RABINDRABHARATI JOURNAL OF PHILOSOPHY
ISSN : 0973-0087

TECHNO-PEDAGOGICAL COMPETENCY OF HIGHER SECONDARY SCHOOL TEACHERS IN RELATION TO AWARENESS ON USAGE OF TECHNOLOGY IN CLASSROOMS

R. Suhirtha Rani, Ph. D Research Scholar, School of Education, Vels Institute of Science, Technology & Advanced Studies (VISTAS), Pallavaram, Chennai, Tamil Nadu.suhirtharani29@gmail.com

Dr.S. Karthiyayini, Research Supervisor, Associate Professor, School of Education, Vels Institute of Science, Technology &Advanced Studies (VISTAS), Pallavaram, Chennai, Tamil Nadu.

ABSTRACT:

This study is an attempt to find out the Techno-pedagogical competency of higher secondary school teachers in relation to their awareness on usage of Technology in Chengalpattu District.Hence this study is concerned with higher secondary school teachers.125 higher secondary school teachers were selected as sample for this study.Techno-pedagogical competencyscale developed by Dr.S.Rajasekar and K. Sathiya Raj (2013) and Awareness on usage of Technology questionnaire was developed by the investigator were used. Findings revealed that there exists significant relationship between techno-pedagogical competency and awareness on usage of technology in classrooms. Also, no significant difference found in techno-pedagogical competency and awareness on usage of technology in classrooms with respect to gender, subjects taught and type of institution.

KEYWORDS:

Techno-pedagogy, Awareness, Technology, Competency, Usage of Technology in Classroom.

INTRODUCTION:

Techno pedagogical Competency is the ability to create and use a particular field of technology effectively, comfortably using technology tools, collaborating online, problem-solving, and exploring new advancement in instructional technology.It is the art of integrating sound pedagogic principles of teaching/learning with the use of technology. It refers to weaving the techniques of the craft of teaching into the learning environment itself.

Awareness on usage of technology means the Technological awareness of teachers towards educational or instructional technology in the field of education with rightly practiced, information and communication. Technology holds great promise to improve teaching and learning.Technology can help encourage active participation in classroom. Using devices like a computer, tablet, or other type of technology inthe classroom can help turn traditionally dull subjects into interactive and funactivities.

NEED AND SIGNIFICANCE OF THE STUDY:

Technology in the classroom provides teachers with more tools to support students. In addition to resources like textbooks and worksheets, technology equips educators with various tools to help students develop a better understanding of the material.

Technology provides students with access to countless online resources, encouraging them to carry out research and therefore become more independent. It also simplifies learning by making concepts more digestible, for example through an instructional video. It is important to recognize that there are various learning styles and traditional education may not be catering to them all.

OBJECTIVES OF THE STUDY:

1. To find out whether any relationship exist between Techno pedagogical competency and Awareness on usage of Technology among higher secondary school teachers.
2. To find out whether any difference exists in Techno pedagogical competency and Awareness on usage of Technology between Male and Female teachers.

3. To find out whether any difference exists in Techno pedagogical competency and Awareness on usage of Technology with respect to the subjects taught by the teachers.
4. To find out whether any difference exists in Techno pedagogical competency and Awareness on usage of Technology with respect to the type of institution

HYPOTHESIS OF THE STUDY:

1.There is significant relationship between Techno pedagogical competency and Awareness on usage of Technology among higher secondary school teachers.

2. There is no significant difference in Techno pedagogical competency and Awareness on usage of Technology between Male and Female teachers.

3. There is no significant difference in Techno pedagogical competency and Awareness on usage of Technology with respect to the subjects taught by the teachers.

4. There is no significant difference in Techno pedagogical competency and Awareness on usage of Technology with respect to the type of institution.

METHODOLOGY:

In the present study normative survey method is employed. The sample comprised of 125 higher secondary school teachers in Chengalpattu district. The sample is drawn by random sampling technique.

TOOLS USED IN THE STUDY:

- Techno pedagogical competency of higher secondary school teacher's questionnaire constructed and standardized by Dr.S. Rajasekar and K. SathiyaRaj, Department of education, Annamalai Nagar. In the year 2013.
- Awareness on usage of technology questionnaire has been developed by the investigatorand the reliability value of the tool was found to be 0.813. Hence the tool possesses high reliability and validity.
-

ANALYSIS OF DATA:

HYPOTHESISI: There is significant relationship between Techno pedagogical competency and Awareness on usage of Technology amonghigher secondary school teachers.

Table 1: Showing the Relationship between Techno-pedagogical competency and awareness on usage of technology among higher secondary school teachers

Variable	Techno-Pedagogical Competency	Awareness on Usage of Technology
Techno-Pedagogical Competency	1	0.385**
Awareness on Usage of Technology	-	1

** Significant at 0.01 level.

From the above table value, it is inferred that there exists significant relationship between Techno-pedagogical competency and awareness on usage of technology in classrooms among higher secondary school teachers. Hence, the formulated hypothesis that there is significant relationship between Techno-pedagogical competency and awareness on usage of technology among higher secondary school teachers is accepted.

HYPOTHESIS II: There is no significant difference between male and female higher secondary school teachers in Techno-pedagogical competency and awareness on usage of technology in classrooms.

Table 2: Showing the mean difference between male and female higher secondary school teachers in Techno-pedagogical competency and awareness on usage of technology in classrooms

Variables	Gender				t value	P value
	Male (N=26)		Female (N=99)			
	Mean	SD	Mean	SD		
Techno-Pedagogical Competency	133.04	9.747	128.65	17.579	1.687	0.224
Awareness on Usage of Technology	199.58	20.950	204.46	22.497	0.999	0.320

From the values presented in the above table, it is observed that there is no significant difference between male and female higher secondary school teachers in Techno-pedagogical competency and awareness on usage of technology in classrooms. Hence, the formulated hypothesis is accepted. It is observed that both male and female higher secondary school teachers are similar in Techno-pedagogical competency and awareness on usage of technology in classrooms.

HYPOTHESIS III: There is no significant difference between the subjects taught by higher secondary school teachers in Techno-pedagogical competency and awareness on usage of technology in classrooms.

Table 3: Showing the Mean Difference between subjects taught by higher secondary school teachers in Techno-pedagogical competency and awareness on usage of technology in Classrooms

Variables	Subjects Taught				t value	P value
	Arts(N=63)		Science (N=62)			
	Mean	SD	Mean	SD		
Techno-Pedagogical Competency	131.08	15.598	128.02	17.023	1.048	0.296
Awareness on Usage of Technology	206.57	20.328	200.27	23.680	1.596	0.113

From the values presented in the above table, it is observed that there is no significant difference between the subjects taught among higher secondary school teachers in Techno-pedagogical competency and awareness on usage of technology in classrooms. Hence, the formulated hypothesis is accepted. It is observed that both Arts and Science higher secondary school teachers are similar in their Techno-pedagogical competency and awareness on usage of technology in classrooms.

HYPOTHESIS IV: There is no significant difference among higher secondary school teachers in Techno-pedagogical competency and awareness on usage of technology in classrooms based on type of institution.

Table 4: Showing the Mean Difference among higher secondary school teachers in Techno-pedagogical competency and awareness on usage of technology in classrooms with respect to type of institution

Variables	Type of Institution						F value	P value
	Government (N=74) [1]		Govt. Aided (N=38) [2]		Self-financing (N=13) [3]			
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
Techno-Pedagogical Competency	130.11	11.894	127.74	10.289	131.77	12.875	0.394	**0.675**
Awareness on Usage of Technology	202.12	20.251	204.61	21.015	207.62	22.184	0.409	**0.665**

From the 'F' values presented in the above table, it is observed that there is no significant difference among the teachers working in Government, Government Aided and Self-financing higher secondary schools in Techno-pedagogical competency and awareness on usage of technology in classrooms.

Hence, the formulated hypothesis that there is no significant difference among higher secondary school teachers in Techno-pedagogical competency and awareness on usage of technology in classrooms based on type of institution is accepted. It is observed that higher secondary school teachers working in Government, Government Aided and Self-financing schools are similar in their Techno-pedagogical competency and awareness on usage of technology in classrooms.

CONCLUSION:

The evolution of technology has impacted every aspect of our lives from banking to the way that we communicate with each other. Technology not only provides students with access to countless online resources, but also aids them in the learning process. Teaching is now more than a lecturer in front of a blackboard and technology has been an integral part of its development. It has transformed education and the way that people learn and retain information. Therefore, its role in the future of education is a fundamental part in maintaining the growth and progression of today's economy.

Technology in the Classroom provides teachers with more tools like textbooks and worksheets which can help students to develop a better understanding of the content. Teachers' use of technology can empower them to leverage an array of resources to provide more focused, and in some cases more personalized, learning to students. Although there is a vast amount of research about the impact of digital technologies on teaching and learning, the results are hardly conclusive.

REFERENCES:

- The Relationship between Pre-Service Teachers' Cognitive Flexibility Levels and Techno-Pedagogical Education Competencies
  Öztürk, Gülcan; Karamete, Aysen; Çetin, Gülcan
  International Journal of Contemporary Educational Research, v7 n1 p40-53 Jun 2020
- The Relationship between Individual Innovativeness and Techno-Pedagogical Levels of School Administrators and Teachers
  Sentürk, Sener; Uçar, Hatice Tuncer; Gümüs, Irfan; Diksoy, Ilhami
  Education Quarterly Reviews, v4 spec iss 1 p556-570 2021

- The Factors Affecting Techno-Pedagogical Competencies and Critical Thinking Skills of Preservice Mathematics Teachers
  Yildiz, Avni
- Jeyaraj, I (2020) Techno pedagogical skills among the secondary level Teacher educators
- Journal of Computer Assisted Learning, v37 n4 p953-965 Aug 2021
- Soni Mayank, H (2017) Information and communication technology education in secondary teachers training colleges competencies attitudes and needs
- Vivek Sharma (2021) A Comparative Study of Attitude of Pupil Teachers Towards The Effect of Information and Communication Technology in Teacher Education
- https://www.concordia.edu/blog/3-reasons-why-teachers-need-technology-in-the-classroom.html#:~:text=Technology%20in%20the%20Classroom%20Provides,better%20understanding%20of%20the%20material.
- https://www.onlinebusinessschool.com/importance-of-technology-in-education/
- https://www.worldbank.org/en/topic/edutech/brief/empower-reachers-reimagining-human-connections-technology-and-innovation-in-education-at-the-world-bank