TEACHER EDUCATORS' TECHNO-STRESS IN THE UTILISATION OF DIGITAL DEVICES IN TEACHING

Research Paper

ABSTRACT

Techno-stress is an adaptive disorder caused by lack of ability to use new technology in the teaching and learning process. Also, techno-stress is the pervasive use of digital technologies in modern society (La Torre et al., 2019). This study aimed to ascertain the teacher educators 'techno-stress in utilising digital devices in teaching. The investigator adopted a normative survey method. The researcher selected 86 teacher educators as the sample (Convenientsampling technique) from the Namakkal district of Tamil Nadu. The investigator constructed and validated the techno-stress in the utilisation of digital devices in teaching, which was used for data collection. The findings of the studyrevealed thatteacher educators have a high level of techno-stress in the utilisation of digital devices in teaching. Moreover, there is no significant difference in techno-stress in the utilisation of digital devices in teaching among teacher educators with respect to their gender, locality of the teacher educators, medium of instruction, computer knowledge and digital devices used in teaching. Finally, there is a significant difference in techno-stress in using digital devices in teaching among teacher educators with respect to their subject stream. Therefore, teacher educators should use digital devices for effective teaching, as they help to rectify techno-stress.

Keywords: Teacher Educators, Techno-stress, Digital devices, Utilisation, Teaching.

Introduction

Techno-stress refers to the physical, emotional and mental strain caused by the use of technology, especially in the workplace or daily life activities. Techno-stress is also known as digital stress. Techno-stress consists of common techno-stress in the utilisation of digital devices in teaching physical characteristics such as headaches, eye strain, fatigue, sleep disturbances, and musculoskeletal problems; emotional characteristics, namely anxiety, irritability, frustration and helplessness; cognitive characteristics such as difficult in concentrating, memory problems, lack of motivation and information overload and the behaviouralcharacteristics like multitasking, avoiding, escapism and compulsive checking.

Objectives of the study

To find out the level of techno-stress in the utilisation of digital devices in teaching among teacher educators.

To find out the significant difference in techno-stress in the utilisation of digital devices in teaching among teacher educators with respect to their following categorical

variables such as gender, locality of the teacher educators, medium of instruction, computer knowledge and digital devices used in teaching.

To find out the significant difference in among teacher educators with respect to their stream of subject.

Hypotheses of the study

The level of techno-stress among teacher educators in the utilisation of digital devices in teaching is high.

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Research and Reflections on Education ISSN 0974 - 648X (P) Vol. 23 Jan - Mar 2025 No. 1 2 There is no significant difference in techno-stress in the utilisation of digital devices in teaching among teacher educators with respect to their following categorical variables such as gender, locality of the teacher educators, medium of instruction, computer knowledge and digital devices used in teaching.

There is no significant difference in techno-stress in the utilisation of digital devices in teaching among teacher educators with respect to their stream of subject.

Methodology of the study

The study employed a descriptive survey method (Quantitative approach) to describe the teacher educators' techno-stress in the utilisation of digital devices in teaching.

Population, sample and sampling technique

The research population consists of teacher educators teaching in the College of Education in the Namakkal district of Tamil Nadu, India. The 86 teacher educators were selected through the convenience sampling technique, and the data was collected from them.

Research instrument of the study

For the study, the investigator used a questionnaire (Likert type – Four-point Scale) for measuring the "technostress in the utilisation of digital devices in teaching". This tool was developed by the researcher and research supervisor.

Data collection and statistical analyses of the study

For the study, the investigator collected data from teacher educators who were teaching in the Colleges of Education in the Namakkal district of Tamil Nadu, India.

This study has adopted both statistical analyses, descriptive (mean and SD)and inferential analyses ('t' and 'F' test).

Testing of hypotheses

Hypothesis 1The level of techno-stress of teacher educators in the utilisation of digital devices in teaching.

Table 1

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Level of techno-stress of teacher educators in the utilisation of digital devices in teaching

Variables	Sub Variables	Ν	Mean	SD
Condon	Male	38	96.13	5.43
Gender	Female	48	96.4	5.39
Locality of	Rural	54	96.56	5.61
Educator	Urban	32	95.81	5.01
Mediumof	Tamil	44	95.86	5.26
Instruction	English	42	96.71	5.53
Computer	Yes	55	95.95	5.63
Knowledge	No	31	96.87	4.95
Digital	Yes	35	96.51	4.84
Devices	No	51	96.12	5.76
	Language	16	94.44	5.43
Stream of Subject	Arts	34	94.29	5.63
	Science	36	98.97	5.86
	Average	N=86	96.28	5.38

From table (1), it is inferred that the calculated mean value of 96.28 is greater than the tablet value of midscore 60 of maximum score (120). Consequently, the calculated mean value is high. Therefore, the result concluded that teacher educators have a high level of techno-stress in the utilisation of digital devices in teaching.

Hypothesis 2 : There is no significant difference in techno-stress in the utilisation of digital devices in teaching among teacher educators with respect to their following categorical variables such as gender, locality of the teacher educators, medium of instruction, computer knowledge and digital devices used in teaching.

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Table2

Significant difference in techno-stress in the utilisation of digital devices in teaching among teacher educators with respect to their categorical variables

Variables	Sub variable s	N	Mean	Sd	't' - value	ʻp'- value
Candan	Male	38	96.13	5.43	0.22	0.82
Gender	Female	48	96.4	5.39	0.23	
Legelity	Rural	54	96.56	5.61	0.64	0.53
Locality	Urban	32	95.81	5.01	0.04	
Mediumof	Tamil	44	95.86	5.26	0.72	0.47
Instruction	English	42	96.71	5.53	0.73	
Computer	Yes	55	95.95	5.63	0.70	0.43
Knowledge	No	31	96.87	4.95	0.79	
Digital	Yes	35	96.12	5.76	0.35	0.73
Devices	No	51	96.51	4.84		

From the table (2), it is inferred that the calculated 't' values 0.23 (gender), 0.64 (locality of the teacher educators), 0.73(medium of instruction), 0.79 (computer knowledge), 0.35 (digital devices used in teaching)are lower than the table value (1.96) at 0.05 level of significant. Consequently, the null hypothesis is accepted. Hence, there is no significant difference in techno-stress in the utilisation iii. of digital devices in teaching among teacher educators with respect to their following categorical variables such as gender, locality of the teacher educators, medium of instruction, computer knowledge and digital devices used in teaching.

Hypothesis 3 : There is no significant difference in techno-stress in the utilisation of digital devices in teaching among teacher educators with respect to their stream of subject.

Table 3



Significant difference in technostress in the utilisation of digital

devices in teaching among teacher educators with respect to their stream of subject

Variables	Sub Variables	Ν	Mean	Sd	'F' - Value	'P' - Value
	Language	16	94.44	5.43		
Stream of Subject	Arts	34	94.29	5.63	9.28	0
Subject	Science	36	98.97	5.86		

Table (3) shows that the calculated 'F' value(9.28)(stream of the subject) is greater than the tabulated value (2.96) at a 0.05 level of significance. Hence, the null hypothesis is not accepted. Therefore, there is a significant difference in techno-stress in the utilisation of digital devices in teaching among teacher educators with respect to their stream of subject.

Findings of the study

The statistical analysis revealed the following:

- i. The teacher educators have high level of techno-stress in the utilisation of digital devices in teaching.
- ii. There is no significant difference in techno-stress in the utilisation of digital devices in teaching among teacher educators with respect to gender, locality of the teacher educators, medium of instruction, computer knowledge and digital devices used in teaching.
- ii. There is a significant difference in techno-stress in the utilisation of digital devices in teaching among teachereducators with respect to their stream of subjects.

Discussion and conclusion

The results showed that teacher educators have a high level of techno-stress in the utilisation of digital devices in teaching. Also, the inferential analysis revealed that there was no significant difference in the utilisation of digital devices in teaching among teacher educators with respect to gender. This finding coincides with the findings of Cetin and Bulbul (2017) and Akgun(2019).

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Finally, the present study showed that the stream of subject-wise analysis indicated that there was a significant difference in the utilisation of digital devices in teaching among teacher educators. Then, a stream of subject-wise analysis determined that the science discipline teacher educators 98.97 are having more techno-stress in the utilisation of digital devices in teaching than language discipline teacher educators (94.44) and arts discipline teacher educators (94.29)

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