CHAPTER-V

SUMMARY, FINDINGS,
RECOMMENDATIONS AND CONCLUSIONS

“In literature and in life we ultimately pursue, not conclusions, but beginnings.”
— Sam Tanenhaus

5.0 INTRODUCTION
The aim of any research is to find out an appropriate answer to the problem undertaken and the answer is stated in the form of findings. The investigator has undertaken the present research work to achieve certain objectives leading to highlight the Teachers favorable attitude towards Smart Class Room, Technophobia and usage of Modern Technology for teaching. This chapter highlights the most important part of the research work, the summary and findings. Recommendations based on the findings of the study and suggestions for further research studies are also presented in this chapter.

5.1 RESEARCH QUESTIONS

The following were the research questions of the study that made the investigator precede in the research direction.

- Will the teachers have favorable attitude towards teaching through smart class room?
- Do these skills are common to the teachers of various discipline?
- Will the high school teacher have Technophobic attitude?
- Do these technology skills motivate teachers to teach concepts in innovative way?
Do these skills differ from every individual to individual?

Is there any relationship in the attitude towards modern technology and teaching through smart class room among the high school teacher?

5.2 SUMMARY OF THE STUDY

The objectives of the study were to find out the High School Teachers favorable attitude towards Smart Class Room, Technophobia and usage of Modern Technology for teaching. It is a descriptive study among the High school teachers. The researcher used Survey method in order to collect data from the teachers. The researcher chose the Normative Survey method. The variables of the study were Smart Class Room, Technophobia and Usage of Modern Technology for Teaching. The demographic variables are Gender, Age, Medium of Instruction, Pattern of Education, Stream of Subject, Type of School, Teaching Experience, Locality, Computer Ownership, Type of Computer, Knowledge about Computer and Access to Internet

To find out the favorable attitude of teachers towards Smart Class Room, Technophobia and usage of Modern Technology for teaching. The researcher selected the Kallakuruchi Taluk of Villupuram district in Tamil Nadu as the population. Stratified Random sampling technique was used to draw the sample. The researcher used both the standardized tools and tool prepared by him. The standardized tool was Attitude towards usage of Modern Technology in teaching (ATUMTT) consists of 35 items with 5 point Liker Scale. Constructed and Standardized by Dr. S.Rajasekar, Annamalai University, Tamil Nadu.
Other Questionnaires are Attitude towards Smart Class Room Scale (ATSCRS) consists of 48 items with 5 point Liker Scale. Scale on Technophobia of Teachers (SOTOT) consists of 50 items with 5 point Liker Scale. These tools were Constructed, Standardized by the investigator with the guidance of the Research Supervisor and Validated by the Experts. These tools were used to collect data for getting information.

Tools were administered for the High School Teachers. The data was collected to the groups of teachers through normative survey method. The data thus collected was analyzed by using Mean, Standard Deviation, ‘t’ test, ANOVA and Correlation Analysis. After statistically analyzing the data the results were drawn this implied that Teachers of high schools have favorable attitude towards teaching through smart class room and using modern technology. At the same time most of the teachers have fear of handling technology device (Technophobia). There is a significant difference between the teacher’s attitude towards modern technology and smart class room with respect to demographic variables. Thus the researcher tested the hypotheses and analyzed the findings of the Study entitled “Attitude of High School Teachers towards Smart Classrooms in Relationship to their Technophobia and Challenges faced by them during Instruction through Modern Technology”.
5.3 FINDINGS OF THE STUDY

After statistical analysis, the results were drawn and all the results were distressed appropriately the findings are thus listed below.

- 86% of high school teachers have favourable attitude towards Teaching in Smart classes.
- 14% of high school teachers have unfavourable attitude towards Teaching in Smart classes.
- 79% of high school teachers have Technophobia while using Technology Devices.
- 21% of high school teachers do not have Technophobia while using Technology Devices.
- 81% of high school teachers have favourable attitude towards using Modern Technology while teaching.
- 19% of high school teachers have unfavourable attitude towards using Modern Technology while teaching.
- There is a significant difference among the high school teachers in the level of attitude towards teaching in the Smart Classroom with respect to the demographic variables -Gender, Age, Medium of Instruction, Pattern of Education, Type of School, Teaching Experience, Locality, Computer Ownership, Knowledge about Computer, and Access to Internet.
- There is no significant difference among the high school teachers in the level of attitude towards teaching in the Smart Classroom with respect to the demographic variable- Stream of Subject and Type of Computer.
There is a significant difference among the high school teachers, in their Technophobia with respect to the demographic variables - Gender, Age, Medium of Instruction, Pattern of Education, Type of School, Teaching Experience, Locality, Computer Ownership and Knowledge about Computer.

There is no significant difference among the high school teachers in their Technophobia with respect to the demographic variable - Stream of Subject, Type of Computer and Access to Internet.

There is a significant difference among the high school teachers in the level of attitude towards using Modern Technologies with respect to the demographic variables - Gender, Age, Medium of Instruction, Pattern of Education, Type of School, Teaching Experience, Locality, Computer Ownership, Knowledge about Computer.

There is no significant difference among the high school teachers in the level of attitude towards using Modern Technologies with respect to the demographic variable - Stream of Subject, Type of Computer, and Access to Internet.

There is positive relationship between teaching in Smart Classroom and using Modern Technologies among the high school teachers.

There is positive relationship between teaching in Smart Classroom and the level of technophobia among the high school teachers.

There is positive relationship between level of technophobia and using Modern Technologies for teaching in Smart Classroom and among the high school teachers.
5.4 DISCUSSION

The findings of the various studies conducted in India and Abroad supported the present study and revealed that Influence of Smart Classroom and Information Communication Technological components such as the Computer Aided Instruction, Video Assisted Instruction, Net Based Instruction, Multimedia packages and e-content development showed positive sign on the performance in the Teaching-learning process. In the case experimental study, Achievement scores of the Experimental group showed higher value than Control group. In a Survey type of research study conducted by Dodia (2012) on the Use of ICT in Smart classroom: Required Competency for Teachers, indicated that most of the ICT competencies are required to develop in Teacher-educators. A study conducted by Rajandran (2011) on Teachers’ views on Application of Information Technology in Teaching students indicated that majority of the teachers expressed their views to make use of digital resources. In another study conducted by Anandan & Venkateswaran (2011) on Awareness towards Computer Education among Teacher Trainees revealed that the Teacher Trainees have more awareness towards Computer Education and smart classroom and modern technology. In another study conducted by Ajatha (2010) on Internet Awareness, modern technology and Competence among High School Students and Teachers stated that Mahiti Sindhu Project has significantly enhanced the awareness and competence to use Internet and modern technology among high school students and Teachers who involved in the project. Similar findings were found in the studies conducted by Anandakumar & Anandan (2010); Neeraj Kaushik and Anita Sharma (2010); Noushad Husain (2010); Rajalaksmi & Anandan (2010); Siddique & Abraham (2010); Rafeedali (2009); Azim Premji Foundation and Vidya Bhawan
Society (2008) and so on. In the case of Experimental study conducted on Effectiveness of Computer Integrated Method and modern technology, the results revealed that there is significant difference in Achievement scores between Computer Integrated Method and parallel Method, Jebamalar Anna Jothi (2012). Similar results were found in the related studies of Tholappan & Krishna Kumar (2012); Doddamani Giriyappa Channabasappa (2011); Thiyagu (2006); Dharshana (2005) and Singh (2005). In the experimental study conducted by Leela Gnanalet & Ramaakrishnan (2010) on the Effectiveness of Multimedia Programme in Teaching, they found that there is significant difference between the experimental and parallel group in the post-test mean scores. Similar results were found in the studies conducted by Harendra Singh & Mishra (2009); Nimavathi & Gnanadevan (2009); Subhashini (2009); Jebaraj & Mohansundaram (2008), Amutha (2007) and so on. The Investigator identified some of the studies related to Attitude. The study on Attitude towards ICT and technophobia among Student-teachers conducted by Mirunalini & Anandan (2012) has revealed that opinion on ICT and technophobia among Student-teachers was high. Similar findings were found in Muralidharan (2008) and Dhamija & Panda (2007). It is contradictory to the results found in the study of Gopal (2010) which stated average among the Student-teachers on e-learning. Regarding the study conducted on Teachers Attitude revealed that there is a positive relationship between teacher’s personality, attitude towards profession and teaching effectiveness of secondary school teachers on academic achievement students, Dakshinamurthy (2010). Similar results were found in Narayan Prasad Uniyal and Pandey (2008) and Joy (2007). The similar findings were found in Selvaraju & Pazhanivelu (2011) and Parvathamama & Sharanamma (2010). From the analysis of studies conducted abroad, the results of all the
studies were in support of utilization of Information Communication Technologies, Teaching Attitude and Technophobia. The study investigated by Jacobson Barineka Bina, Obomanu & Baribor Vikoo (2011) on Utilization of Information and Communication Technology for Quality Instruction I Rivers State University of Education Port Harcourt: An Assessment stated that very few lecturers utilize smart class room technology, ICT facilities in their Instruction. This is contradictory to the results obtained by Bee Theng Lau & Chia Hua Sim (2008) states that most of the teachers are positive with the use of ICT in school and they appreciate use of ICT in enhancing teaching and learning. In another study investigated by Sunday (2010) on the Impact of Information and Communication Technology (ICT) and modern technology on Teaching and Learning found out that ICT have great impact on Teaching and learning. Similar results were found in the studies of Nwachukwu Prince Ololube (2006); Whitely Michael (2006); Willem, et.al. (2006) and Sari Juntunen, et.al. (2005). The study related to Teachers’ Attitude conducted by Naser Jamil AlZaidiyeen, Leong Lai Mei & Fong Soon Fook (2010) on Teachers’ Attitudes and Levels of Technology Use in Classrooms revealed that the teachers hold positive attitude towards the use of ICT. Similar result was found out in the case of study conducted by Bulent Cavas, Pinar Cavas, Bahar Karaoglan and Tarik Kisla (2009). However, this result is contradictory to the study conducted by Rengarajan & Senthilnathan (2012) on Teacher-educators towards e-learning. On the study related to the Technophobia conducted by Richard Keith Rogers & Wallace (2011) on Predictors of Technology Integration in Education: A Study of Technophobia and Innovativeness in Teacher preparation indicated that the significant relationships were found between Computers based Technophobia, Innovativeness and Technology Integration.
5.5 RECOMMENDATIONS AND SUGGESTIONS

Only very few studies have been conducted with the high school teacher’s attitude towards smart classroom, level of technophobia and attitude towards using modern technology as the variable. This study is also of that kind

- The level of attitude towards smart classroom, level of technophobia and attitude towards using new technology of the Higher Education teachers can be studied.

- The same study may be conducted with Teachers from Arts and Science Colleges as sample.

- Factor analysis can be made to study the relatively more important factors that contribute towards teaching in smart classroom, technophobia and attitude towards using modern technology in the high school teachers.

- The present study concentrated on the teachers who belonged to Arts, Humanities and Science stream of High School alone. Further studies can be made with different level of teachers.

- The study was conducted among the state Government, Government, Aided and Self-Financing School teachers only. To some extent the future studies can include Central government school teachers from Kendriya Vidyalaya and Jawahar Navodhya Vidhyalayas in order to know the status of central government teacher’s level of attitude towards information, communication technology. We can also know about the available technology resources in the Central Government schools when compared to
State Government schools. Future studies can be done in the different level schools situated in all the regions.

- The similar type of study can be extended to the other taluks of Villupuram district and other districts of Tamil Nadu.

5.6 EDUCATIONAL IMPLICATIONS

The results obtained from the present study helps the researcher to arrive at some educational implications for the techno friendly younger generation of the society.

- The present school curriculum needs to be modified according to the current technology development, so that the teachers and students will top all the fields in which they enter.

- Teacher Education Curriculum must have compulsory Core Paper in Computer Education and Technology Tools.

- There should be the centre for training the teachers at Block Level, Regional Level, State Level in the field of Multimedia, Educational Technology, Information Communication Technology, Interactive White Board technology etc., to facilitate the teaching and learning in a better manner.

- Co-curricular Activities like Computer based Clubs can be created to give knowledge about the computer and technology devices for students as well as teachers.

- Technology based Seminars, Conference, Symposium, Workshops, Refresher Course and Orientation Course can be extended to the teachers to develop technology skills in them.
Sharing of resources from one educational institution and other education institution shall be made to gain awareness and knowledge to use the modern technology devices.

Compulsory Computer Education Programmers should be organized to develop all the skills among the teachers through Extension Services Departments.

The schools can set up Computer Literacy Club to facilitate the Active Learning among the Students.

5.7 CONCLUSION

The present investigation revealed that the high school teachers show a favorable attitude towards smart classroom, favorable attitude towards using new technology while teaching and have a low level of technophobia. So it can be concluded from the investigation that the high school teachers support the new innovations in teaching.

According to Kumar (2009) “Educational Technology is complex, integrated process involving people, procedure, ideas, devices and organization, for analyzing problems involved in all aspects of human learning.” Impression created by visual sense cannot be easily erased. Nearly 80% of the experience that a person gains in this world is received through the sense of sight. Experience and researches have shown that the following figures are generally valid.

- 1.0% through taste
- 1.5% through touch
- 3.5% through smell
- 11.0% through hearing
- 83.0% through sight

Similar is the contention and view expressed through this investigation. It falls well in tune with the above mentioned literature and Statistics. The findings are expected to add to the fund of knowledge already present in this field. It is the humble hope of the investigator that the present study would open doors to further research in the Technology Era.