CHAPTER – V
FINDINGS AND CONCLUSION

5.0 OVERVIEW

The present study attempts to find out the Influence of Teaching Attitude and Anxiety towards Utilization of Information and Communication Technologies in Classroom Instruction among Teacher-Educators at Colleges of Education. In relation to the Research Components such as Teaching Attitude, Anxiety, Utilization of Information Communication Technologies and the Demographic Variables. The Chapter – I gives a brief Introduction and Statement of the Problem of the Study. The Review of Related Literature is given in the Chapter – II. The Methodology followed in the Present Study is described in the Chapter – III. Chapter – IV deals with the Analysis and Interpretation of the Results from the collected data. In the present chapter, the Design of the Study, Findings of the Present Study, Discussion, Conclusion, Educational Implications and Suggestions for further Study are presented.

5.1 DESIGN OF THE STUDY

The present study belongs to Survey Research Design, as it is intended to measure the Influence of the Teaching Attitude and Anxiety towards the level of Utilization of ICT among Teacher-Educators at Colleges of Education. The variables involved in this study were Teaching Attitude, Anxiety and Utilisation of ICT. The Demographic variables used in this study were Gender, Type of
Institution, Major Subject and Years of Experience in working with Computers. By using the Stratified Random Sampling Technique Investigator selected 521 Teacher-educators which includes 272 Male and 249 Female Teacher-educators working from 03 Government, 05 Aided and 55 Self – Finance of which 33 from Government, 46 from Aided and 442 from Self-financing Colleges of Education in Southern Tamil Nadu. The investigator used three types of tools. The first type of Tool was developed by the investigator namely Utilization of ICT (UICT) tool to measure the level of Utilisation of Information Communication Technologies (ICT) in Classroom Instruction. The remaining two types of tools were Standardized Tools namely Teaching Attitude Scale (TAS) and Anxiety Rating Scale (AnRS) constructed by S. Sathiyagirirajan (2008) were taken for assessing the Teaching Attitude and Anxiety level of the Teacher-educators. The collected data were analysed by applying different Statistical Techniques such as Mean, Standard deviations, Percentage Analysis, ‘t’ test, F test and Correlation Co-efficient to find out the results of the present study.

5.2 FINDINGS OF THE STUDY

The results obtained from the previous chapter were presented in the following two captions such as Descriptive Analysis and Inferential Analysis.

5.2.1 Findings from Descriptive Analysis

This section deals with the analysis of the Mean, Standard Deviation and Percentage Analysis scores of the Utilization of the ICT in Classroom Instruction,
Teaching Attitude and Anxiety among the Teacher-Educators at Colleges of Education in Total and also with High, Moderate and Low level of Teaching Attitude and Anxiety with respect to Demographic variables such as Gender, Type of Institution, Major Subject and Year of Experience in working with Computers. The findings drawn from the results presented in the previous chapters are given below:

**Section A: Level of Mean Scores of Utilization of ICT (UICT) and Influence of Teaching Attitude and Anxiety among the Teacher-educators at Colleges of Education in Total**

i. Mean and SD values towards UICT in Classroom Instruction in Total are 38.09 and 28.93. It reveals that the level of Mean Scores of Utilisation of ICT (UICT) in Classroom Instruction among Teacher-Educators is low.

ii. Mean and SD scores of Influence of Teaching Attitude in Total are 86.72 and 11.06 respectively. It is understood from the results that the Teaching Attitude is high 92.41 among Teacher-educators working in Aided Colleges of Education and their Anxiety is only 37.80.

iii. Mean and SD scores of Anxiety in Total are 52.19 and 19.70 respectively. In the case of Anxiety, it is high 54.50 among Teacher educators with nil experience in working with computer and less 37.80 among the Teacher-educators of Aided Colleges of Education.
Section B: Level of Mean Scores of UICT and Anxiety among the Teacher Educators at High, Moderate and Low level of Teaching Attitude with respect to demographic variables

iv. Mean and SD values of UICT and Anxiety scores in total are 39.28 and 28.62, 47.41 and 19.21 respectively at High level of Teaching Attitude. It implies that the level of Mean scores of UICT is low and the Anxiety is average among the Teacher Educators.

v. Mean and SD values of UICT and Anxiety scores of the total sample are 35.11 and 29.41, 61.12 and 17.67 respectively at Moderate level of Teaching Attitude.

vi. Maximum and Minimum Mean and SD values of UICT and Anxiety scores are 64.00 and 37.08, 36.40 and 26.98, 81.00 and 55.36, 24.12 and 15.15 respectively at Low level of Teaching Attitude.

Section C: Level of Mean Scores of UICT and Teaching Attitude among the Teacher Educators at High, Moderate and Low level of Anxiety with respect to demographic variables

vii. Mean and SD values of UICT and Teaching Attitude scores of the total sample are 39.81 and 28.96, 83.57 and 9.91 respectively at High level of Anxiety. It shows that the level of Mean scores of UICT is low and the Teaching Attitude is high among the Teacher Educators.
viii. Maximum and Minimum Mean and SD values of UICT and Teaching Attitude scores are 45.02 and 36.94, 30.29 and 21.16, 93.12 and 82.28, 12.40 and 5.29 respectively. It is also reveal that Mean and SD values of UICT and Teaching Attitude scores of the total sample are 39.97 and 28.55, 84.85 and 11.63 respectively at Moderate level of Anxiety.

ix. Maximum and Minimum Mean and SD values of UICT and Teaching Attitude scores at Low level of Anxiety are 46.16 and 19.04, 30.56 and 24.99, 92.57 and 89.13, 11.21 and 3.74 respectively.

Section D: Percentage Analysis on level of UICT, Teaching Attitude and Anxiety at Low, Moderate and High level and Components-wise Analysis among the Teacher Educators with respect to demographic variables

x. With regard to Percentage Analysis on the level of Utilization of ICT (UICT) were found to be Maximum 72.76% with respect to Teacher-educators who are having below 5 years of experience with computers and Minimum 25% with respect to Male Teacher-educators at Low Level.

xi. In the case of Moderate level the Maximum 76.66% and Minimum 43.04% with respect to Science Major subject Teacher-educators and Teacher-educators who are having Nil experience in working with computers respectively on the level of Utilisation of ICT.

xii. Similarly in High level category, percentage analysis were found to be Maximum 27.45% with respect to Teacher-educators who are having 5 and
above years of experience with computers and Minimum 8.36% with respect to Arts Major subject Teacher-educators.

xiii. Percentage Analysis of Mean Scores of Teaching Attitude for Minimum and Maximum were 2.17 and 23.54 at Low level, 71.31 and 90.90 at Moderate level and 0 to 17.39 at High level category.

xiv. With respect to Anxiety the Mean scores of Percentage analysis were Minimum and Maximum for 16.41 and 37.25 at Low level, 41.30 and 62.68 at Moderate level and 12.74 and 22.79 at High level category.

xv. Percentage Analysis of Mean scores of the level of UICT in Total is found to be 38.09% which is average level whereas in the case of Component-wise analysis indicate that CAI is high 47.12% and CCTV is low 27.25% among the Teacher-educators at Colleges of Education.

5.2.2 Findings from Inferential Analysis

The Significant Difference and Relationship between Utilization of the ICT (UICT), Teaching Attitude and Anxiety among the Teacher-educators of the Colleges of Education with respect to Demographic variables. Also at High, Moderate and Low Teaching Attitude and Anxiety. The findings drawn from the results presented in the previous chapters are given below:
Section A: Significant Difference between the Level of UICT, Teaching Attitude and Anxiety among the Teacher Educators in Total with respect to their Demographic Variables.

xvi. There is no significant difference in the Mean Scores on the level of Utilization of ICT in Classroom Instruction and Anxiety among the Teacher-educators with respect to Gender.

xvii. With regard to Teaching Attitude Female Teacher Educators ($\bar{X} = 88.91$) were significantly higher than the Male Teacher Educators ($\bar{X} = 84.71$).

xviii. There is no significant difference between Mean Scores of Level of UICT, Teaching Attitude and Anxiety among Teacher-Educators with respect to their classification of Major Subject Arts and Science.

xix. Mean Scores of Level of UICT with respect to their Type of Institution is found to be similar.

xx. There is a significant difference in the level of Teaching Attitude and Anxiety with respect to their Type of Institution.

xxi. Among Government and Self-finance Institutions of Teacher-educators with regard to Teaching Attitude and Government and Aided Institutions of Teacher-educators with regard to Anxiety were similar.

xxii. Mean scores of the Teaching Attitude among the Teacher –Educators of Aided institution are higher than the Self-Finance and Government institution, whereas the level of Anxiety among the Teacher –Educators of Self-Finance institution are higher than the Aided and Government institution.
xxiii. It is inferred that there is a significant difference in the level of UICT, Teaching Attitude and Anxiety with respect to their Year of Experience in working Computer.

xxiv. Among Teacher-educators of Nil and below 5 years experience with computers with regard to UICT, Teaching Attitude and Anxiety are found to be similar.

xxv. Mean Scores of level of UICT for 5 and above year of Experience is higher than the Nil and below 5 years of experience in working with Computer.

xxvi. On observing the Teaching Attitude among the Teacher –Educators of 5 and above year of Experience are higher than the below 5 year and Nil Experience, whereas Anxiety among the Teacher –Educators of Nil Year of experience are higher than the below 5 years and 5 years and above year of Experience in working with Computer.

Section B: Significant Difference between the Level of UICT, Teaching Attitude and Anxiety among the Teacher Educators at High level of Teaching Attitude with respect to their Demographic Variables

xxvii. The level of UICT, Teaching Attitude and Anxiety among the Male and Female Teacher-Educators at High level of Teaching Attitude were found to be similar

xxviii. It is found to be similar for the Mean Scores of Level of UICT, Teaching Attitude and Anxiety at High Level of Teaching Attitude among Teacher-Educators with respect to their Major Subject.
xxix. Level of UICT and Teaching Attitude were found to be similar whereas Anxiety is significant at High level of Teaching Attitude with respect to the type of Institution.

xxx. The Self-finance colleges Teacher-educators are found to be significantly higher level of Anxiety than the Government and Aided College Teacher-educators whereas Government and Aided Teacher Educators were found to be similar at High level of Teaching Attitude.

xxxi. Teaching Attitude is found to be similar with respect to their Years of Experience in Working Computer among the Teacher-educators whereas level of UICT and Anxiety at High level of Teaching Attitude are not similar.

xxxii. There is no significant difference between the Mean scores of level of UICT among Teacher-educators who are having below 5 and above 5 years whereas in Anxiety those who are having nil Experience and below 5 years in working with computers.

xxxiii. Level of UICT is more among Teacher-educators who are having 5 and above years of experience in working with Computers whereas in the case of Anxiety is found to be less.
Section C: Significant Difference between the Level of UICT, Teaching Attitude and Anxiety among the Teacher Educators at Moderate level of Teaching Attitude with respect to their Demographic Variables

xxxiv. There is no significant difference in the level of UICT, Teaching Attitude and Anxiety among Teacher-Educators at Moderate Level of Teaching Attitude with respect to their Gender.

xxxv. Level of the UICT, Teaching Attitude and Anxiety among the Teacher-educators at Moderate Level of Teaching Attitude with respect to Major Subject are found to be similar.

xxxvi. There is significant difference in Anxiety among the Teacher-educators at Moderate Level of Teaching Attitude with respect to the type of Institution whereas level of UICT and Teaching Attitude are found to be Similar.

xxxvii. Government and Self-financing Teacher-educators are having significantly higher level of Anxiety than the Aided College Teacher-educators at Moderate level of Teaching Attitude with respect to Type of Institutions.

xxxviii. There is no significant difference between Government and Self-finance Teacher Educators with regard to Anxiety at Moderate level of Teaching Attitude.

xxxix. Level of UICT and Anxiety are found to be similar at Moderate level of Teaching Attitude among Teacher-Educators with respect to their Years of Experience in Working Computer whereas Teaching Attitude at Moderate level of Teaching Attitude is not similar.
With regard to Anxiety 5 yrs and above experience with computers among Teacher-educators are significantly having higher level than the below 5 years and nil experience Teacher-educators at Moderate level of Teaching Attitude whereas Teacher-educators having nil experience and below 5 years in working with computers are found to be similar.

Section D: Significant Difference between the Level of UICT, Teaching Attitude and Anxiety among the Teacher Educators at Low level of Teaching Attitude with respect to their Demographic Variables

xli. There is no significant difference in the level of UICT, Teaching Attitude and Anxiety among Teacher-Educators at the Low Level of Teaching Attitude with respect to Gender.

xlii. Arts and Science Major Subject Teacher-educators are found to be similar with regard to the level of UICT, Teaching Attitude and Anxiety at Low level of teaching attitude.

xliii. Teacher-educators who are working in Government and Self-finance institutions with regard to the level of UICT, Teaching Attitude and Anxiety at Low level of teaching attitude are found to be similar.

xliv. Level of UICT, Teaching Attitude and Anxiety among Teacher-educators who are having nil experience and below 5 years in working with computers are found to be similar at Low level of teaching attitude.
Section E: Significant Difference between the Level of UICT, Teaching Attitude and Anxiety among the Teacher Educators at High level of Anxiety with respect to their Demographic Variables

xlv. There is no significant difference in the High Level of Anxiety towards UICT, Teaching Attitude and Anxiety among Teacher-Educators with respect to their Gender.

xlvi. Level UICT and Teaching Attitude among the Teacher-educators whose Major Subject Arts and Science at High level of Anxiety are found to be similar whereas Anxiety is not similar. It is imbibed that Science Teacher-educators are having higher Anxiety than the Arts Teacher-educators.

xlvii. It is found to be similar in the level of UICT among Government and Self-finance Institutions among the Teacher-educators at high level of Anxiety. In the case of Teacher-educators who are working in Self-finance institutions are significantly higher than the Government institutions with regard to Teaching Attitude and Anxiety at High level of Anxiety.

xlviii. Level of UICT, Teaching Attitude and Anxiety are found to be similar at High level of Anxiety among Teacher-Educators with respect to their Years of Experience in working with Computer.
Section F: Significant Difference between the Level of UICT, Teaching Attitude and Anxiety among the Teacher Educators at Moderate level of Anxiety with respect to their Demographic Variables

xlix. There is no significant difference between Mean Scores of level of UICT and Anxiety among the Male and Female Teacher-Educators at Moderate level of Anxiety whereas in the case of Teaching Attitude, the Female Teacher-educators are significantly higher than the Male Teacher-educators.

li. Arts and Science Major Subjects of Teacher-Educators towards the level of UICT and Anxiety at Moderate level of Anxiety are found to be similar. In the case of Teaching Attitude, Science Teacher-educators are significantly higher than the Major subject of Arts Teacher-educators at Moderate level of Anxiety.

lii. Level of UICT and Anxiety are similar at Moderate level of Anxiety with respect to the type of Institution whereas Teaching Attitude among the Teacher-educators are not similar.

liii. There is no significant difference in the mean scores between Government and Self-finance and Government and Aided Teacher Educators at moderate level of Anxiety whereas Aided colleges Teacher-educators are found to be significantly higher level of Teaching Attitude than the Self-finance College Teacher-educators.
liii. Level of UICT is found to be similar at Moderate level of Anxiety among Teacher-Educators with respect to their Years of Experience in Working Computer whereas there is significant difference in the Teaching Attitude and Anxiety at Moderate level of Anxiety.

liv. There is no significant difference between the Mean scores of Teaching Attitude among Teacher-educators who are having nil Experience and below 5 years as well as Anxiety among Teacher-educators who are having nil Experience and below 5 years in working with computers.

lv. It is found that Teaching Attitude among Teacher-educators who are having 5 and above years of experience in working with computers are significantly higher whereas in the case of Anxiety, it is found to be significantly lesser than the Teacher-educators who are having Nil experience and below 5 years experience in working with computers at moderate level of Anxiety.

Section G: Significant Difference between the Level of UICT, Teaching Attitude and Anxiety among the Teacher Educators at Low level of Anxiety with respect to their Demographic Variables

lvi. Male Teacher-educators are having more level of UICT and Anxiety than the Female Teacher-educators whereas in the case of teaching Attitude Female Teacher-educators are having higher level than the Male Teacher-educators at low level of Anxiety.
lvii. There is no significant difference in the level of UICT, Teaching Attitude and Anxiety among Arts and Science major Teacher Educators at low level of Anxiety.

lviii. There is a significant difference in the level of Anxiety whereas in the level of UICT and Teaching Attitude are similar at Low Level of Anxiety among Teacher Educators with regard to Type of Institution.

lix. On observing level of Anxiety among Teacher Educators of Government and Self-Finance Institutions at Low Level of Anxiety it is found to be similar whereas Teacher-educators of Government and Self finance institutions are significantly higher level of Anxiety than the Aided College Teacher Educators at low level of Anxiety.

lx. There is a significant difference in the level of UICT and Anxiety at low level of Anxiety among Teacher Educators whereas there is no significant difference in the Teaching Attitude.

lxi. It is found that UICT level of the Teacher Educators who are having below 5 years and above 5 years of Experience in Working Computers are significantly higher than the Nil experienced Teacher Educators. In the case of Anxiety, the Teacher Educators who are having Nil and below 5 years of Experience in Working Computers are significantly higher than the 5 years and above experience in working with computers.
Section H: Significant Relationship between the Level of UICT with Teaching Attitude, UICT with Anxiety in Total among the Teacher Educators at High, Moderate and Low Level of Teaching Attitude and Anxiety

lxii. There is no significant relationship between Level of UICT and Teaching Attitude, UICT and Anxiety among Teacher Educators at Colleges of Education.

lxiii. There is a significant relationship between UICT and Anxiety at high level of Teaching Attitude among Teacher Educators.

lxiv. There is no significant relationship between UICT and Teaching Attitude at high level of Teaching Attitude among Teacher Educators. Also, No significant relationship between UICT and Teaching Attitude, UICT and Anxiety at moderate and low level of Teaching Attitude of Teacher Educators.

lxv. There is a significant relationship between UICT and Teaching Attitude at high level of Anxiety Teacher Educators.

lxvi. There is no significant relationship between UICT and Anxiety at high level of Anxiety Teacher Educators. No significant relationship has been found between UICT and Teaching Attitude, UICT and Anxiety at moderate and low level of Anxiety among Teacher Educators.
5.3 DISCUSSION

The aim of the present study is to find out the Influence of Teaching Attitude and Anxiety towards Utilization of Information and Communication Technologies in Classroom Instruction among Teacher-Educators at Colleges of Education. From the Descriptive Analysis, it is understood that the Mean Scores of Level of UICT in Classroom Instruction in Total are 38.09. It implies that level of Utilisation of ICT (UICT) in Classroom Instruction is low among Teacher-Educators. The maximum Mean scores of level of UICT were only 44.59 among Teacher educators who are having 5 years and above experience with computers. This reflects the Teacher-educators working at Colleges of Education are using sparingly the ICT components for their teaching in their classroom. The Mean Scores of Teaching Attitude and Anxiety in Total were 86.72 and 52.19. It reveals that Teaching Attitude is found to be high and also Anxiety of Teacher-educators is found to be average. The Aided College Teacher-educators are having maximum mean scores of 92.41 whereas the level of Anxiety is minimum mean scores of 37.80. This is good sign factor among the Teacher-educators at Colleges of Education who are better in Teaching Attitude and the level of Anxiety which is found to be average. Similar findings were revealed in the studies conducted by Dakshinamurthy (2010); Gopal (2010) and Narayan Prasad Uniyal & Pandey (2008).
From the findings of the Mean Scores of UICT and Anxiety among the Teacher Educators at High, Moderate and Low level of Teaching Attitude with respect to demographic variables reveals that Government Teacher-educators are more utilizing ICT in Classroom Instruction at low Teaching Attitude whereas the Anxiety level is high. This may be due to the fact that they are having rich teaching experience and competent knowledge in utilizing ICT components for their classroom instruction but the level of Anxiety is found to be high which is adverse in nature of teaching. This reflects in the findings of this present study when the Mean scores of level of UICT at the High Level of Anxiety, the Government Teacher-educators utilization of ICT is only 16.00. It elucidates that if Anxiety level increases the utilization level of ICT in Classroom Instruction gradually decreases.

In the case of Percentage analysis on the level of UICT with respect to demographic variables were found to be Maximum 72.76% with respect to Teacher-educators who are having below 5 years of experience with computers at low level whereas Science Major Subject Teacher-educators is higher at Moderate level and Teacher-educators of 5 and above years of experience with computers are more at High level of UICT percentage. This may be the reason due to having experience in computers and science major subject teacher-educators might have more awareness and knowledge about ICT towards utilization of ICT components in the teaching-learning process. While reviewing the related literature similar
findings were obtained from the study conducted by Bulent Cavas, Pınar Cavas, Bahar Karaoglan & Tarik Kisla (2009); Tholappan & Krishnakumar (2011) and Bee Theng Lau and Chia Hua Sim (2008).

At the same time Percentage Analysis of Mean scores of the level of UICT in Total is found to be 38.09% which is average level whereas in the case of Component-wise analysis reveals that utilization of CAI is high 47.12% and CCTV is low 27.25% in classroom instruction among the Teacher-educators at Colleges of Education. Next to CAI is Net Based Instruction (NBI) is found to be 42.29%. From the analysis, CAI is higher when compared with other identified components. This may be due to reason that Teacher-educators are more familiar in working with computers than the other identified components in the study. Finally, it revealed in the present study that Teacher-educators need to develop their competent skills and attitude towards the technological ICT components for utilizing for classroom instruction. Similar results were found in the related study conducted by Verma (2011); Ananda Kumar (2009) and Rafeedali (2009).

On analysis of the data through the ‘t’ test, there is no significant difference in the Mean Scores on the level of Utilization of ICT in Classroom Instruction with reference to their demographic variables such as the Gender, Major Subject Arts and Science, Type of Institution among the Teacher-educators. There is significant difference with respect to their years of experience in working with computers where 5 years and above is higher than the Nil and below 5 years
of experience in working with Computer. It may be because of the reason as stated in the previous discussion that the working experience in the computer might have motivated them to utilize ICT devices in the teaching process. Similar results were found in the study conducted by Rengarajan & Senthilnathan (2012); Mirunalini & Anandan (2012) and Tholappan & Krishna Kumar (2012).

The findings of the results revealed that there is a significant difference in the level of Teaching Attitude and Anxiety with respect to their Type of Institution. Teaching Attitude among the Teacher –Educators of Aided institution are higher than the Self-Finance and Government institution, whereas the level of Anxiety among the Teacher –Educators of Self-Finance institution are higher than the Aided and Government institution. In addition, Female Teacher-educators were significantly higher than the Male teacher-educators with regard to Teaching Attitude. Since Anxiety is high among the Self-financing Teacher-educators, it implies that they might have more stress towards teaching than the other institutions. Also Female Teacher-educators are better in performance regarding to Teaching Attitude than Male Teacher-educators. On observing the Teaching Attitude among the Teacher–educators of 5 and above year of Experience are higher than the below 5 year and Nil Experience, whereas Anxiety among the Teacher –Educators of Nil Year of experience are higher than the below 5 years and 5 years and above year of Experience in working with Computer. Teacher-educators do not differ with regard to the Teaching Attitude and Anxiety with
respect to their classification of Major Subject Arts and Science. Similar results were found in the study conducted by Rajalakshmi and Anandan (2010); Ananda Kumar (2009) and Rafeedali (2009). It is contradictory to the results found by Rajandran (2011); Thollapan (2011) and Selvaraju & Pazhanivelu (2011).

In the case of Mean Scores of Level of UICT, Teaching Attitude and Anxiety among the Teacher Educators at High level of Teaching Attitude; it is found that Gender and Major Subject are similar whereas the Self-finance colleges Teacher-educators are found to be significantly higher level of Anxiety than the Government and Aided College Teacher-educators. In terms of the Level of UICT, Teaching Attitude and Anxiety at Moderate level of Teaching Attitude do not differ with respect to Gender, Major Subject whereas Teaching Attitude differ with respect to their Years of Experience in Working with Computer and Anxiety differ with respect to the type of Institution. From the findings that Aided College Teacher-educators have lesser Anxiety over Government and Self-financing Institutions. This may be reason that the Aided College Teacher-educators might have working in the conducive environment. From the analysis of the review of related literature, similar findings were found from the studies of Jacobson Barineka bina, Obomanu & Baribor Vikoo (2011); Anandakumar & Anandan (2010); Cher Ping Lim David Hang (2010); Muthupandi &
With regard to Low level of Teaching Attitude on the level of UICT, Teaching Attitude and Anxiety among Teacher-Educators do not differ with Gender, Major Subject, Type of Institution and Experience in working with Computers. Science Teacher-educators are significantly higher than the Major subject of Arts Teacher-educators in Teaching Attitude and Anxiety at Moderate level of Anxiety. Level of UICT, Teaching Attitude and Anxiety are found to be similar at High level of Anxiety whereas Teaching Attitude among Teacher-educators who are having 5 and above years of experience in working with computers are significantly higher than the other. But at low level of anxiety, the Teacher Educators who are having Nil and below 5 years of Experience in Working Computers are significantly higher than the 5 years and above experience in working with computers. While reviewing the related studies presented in the Chapter II, the findings of the present study coincides with the majority of the studies quoted Siddique & Abraham (2010); Amuthavalli & Zuneetha Bai (2008); Rakesh (2005); Singh (2005); Abbas Zare-Ee & Abbas Shekarey (2010); David (2010); Sunday (2010); Yasemin Gulbahar & Ismail Guven (2008) and Traci (2007).

Teacher-educators who are working in Self-finance institutions are significantly higher than the Government institutions with regard to Teaching
Attitude and Anxiety at High level of Anxiety. In the case of Teaching Attitude, Science Teacher-educators are significantly higher than the Arts Teacher-educators at Moderate level of Anxiety. It is contradictory results found by Muralidharan (2008).

Further from the results obtained reveal that there is no significant relationship between Level of UICT and Teaching Attitude, UICT and Anxiety among Teacher Educators at Colleges of Education. It implies that Teaching Attitude and Anxiety may not influence the Utilisation of ICT in Classroom Instruction among the Teacher-educators. There is a significant relationship between UICT and Anxiety among Teacher Educators at high level of Teaching Attitude. Also there is significant correlation between UICT and Teaching Attitude among Teacher Educators at high level of Anxiety. Similar results are found in the study of Naser Jamil Al-Zaidiyeen, Leong Lai Mei & Fong Soon Fook (2010).

The results shows that there is no correlation among UICT, Teaching Attitude and Anxiety at High, Moderate and Low Teaching Attitude and Anxiety except at higher level of Anxiety and Teaching Attitude there is relationship among UICT. This implies that the Teacher Educators of Colleges of Education having relationship with level of Utilisation of ICT with regard to higher level of Anxiety and Teaching Attitude. This may be due to the Anxiety and Teaching Attitude having significant relationship with academic achievement as mentioned
in the study conducted by Shaheen **Perveen (2012)**. But Anxiety and Teaching competency are not correlated as mentioned in the Study of **Merline Preetha & Francisa (2011)**. Finally the results of the reviewed experimental study also states that utilisation of ICT in Classroom Instruction have been effective which were conducted by **Jebmalar Anna Jothi (2012); Harendra Singh & Mishra (2009); Nimavathi & Gnanadevan (2009); Subhashini (2009); Jebaraj & Mohansundaram (2008)** and **Amutha (2007)**.

5.4 CONCLUSION

The results show that the Teacher-educators were not fully utilised the Information Communication Technologies components in Classroom Instruction. The study also found that the level of Teaching Attitude is high and the level of Anxiety is average among the Teacher-educators. Though high level of Teaching Attitude and low level of Anxiety show the good trend, the low Utilisation of ICT is not found to be congenial climate. From the findings it reveals that Teaching Attitude and Anxiety might have not influence the Utilisation of ICT in Classroom Instruction among the Teacher-educators as there is no significant relationship among the level of UICT. This may be due Teacher-educators are not fully aware of the ICT and their benefits of technology-oriented teaching in the classroom. Level of Utilisation of ICT might have been increased, if the Attitude and Anxiety have relationship with the utilisation of ICT among the Teacher-educators.
For better achievements of the concepts among the Student-teachers, Teacher-educators should enhance their integration of ICT in the Classroom Instruction and the Institution must provide suitable infrastructural facilities and encourage their Teacher-educators to meet out the demands of the modern trend.

5.5 EDUCATIONAL IMPLICATIONS

From the analysis of the study, Teacher-educators working at Colleges of Education are using sparingly the ICT components for their teaching in their classroom. The Government should undertake necessary steps to integrate ICT in Classroom for colleges of Education to make the Teacher-educators utilise the ICT compulsory for their teaching. Sufficient facilities and resources should be provided to in-service and pre-service teachers to practice the ICTs in teaching-learning process. They should be given environment in which they develop their ICT-based competencies. Further, Male Teacher-educators are lagging in utilisation of ICT than the female teacher-educators. They may be given technical training that how to use and maintain ICT equipments and software which involve the skills to operate modern technologies such as computer, Internet etc. and make them to realise the effectiveness of teaching through ICT in the Classroom.

As it has been found that utilizing ICT is more and more effective in increasing the performance of student-teachers, the curriculum may be modified with integration of ICT and level of utilisation of ICT should be enhanced for the teaching-learning process. In-service training might be given to the teachers on
the utilization of ICT and the variety of applications can be implemented in the teaching strategy for their class instruction. Competition may be conducted among the teachers on the preparation of the Effective Software and Awards/Incentives may be given at the State/National Level. Regarding the Influence of Teaching Attitude and Anxiety towards Utilisation of ICT does not reflect the significant relationship among the Teacher-educators except on the High level Teaching Attitude and Anxiety. Hence, the Teacher-educators might have to increase the level of teaching attitude towards technology-enabled teaching to be competent to excel in teaching with utilisation of ICT-components in Classroom Instruction.

5.6 SUGGESTIONS FOR FURTHER STUDY

Based on the findings of the present study further studies are suggested to be conducted in future are as given below:

i. Similar studies may be conducted among the Student-Teachers at Colleges of Education.

ii. Similar studies on the Awareness and Availability with regard to utilisation of ICT devices may be conducted among Teacher-educators and Student-teachers at Colleges of Education

iii. Similar Studies may be conducted among Secondary Grade Teacher Training Teacher-educators of Tamil Nadu.
iv. Similar studies may be conducted to find out the effectiveness of ICT devices over the Achievement in different subjects among the Schools and Colleges of Education.

v. The study may also be conducted with different Colleges such as Medical, Engineering, Arts and Science Colleges.

vi. A similar study may be conducted among the different types of Schools such as Government, Aided, Municipal, Private and Matriculation.
BIBLIOGRAPHY


