTs)-which include radio and television, as well as newer digital technologies such as computers and the Internet- have been touted as potentially powerful enabling tools for educational change and reform. When used appropriately, different ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life. The higher education institutions around the globe have increasingly adopted ICT as tools for teaching, curriculum development, staff development, and student learning. The global adoption of ICT into education has often been premised on the potential of the new technological tools to revolutionize an outmoded educational system, better prepare students for the information age, and/or accelerate national
development efforts. The problem with the current technology-implementation plans is not only their focus on the potential of the technology, but also their failure to base their implementation efforts on research and enough information gathering.

Research has indicated that, despite support through policy and resources provision, ICT has made little impact in the classroom practices and teachers are still using traditional expository pedagogy (Watson, 1998). Today, India actively promotes the use of ICT in education sector, the country’s decision-makers, at both the central and state levels, have chosen to explore the use of newer computer and Internet based ICTs for education, along with broadcast ICT. A key element that seems to be left out in application of ICT tools is attitudes of teachers as the end-users and the real agents of change within the classroom arena. It is widely accepted that unless teachers develop positive attitudes toward ICT, they will not use them in their teaching practice (Reddi and Sinha, 2003). Therefore, it is in this background that the present study was undertaken by the investigator.

6.2 Objectives

The main objectives of this study are:

1. To develop and validate scales on attitude towards ICT use and computer competency.

2. To study university teachers’ attitude towards ICT use belonging to different faculties with regard to computer competency.

3. To study university teachers’ attitude towards ICT use at different levels of computer competency.

4. To study interaction between type of faculty and levels of computer competency with regard to university teachers’ attitude towards ICT use.

5. To study university teachers’ attitude towards ICT use belonging to different faculties with regard to computer anxiety.

6. To study university teachers’ attitude towards ICT use at different levels of computer anxiety.
7. To study interaction between type of faculty and levels of computer anxiety with regard to university teachers’ attitude towards ICT use.

8. To study the relationship between attitude towards ICT use and computer competency of university teachers

9. To study the relationship between attitude towards ICT use and computer anxiety of university teachers

10. To study the relationship between computer competency and computer anxiety of university teachers

11. To predict university teachers’ attitude towards ICT use based on computer competency and computer anxiety

6.3 Delimitations of the Study

1. The study was delimited to 200 academic full-time faculty members of Panjab University Chandigarh.

2. The study was delimited with respect to the variables of Attitude towards ICT use, computer competency, and computer anxiety.

6.4 Hypotheses

Hypotheses related to attitude towards ICT use scores with respect to different levels of computer competency

2 x 3 ANOVA was employed for analyzing university teachers’ attitude towards ICT use scores with respect to different levels of computer competency. Following null hypotheses were tested through this analysis:

H₀₁: There is no significant difference between attitude towards ICT use scores of teachers of different faculties.

H₀₂: There is no significant difference between attitude towards ICT use scores of teachers with different levels of computer competency.
H$_0$3: There is no significant interaction between faculty type and different levels of computer competency with regard to teachers’ attitude towards ICT use scores.

Hypotheses related to attitude towards ICT use scores with respect to different levels of computer anxiety

2 x 3 ANOVA was employed for analyzing university teachers’ attitude towards ICT use scores with respect to different levels of computer anxiety. Following null hypotheses were tested through this analysis:

H$_0$4: There is no significant difference between attitude towards ICT use scores of teachers of different faculties.

H$_0$5: There is no significant difference between attitude towards ICT use scores of teachers with different levels of computer anxiety.

H$_0$6: There is no significant interaction between faculty type and different levels of computer anxiety with regard to teachers’ attitude towards ICT use scores.

Hypotheses related to relationship among attitude towards ICT use and computer competency and computer anxiety

The following null hypotheses were tested with respect to the analysis of relationship between different variables:

H$_0$7: There is no significant relationship between teachers’ attitude towards ICT use and computer competency.

H$_0$8: There is no significant relationship between teachers’ attitude towards ICT use and computer anxiety.

H$_0$9: There is no significant relationship between teachers’ computer competency and computer anxiety.
Hypotheses related to predict attitude towards ICT use scores based on computer competency and computer anxiety.

Separate linear regression analysis was conducted to distinguish whether university teachers’ attitude towards ICT use scores can be predicted by computer competency and anxiety. The following null hypotheses were tested:

H$_{0,10}$: There is no significant effect of computer competency on university teachers’ attitude towards ICT use.

H$_{0,11}$: There is no significant effect of computer anxiety on university teachers’ attitude towards ICT use.

H$_{0,12}$: There is no significant effect of computer competency and computer anxiety conjointly on university teachers’ attitude towards ICT use.

6.5 Design of the Study

A research design is a detailed plan of the investigation. In fact, it is the detailed procedure of testing the hypotheses and analyzing the obtained data. Research design may thus be defined as a sequence of those steps taken ahead of time to ensure that the relevant data will be collected in a way that permits objective analysis of the different hypotheses formulated with respect to the research problem. Descriptive method is concerned with surveying, describing and investigating the existing phenomenon or issues, conditions and relationships that exist.

This method enabled the researcher to compare university teachers of different faculties, viz. Art/Education and Science/Engineering & Technology, with respect to attitude towards ICT use, computer competency and computer anxiety.

Two 2 x 3 ANOVA designs were employed and the dependent variable in each of the two designs, was: university teachers’ attitude towards ICT use. The independent variables in each of the two 2 x 3 ANOVA designs were:

Type of Faculty:

- Arts + Education Faculty
- Science + Engineering & Technology Faculty (Science/Engr. & Tech.)
Different Levels of Computer Competency

- Low
- Moderate
- High

Different Levels of Computer Anxiety

- Low
- Moderate
- High

The two 2 x 3 ANOVA design were employed to study university teachers’ attitude towards ICT use in relation to computer competency and computer anxiety.

Further, the relationship among attitude towards ICT use, computer competency and computer anxiety were studied. The schematic layout of the designs has been presented below in Figures.
6.6 Sample and Population

A population is any group of individuals that has one or more characteristics in common and that are of interest to the researcher. The primary purpose of research is to discover principles that have universal application, but to study the entire population to arrive at generalizations would be impractical, if not impossible. A population is defined as a group of individuals with at least one common characteristic which distinguishes that group from other individuals. Researchers rarely survey the entire population for two reasons: the cost is too high, and the population is dynamic in that the individuals making up the population may change over time. Sampling is that part of statistical practice concerned with the selection of an unbiased or random subset of individual observations within a population of individuals intended to yield some knowledge about the population of concern, especially for the purpose of making predictions based on statistical inference (Best & Kahn, 2011).

In the current study, at first a preliminary consideration was done on the structure of the Panjab University regarding the number of faculties and related departments and teachers. According to the list of faculty members (Panjab University Web Site, 2012), the population of the present research was 746 full time university teachers who were working in the ten faculties in Panjab University in session 2012-2013.
The sampling technique at this level was purposive-cum random. Because, as Stodola and Storodah (1967) discussed, the principle of selection in purposive sampling is the investigator’s judgment of the typicality of his/her interest. A sample may then be deliberately chosen because in the light of the available evidence, it mirrors some larger groups with reference to a given characteristic.

Panjab University is one of the oldest and biggest universities in India. The university has 58 teaching and research departments and centers at the main campus located at Chandigarh. It has 172 affiliated colleges spread over Punjab. Further, the university was identified as one of the six centers in the country for super-computing facilities to serve the entire north-western region in Technology Information Forecasting and Assessment Council (TIFAS), DST. The Government of India has also identified the university as a special center. The university has extensively used its website www.puchd.ac.in, in providing information to students and the general public. Panjab University has been identified as a Level-III National High Performance Computing Center under the ICOSER Project of TIFAC, Department of Science and Technology. It is among the seven such centers being setup around the country and is the only one in Northern India (Profile of Panjab University, 2013).

Stratified Random Sampling Technique was also used for the selection of the sample in the present study. Stratified random sampling is a modification of random sampling in which the researcher divides the population into two or more relevant and significant strata based on one or a number of attributes. In effect, the sampling frame is divided into a number of subsets. A random sample (simple or systematic) is then drawn from each of the strata. Consequently stratified sampling shares many of the advantages and disadvantages of sample random or systematic sampling. Dividing the population into a series of relevant strata means that the sample is more likely to be representative, as the researcher can ensure that each of the strata is represented proportionally within his/her sample. However, it is only possible to do this if the researchers are aware of, and can easily distinguish, significant strata in the sampling frame. In addition, the extra stage in the sampling procedure means that it is likely to take longer, to be more expensive, and to be more difficult to explain than simple random or systematic sampling (Saunders, Lewis, & Thornhill, 2009).
Hence, 200 university teachers of different faculties and departments of Panjab University were selected at two levels in the present investigation:

- Faculty Sample
- Department Sample

**Faculty Sample**

There are 10 faculties that are in the Panjab University. Four faculties were selected by lottery method from list of the faculty name as shown below:

**Table 6.1 Name of faculties in Panjab University**

<table>
<thead>
<tr>
<th>N</th>
<th>Name of faculties</th>
<th>N</th>
<th>Name of faculties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Arts</td>
<td>6</td>
<td>Language</td>
</tr>
<tr>
<td>2</td>
<td>Business Management &amp; Commerce</td>
<td>7</td>
<td>Multi – Faculty Departments</td>
</tr>
<tr>
<td>3</td>
<td>Design and Fine art</td>
<td>8</td>
<td>Law</td>
</tr>
<tr>
<td>4</td>
<td>Education</td>
<td>9</td>
<td>Pharmaceutical Science</td>
</tr>
<tr>
<td>5</td>
<td>Engineering &amp; Technology</td>
<td>10</td>
<td>Science</td>
</tr>
</tbody>
</table>

Thus, Arts + Education and Science + Engineering & Technology faculties were selected from the ten faculties.

**Department Sample**

From each of the selected faculties (Arts/Education and Science/Engineering & Technology) 5 departments / Institutions were randomly selected (Table 6.2). In each department or institution 20 questionnaires were randomly distributed among the university teachers. In some departments which were a shortage of specific subjects, the investigator shifted to the other similar departments. The researcher administered the questionnaires personally, in case the selected respondents were not available even after making two attempts to do so. Responses from 200 respondents of university teachers were received. After scrutiny, it was observed that 14 responses were returned with incomplete information; they were omitted from the sample and new subjects were selected. Thus, in all 200 completely filled in questionnaires were included in the present investigation.
Table 6.2 Distribution of Sample among Departments / Institutions

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Departments / Institutions</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts / Education</td>
<td>Education</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Public Administration</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Economics</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Geography</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Political Science</td>
<td>20</td>
</tr>
<tr>
<td>Science / Engineering &amp; Technology</td>
<td>Botany</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Computer Science &amp; Technology</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Mechanical Engineering</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Electronics &amp; Communication</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>200</td>
</tr>
</tbody>
</table>

6.7 Tools Used

This part of the chapter has been devoted to the description of the tools for the collection of data. For every type of research, there is a need of certain instruments to explore new fields. The instruments employed for the collection of data are called tools. The tools used in the study have been enlisted below.

- Demographic characteristics data sheet (developed by the investigator)
- Scale of attitude towards ICT use (developed and validated by the investigator)
- Computer Competency Scale (developed and validated by the investigator)
- Computer Anxiety Scale (CARS) by Roslan Embi (2007)

6.8 Pilot Study

A pilot study was conducted by the researcher with 100 university teachers. The reason for conducting a pilot study was to determine the reliability of the Computer Anxiety Scale that was developed by Embi (2007). The pilot study showed that the reliability coefficient (estimated by Cronbach’s alpha method) for the above tool is 0.79. Hence, this tool was thought to be suitable for data collection from Panjab University teachers.
6.9 Procedure

The data was collected at two stages:

**Stage I: Selection of the sample**

**Stage II: Collection of data**

**Stage I: Selection of the sample**

This stage has been discussed under the heading sample and population in this chapter.

**Stage II: Collection of data**

After development of the tools and validating the related tools, in April, 2013, the survey packets consisted of a cover letter and a questionnaire were administered to a total of 200 university teachers who constitute the sample of the study. The participants were informed of the purpose of the study, the voluntary participation, and given two weeks to complete survey. In some cases, it was necessary to coordinate with chairperson in some departments to take best results of the teachers’ participation. To further increase the response rate, follow up survey packet were resent to non-respondents after two weeks. All questionnaires collected were carefully inspected and unusable questionnaires rejected. Of the questionnaire received, 14 were found to be incomplete and therefore discarded. Scoring was done in accordance with the instructions given in the manual of each tool.

6.10 Statistical Techniques

The following statistical techniques were employed to analyze the data obtained in order to test hypotheses.

2 x 3 ANOVA was employed to study the impact of faculty type and different levels of computer competency (low, moderate and high) on university teachers’ attitude towards ICT use scores.

2 x 3 ANOVA was employed to study the impact of faculty type and different levels of computer anxiety (low, moderate and high) on university teachers’ attitude towards ICT use.
Coefficient of correlation was employed for studying relationship of university teachers’ attitude towards ICT use with computer competency and computer anxiety.

Linear regression was conducted to distinguish whether university teachers’ attitude towards ICT use can be predicted variables namely, computer competency and computer anxiety.

6.11 Findings

Findings related to demographic characteristics

- The average age of the sample teachers was 40.87 years among the university teachers. Majority of the teachers (47.0 %) belonged to 31- 40 years category which was followed by 41- 50 years category constituting 22.5 percent, 51- 60 years category constituting 15 percent, 21- 30 years category constituting 12 percent and the remaining 3.5 percent of teachers constituted the oldest age group (>60).

- The total sample Size was 200 university teachers and 110 respondents were male (55 %) and 90 remaining respondents were female (45%).

- There were 100 respondents (50 percent) from Arts/Education faculty and 100 respondents (50 percent) from Science/Engineering & Technology faculty.

- The average teaching experience of the sample teachers was 13.68 years among the university teachers. Majority of the teachers (49%) belonged to 1-10 years category which was followed by 11- 20 years category constituting 28.5 percent, 21- 30 years category constituting 17 percent and the remaining 5.5 percent of teachers constituted the teaching experience category (>30).

- The academic ranks among respondents were as follows. There were 6 Instructors (3 percent), 124 Assistant Professors (62 percent), 28 Associate Professors (14 percent) and 42 Professors (21 percent) who were university teachers’ sample.

- Educational qualifications (i) Masters; (ii) M.Phil and (iii) PhD. Revealed that there were 42 Masters (21 %), 3 M.Phil (1.5 %) and remaining 155 teachers (77.5 %) had PhD degree.

Findings related to the comparative levels of attitude towards ICT use, computer competency and computer anxiety

- About 94 percent of university teachers at Arts/Education faculty and 95 percent at Science/Engineering & Technology faculty had positive attitude
towards ICT use. However, only 6 percent of sample teachers at Arts/Education faculty and 5 percent of Science/Engineering faculty had negative attitude.

- No more than 2% of the respondents of different faculties were in the little competence category. Similarly, 2% of subjects in both Arts/Education and Science/Engineering & Technology faculties fell under the category of little competence. Over 98% of the whole university teachers’ sample revealed that their levels of computer competency were in moderate or much confidence categories. The important point was that 80% of respondents at Science/Engineering & Technology faculty perceived themselves as highly proficient in computer skills.

- Around 89% of university teachers’ sample at Science/Engineering faculty perceived themselves either very relaxed or generally relaxed. Also, 78% of respondents at Arts/Education faculty felt generally relaxed. Only 22% of subjects at Arts/Education faculty and 11% of respondents at Science/Engineering & Technology faculty were categorized as anxious towards computer. None of the university teachers’ sample felt themselves under the category of very anxious.

Findings related to dimension analysis of attitude towards ICT use

- Majority of the respondents (98%) of Arts/Education and Science/Engineering respondents (96%) faculties agreed or strongly agreed with ICT use in instructional settings.

- Majority of the respondents (81%) of Arts/Education and Science/Engineering respondents (88%) faculties agreed or strongly agreed with “confidence in ICT use” subscale.

- Majority of the respondents (75%) of Arts/Education and Science/Engineering respondents (73%) faculties agreed or strongly agreed with “encouragement from colleagues” subscale.

- Above half of the respondents (49%) of Arts/Education and around one third of Science/Engineering respondents (33%) faculties agreed or strongly agreed with “ICT health problem” subscale.
• More than half of the participants (56%) of Arts/Education and around one third of Science/Engineering respondents (53%) faculties agreed or strongly agreed with “ICT and its socialization effects on users”.

• Majority of the respondents (92%) of Arts/Education and Science/Engineering respondents faculties agreed or strongly agreed with “ICT uses have relative advantage in instruction” subscale.

• Majority of the respondents (94%) of Arts/Education and Science/Engineering respondents (95%) faculties agreed or strongly agreed with “that they had no difficulty with applying ICT” subscale.

• Around one third of the University Teachers respondents (35%) of Arts/Education and more than half (56%) Science/Engineering respondent’s faculties agreed or strongly agreed with “existence of barriers to ICT use in the university” subscale.

Findings related to dimension analysis of computer competency

• Majority of the respondents (98%) in both Arts/Education and Science/Engineering & Technology faculties had moderate or much competence on basic computer operations.

• Majority of the respondents (92%) of Arts/Education and Science/Engineering respondents (97%) faculties agreed or strongly agreed with “competent for use of application software” subscale.

• Majority of the respondents (98%) of both Arts/Education and Science/Engineering respondents (98%) faculties agreed or strongly agreed with “use of internet resources” subscale.

• Majority of the respondents (81%) of Arts/Education and Science/Engineering respondents (91%) faculties agreed or strongly agreed with “competence in use of computer accessories and ICT equipment” subscale.

Findings related to dimension analysis of computer anxiety

• Majority of the respondents (67%) of Arts/Education and Science/Engineering respondents (83%) faculties agreed or strongly agreed with “general anxiety about ability to use computer”.

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• Majority of the respondents (88%) of Arts/Education and Science/Engineering respondents (93%) faculties were generally relaxed or very relaxed in “ability to learn about computer”.

• Majority of the university teacher’s respondents (96%) of Arts/Education and Science/Engineering respondents (92%) faculties were relaxed towards motivation or necessity to learn about computers.

• Majority of the university teacher’s respondents (76%) of Arts/Education and Science/Engineering respondents (81%) faculties perceived themselves relaxed about “power and control of computers”

Findings related to Analysis of university teachers’ attitude scores towards ICT use with respect to different levels of computer competency

• F-ratio for the differences in the mean of university teachers’ attitude scores towards ICT use at different faculties was found not to be significant even at the level 0.05 confidence. It may be inferred that the means of different faculties on university teachers’ attitude scores may be considered equal.

• F-ratio test for the differences among the means of attitude scores of university teachers with low, moderate and high levels of computer competency was found to be significant at the level 0.01 confidence. It may be inferred that university teachers’ attitude scores mean were significantly different when they had low, moderate and high computer competency.

• F-ratio for the interaction between the two variables viz., type of faculty and different levels of computer competency was not found to be significant even at 0.05 level of confidence.

• University teachers of Arts/Education faculty with higher computer competency exhibited better attitude towards ICT use as compared to those with moderate and low levels of computer competency. Similarly, University teachers of Science/Engineering & Technology faculty with high computer competency exhibited better attitude towards ICT as compared to teachers with moderate and low levels of computer competency.

Findings related to Analysis of university teachers’ attitude scores towards ICT use with respect to different levels of computer anxiety

• F-ratio for the differences in the mean of university teachers’ attitude scores towards ICT use at different faculties was found to be not significant even at
the level 0.05 confidence. It may be inferred that the means of different faculties on university teachers’ attitude scores may be considered equal.

- F-ratio for the differences among the means of attitude scores of university teachers with low, moderate and high computer anxiety scores was found to be significant at the level 0.01 confidence. It may be inferred that university teachers’ attitude scores mean were significantly different when they had low, moderate and high computer anxiety.
- F-ratio for the interaction between the two variables viz., type of faculty and different levels of computer anxiety was not found to be significant even at 0.05 level of confidence.

Findings related to Relationship among Attitude towards ICT Use and Computer Competency and Computer Anxiety of University Teachers

- Significant positive relationship was found between attitude towards ICT use and computer competency.
- Significant negative correlation was found between attitude towards ICT use and computer anxiety. It means that, as the score of computer anxiety increased, the scores of attitude towards ICT use decreased.
- Significant negative correlation was also found between computer competency and computer anxiety. It may be inferred that more the computer competency, the lower computer anxiety levels.

Findings related to Predicting university teachers’ attitude scores towards ICT use based on computer competency and computer anxiety

- Computer competency as an independent variable had significant effect on attitude towards ICT use at 0.01 level of significance, Also, 12.2% of variations in university teachers’ attitude towards ICT use was explained by computer competency.
- Computer anxiety as an independent variable had significant effect on attitude towards ICT use at 0.01 level of significance, 14.8% of variations in university teachers’ attitude towards ICT use was explained by computer anxiety.
- Computer competency and computer anxiety as independent variables had conjointly significant effect on attitude towards ICT use at 0.01 level of
significance, 17.3% of variations in university teachers’ attitude towards ICT use were explained conjointly by computer competency and computer anxiety.

6.12 Educational Implications

The results of this study suggest that classroom technology should become an integral part of the core mission for the institution, with its primary focus rooted in the paradigm shift from teaching to learning. Programs that foster the use of information and communication technology (ICT) in the classroom increase familiarization with technology and lead to empowerment in technology as well as teaching. Future generations would be computer literate and would expect technology in the classroom. The university administrators should place emphasis on building teachers’ perception of their ability to use ICT with a view to transform classroom practice.

• University authorities should provide financial help to teachers so that teachers adapt ICT in the classroom.
• More ICT equipments and facilities are needed to be provided at the university level for teachers such as laptops for all teachers, interactive whiteboard, data Projector, etc.
• The university administrators should provide advanced practical training for the university teachers on how to integrate ICT tools in instructional settings.
• The university administrators should support their faculty members with up-to-date software programs, hardware equipments and networking facility.
• Tangible incentives and effective reward for using ICT in classrooms (e.g., leave time, contribution towards tenure, financial rewards) should be provided by the university administrators in order to encourage the university teachers to use ICT in instructional settings.
• The administrators should evaluate faculty members on utilization of ICT on an ongoing basis.

6.13 Suggestion for Further Research

• Further research can be conducted to more fully examine or identify other variables and factors that may contribute to or influence university teacher’s attitude towards ICT use in addition to the ones already discussed in this study.
• Related research could be conducted to build on this study to examine the students’ attitude towards ICT use in learning at different streams, their responses to ICT use in the classroom, their preferences and the impact on their learning. Feedback from the study may motivate more university teachers to adopt and implement ICT in their teaching.

• Future study may comprise of teacher interviews and classroom observations with a small number of teachers. This technique could be replicated using a random sample of the university teachers on a larger scale. This would make the results of the study even more qualitative.

• Comparison studies would be interesting. For example, it would be interesting to learn what differences attitude towards ICT, if any, exist between different subjects of universities, between different countries in their adoption of ICT in the delivery of instruction.