



Factors Affecting Technophobia Among Secondary School Teachers In Vizianagaram District

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Abstract

Information and Communication Technology (ICT) plays a significant role in the teaching learning process. Teaching has become one of the most challenging professions in our society where knowledge is expanding rapidly and modern technologies are demanding teachers to learn how to use these technologies. The teachers should develop in their students the necessary skills to meet the challenges in the technological world and to prepare them for the 21st century learning needs. However, most of the teachers working in secondary schools have developed a kind of fear or anxiety towards using technology in classroom teaching. This kind of technophobia on the part of the teachers has been proved to influence the student performance negatively. The present study is an attempt to know the perceptions of teachers towards the use of technology in their classroom teaching, to know the causes for their technophobia and suggest measures to overcome this problem. The researchers used a well prepared and standardized questionnaire as the tool for collection of data from a sample of 500 teachers (60 Headmasters and 440 School Assistants) selected from 60 secondary schools located in rural as well as urban areas in Vizianagaram District of Andhra Pradesh using Stratified Random Sampling technique. Mean score values, standard deviations and independent t-tests were used for analysis of data. The findings of the study revealed that the demographic variables – Gender and Medium of instruction offered by the school have no influence on the technophobia of teachers working in secondary schools. However, the teaching experience and the location of the school have a positive influence on the technophobia of teachers. The study suggests that the teachers working in secondary schools should overcome the problem of technophobia; and use ICT tools effectively in order to make their classroom teaching more meaningful and purposeful.

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Key words: Information and Communication Technology (ICT), Technophobia, Teaching learning process, 21st century learning needs.

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Introduction

Education is an effective means of social reconstruction. It is the process of facilitating learning. It helps in the acquisition of knowledge, skills, values, morals, beliefs and habits necessary for the human living. It is the most powerful instruments of social, economic and cultural transformation necessary for the realization of national goals. It cultivates social, moral and spiritual values among people (Report of the Indian Education Commission, 1964-66). It helps in the transmission of culture

from one generation to the other. It helps to increase the productivity, achieve national and emotional integration and accelerate the process of modernization. It seeks to develop the innate capacities of the individuals. Education is a potential tool for creating awareness among people and enabling them to lead a happy and peaceful life.

Education system has a tremendous responsibility to transform a child into a fully developed individual. Over the ages,

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academicians and educationists of the country have been persistently working to develop a system of education which can express and promote its social and cultural identity; and accomplish the requirement of the time. Research studies are being conducted continuously in education sector for the improvement of the existing system; and to establish a system wherein learners can be equipped with necessary skills to face the challenges in the technological world and also to prepare them for the 21st century learning needs. Teaching has become one of the most challenging professions in our society where knowledge is expanding rapidly and modern technologies are demanding teachers to learn how to use these technologies.

Information and Communication Technology (ICT) has made a considerable impact upon almost every aspect of society. A working familiarity with ICT is becoming increasingly important, particularly in business and educational contexts. Computers are now prevalent on university campuses, business organizations and secondary schools; and many of our homes. Thus computers and technology have become an integral part of our life. The advent of technology in the world has changed many folds. Today's schools continue to be challenged by the increased visibility, role and cost of educational technology. Considering current trends in education, a modern classroom would not be complete without computers, software, internet connection, projects and a variety of other hi-tech devices. So, teachers find themselves wandering in a situation, where they have to make use of technology to up date their knowledge and deliver lessons through the use of ICT tools; and on the other side of the picture, they face certain stressful symptoms while dealing with the technological devices in the classroom. Most teachers agree that the tools of technology are very useful in their classroom teaching; but a few use technologies extensively in the classroom. Teachers with anxiety either avoid using technology in the classroom; or if they do not use ICT tools in their teaching, simply pass their anxiety and negative attitude onto their students.

Advancement in technology today is growing in leaps and bounds. It has opened up new avenues

for all generations of people in various fields like education, marketing, commerce etc. To keep up the pace with this advanced technology in education field, the stakeholders need to keep themselves abreast with it. Teachers are one of the most important personnel who need digital literacy because their gained knowledge can transform teaching learning process which emphasize more on connected learning. It enhances professional content, resources and systems to help them improve their own instruction and personalize learning.

Information and Communications Technology (ICT) can impact student learning to a great extent when teachers are digitally literate and understand how to integrate it with curriculum. The teachers should equip themselves with the necessary skills to use technology effectively for the benefit of their students. National Curriculum Framework (NCF)-2005 envisioned: "Integration of Information and Communication Technologies (ICT) into schooling needs serious consideration. Teacher educators, Curriculum developers, Evaluators and other stakeholders will have to redefine their roles to tackle ICT rich environment and harness its full potential for the benefit of the learners". As the teacher plays a significant role in the management of learning, teachers should equip themselves with ICT competencies to design new learning environments using the most modern technologies in the field of education. However, most of the teachers working in secondary schools have developed a kind of fear or anxiety towards using technology in classroom teaching. This kind of technophobia on the part of the teachers is a hindrance in the teaching learning process; and influences student performance negatively. Hence, the teachers should get rid of technophobia; and join the main stream of integrating technology in education to the best of their abilities in their classroom teaching in order to make their students understand the concepts better and face the challenges in the changing scenario.

THE CONCEPT OF 'TECHNOPHOBIA'

Technophobia is an overwhelming fear of advanced technology and complex devices. The word, 'technophobia' is derived from the Greek '*techne*' meaning "art, skill or craft" and '*phobos*' meaning "fear or aversion". It is the opposite of



technophilia, i.e. love for technology. In technophobia, there is a sense of irrational fear, anxiety and a feeling of being uncomfortable with the technological gadgets and their application.

The constant fear and anxiety hinder teachers to accept new advancements in technology. To meet the needs of the new generation learners, teachers need to keep pace with the innovative teaching learning practices using technology effectively. But technophobia becomes a setback in adopting and adapting technology.

CAUSES OF TECHNOPHOBIA

The following are some of the causes of technophobia:

(i) Fear of Mathematics and Science

Those teachers, who had a disinterest towards Science and Mathematics, see technology as an extension of it; and that is why associate it with difficulty and complexity. This attitude among the teachers hinders them avoid the use of technology in the classroom teaching.

(ii) Generation gap

There is demarcation between the digital natives and digital immigrants. The digital immigrants have to take an extra effort to understand and imply technology in their day to day work. These people have a fear to compete with their older generation. This ultimately develops in them a feeling of avoidance of technology altogether.

(iii) Keeping pace with technology

With the advancement of technology, there has been a new application discovered in the field of education. The teachers should keep themselves abreast of these applications. But teachers are engaged in several duties and responsibilities in the schools. Hence, they cannot keep pace with the innovations and advancements in the field of technology.

(iv) Lack of infrastructural and instructional facilities

If the management of the institution does not provide requisite technology gadgets and internet connection to the teachers, they will fail to learn as well as execute. Lack of motivation and support from management also becomes a barrier in teaching learning leading to disinterest

towards the use of technology in the classroom teaching.

(v) Expensive to provide gadgets

Buying and maintaining technology devices incurs a lot of expenditure. If the institution does not spend and support this cost, teachers can not use technology in their teaching. This ultimately develops in them a kind of disinterest towards the use of technology in classroom teaching.

REVIEW OF RELATED STUDIES

A review of the studies carried out in the field of technophobia reported that there are factors such as gender, qualifications, teaching experience and location of the institution influence the technophobia of teachers working in secondary schools to a great extent.

Pankajbhai Suvera and Priteshkumar R. Tailor (2020) investigated to study the effect of sex, area and caste on Computer phobia of Male and Female B.Ed. trainees of Navsari district in Gujarat state. The sample consisted of 360 B.Ed. College trainees. The sample was selected in terms of Gender (male and female), Area (rural and urban) and Type of Students (Arts, Commerce and Science) in equal proportions, using random sampling method. Computer phobia was measured by 'Computer Phobia Scale' developed by Rajasekar & Vaiyapuri Raja. (2005). Mean, Standard Deviation and 't' test were used for analysis of the data. The findings of the study revealed that there is significant difference between Computer phobia of Male and Female B.Ed. trainees. Further, significant differences were observed in the Computer phobia of rural and urban B.Ed. trainees and also with Arts, Commerce and Science B.Ed. trainees.

Parminder Kaur & Rajan Sethi (2019) conducted a comparative study on cyber phobia among Rural and Urban Primary and Secondary School Teachers of Punjab. For this purpose, a sample of 400 teachers was selected randomly; 200 rural teachers (100 primary and 100 secondary) and 200 urban teachers (100 primary and 100 secondary). The investigators used 'cyber phobia scale' developed by Dr. S. Rajasekar and Dr. P. Vaiyapuri Raja (2010). The findings of the study revealed that most of the



secondary school teachers have low cyber phobia. Teachers with high cyber phobia are less in number in primary as well as secondary schools. Further, it is found that Teachers' cyber phobia is significantly associated with the locality of the school.

Ved Parkash (2016) conducted a study on computer phobia among senior secondary school teachers in Solan District of Himachal Pradesh. The investigator used 'computer phobia scale' developed by Dr. S. Rajasekar and Dr. P. Vaiyapuri Raja. A sample of 100 teachers was taken for the present study. After the analysis of data, it was found that female teachers possess more computer phobia as compared to male teachers in Solan District. The study also revealed that Private school teachers possess more computer phobia as compared to Government school teachers. The study also reported that Urban teachers possess more computer phobia as compared to Rural teachers.

Akinyemi, K. (2003) conducted a study on the technophobia among Primary School Teachers in Nigeria. Nigerian primary school teachers have been observed to entertain a phobia towards educational technology by avoiding the use of equipment in teaching. This study was designed to investigate the causes of teachers' apathy towards equipment and to verify possible links with technophobia. Results have yielded only inconclusive evidence of the presence of technophobia in the three-phase study. The 48 subjects demonstrated lack of knowledge of educational technology (equipment) and mere traces of technophobia. Such inconclusiveness may be due to some of the limitations of the study. The subject calls for more rigorous study in the attempt to make educational technology a reality in primary education in Nigeria.

NEED FOR THE PRESENT INVESTIGATION

Information and Communication technology (ICT) has made a considerable impact on almost every aspect of society. A working familiarity with ICT is becoming increasingly important in every field in general and in the field of education in particular. Computers now have become an integral part of our daily life. The advent of technology in education has changed

the way people live. Considering current trends in education, a modern classroom would not be complete without computer software, internet connectivity, projectors and a variety of other hi-tech devices. So teachers find themselves wandering in a situation, where they have to make use of technology in order to make learning more effective. On the other side of the picture, majority of teachers agree that tools of ICT are very useful for them in the classroom; but due to their anxiety, they avoid using them in the classroom. Further they pass on their anxiety and negative attitudes onto their students. Researches indicate low adoption of computer technology in schools, though the institutions provide necessary hardware and software for their users. This kind of situation is very dangerous in the Indian classrooms where teachers have anxiety or phobia to integrate technology in teaching. So there is need to investigate the perceptions of teachers towards the use of technology in their classroom teaching, to know the causes for their technophobia; and suggest measures to overcome this problem. The present investigation is an attempt in this direction.

OBJECTIVES OF THE STUDY

The main objective of the present study is to find out the factors influencing technophobia among teachers working in secondary schools.

The study also aims at finding out the causes of technophobia among secondary school teachers; and know the differences, if any existing in the technophobia of teachers with regard to certain demographic variables such as gender, teaching experience, location of the institution and medium of instruction offered by the school.

HYPOTHESES OF THE STUDY

The following hypotheses have been formulated for the present investigation:

- (i) There is no significant difference in the technophobia of male and female teachers working in secondary schools.
- (ii) There is no significant difference in the technophobia of secondary school teachers with an experience of less than 10 years and those with 10 years and above.



- (iii) There is no significant difference in the technophobia of teachers working in rural and urban secondary schools.
- (iv) There is no significant difference in the technophobia of teachers working in English and Telugu medium secondary schools.

LIMITATIONS OF THE STUDY

The study is limited to find out the influence of four demographic variables, viz., gender, teaching experience, location of the institution and medium of instruction offered by the school on the technophobia of teachers working in secondary schools. Further, the study is confined to 500 secondary school teachers (60 Headmasters and 440 School Assistants) working in 60 secondary schools located in Vizianagaram district of Andhra Pradesh.

METHODOLOGY

(a) Method of Research

Since the present study involves collecting data with the help of survey, the investigators used Descriptive survey method for the present investigation.

(b) Sample

The sample of the study consisting of 500 teachers (60 Headmasters and 440 School Assistants) has been selected from 60 secondary schools located in Vizianagaram district of Andhra Pradesh using Stratified Random Sampling technique. In this method, no significant group is left unrepresented and this gives a greater control over the sample. Here, in addition to randomness, stratification introduces a secondary element of control as a means of increasing precision and representativeness.

(c).Research Tool

The researchers used a well prepared questionnaire consisting of 46 items as the tool of research for the present investigation.

(d) Administration of the tool

The tool was initially administered to 50 teachers (10 Headmasters and 40 School Assistants) under Pilot study. The measures of reliability, validity and objectivity of the tool have been calculated. Further, the researchers conducted item analysis for the items included

in the tool. Out of 46 items selected for the tool, the discriminating power of 40 items has been found positive and is negative in respect of 6 items. The items whose discriminating power is negative have been removed; and the final tool consists of 40 items, which are foolproof in all respects. The final tool has been administered to 500 teachers (60 Headmasters and 440 School Assistants) working in 60 Secondary Schools of Vizianagaram district in Andhra Pradesh.

STATISTICAL INTERPRETATION OF DATA

The data collected has been analyzed and interpreted using different statistical techniques such as Mean score values, Standard Deviations and t-ratios; and are presented in the following table.

Table showing t-values of different variables relating to the perceptions of teachers working in Secondary schools towards technophobia

S. No.	Variable	N	Mean	S.D.	t-ratio	Result	
1	Gender	Male	240	111.08	28.07	0.46*	*Not Significant at 0.05 and 0.01 levels
		Female	260	109.88			
2	Teaching Experience	Less than 10 yrs	320	107.12	27.32	2.82*	*Significant at 0.05 and 0.01 levels
		10 yrs. & above	180	114.94			
3	Location of the institution	Rural	280	113.86	28.41	2.822*	*Significant at 0.05 and 0.01 levels
		Urban	220	106.41			
4	Medium of Instruction	English	160	110.75	31.06	0.28*	*Not Significant at 0.05 and 0.01 levels
		Telugu	340	111.56			

FINDINGS OF THE STUDY

On the basis of the analysis and interpretation of data, the researchers have arrived at the following findings and drawn the conclusions.

1. There is no significant difference in the technophobia of male and female teachers working in secondary schools
2. There is significant difference in the technophobia of secondary school teachers with an experience of less than 10 years and those with 10 years and above. Secondary school teachers with an experience of 10 years and above have exhibited a higher level of technophobia as compared to their counterparts with an experience of less than 10 years.



3. There is significant difference in the technophobia of teachers working in rural and urban secondary schools.

The secondary school teachers working in rural areas have exhibited higher levels of technophobia as compared to their counterparts working in urban areas.

4. There is no significant difference in the technophobia of teachers working in English and Telugu medium secondary schools.

CONCLUSIONS

From the findings of the study, it is concluded that:

- (i) Gender and Medium of instruction offered by the school have no influence on the technophobia of teachers working in secondary schools.
- (ii) Teachers with an experience of 10 years and above exhibited a higher level of technophobia as compared to their counterparts with an experience of less than 10 years.
- (iii) Teachers working in rural secondary schools exhibited a higher level of technophobia as compared to their counterparts working in urban secondary schools.

EDUCATIONAL IMPLICATIONS

- (i) The study would help the teachers identify the difficulties faced by them in the use of ICT tools effectively in classroom teaching.
- (ii) The present study helps the teachers working in secondary schools to get rid of their technophobia in using electronic gadgets.
- (iii) The study would help the secondary school students to have a better understanding of the school subjects when their teachers integrate technology in school curriculum.
- (iv) The study would help the government and policy makers to take necessary steps for the effective integration of ICT in school curriculum.
- (v) The study would help the Academic Organizations like SCERTs, IASEs and the State Departments of Education to take necessary steps to provide orientation to the teachers working in secondary schools in the effective use of ICT tools in classroom teaching.

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