DIGITALEDUCATIONREVIEW

A simulation study of preservice STM teachers' technostress as related to supposed utility, attitudes towards portable technology and continuance intents to use portable technology

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ABSTRACT

The speedy advancement of evolving technologies has made the integration of portable technology into preservice science, technology, and mathematics (STM) teachers' teaching practices a must to enhance learning goals and improve their professional development. However, preservice STM teachers are unenthusiastic in incorporating portable technology into instruction when they go out on practicum as a result of stress associated with technology called technostress. While numerous investigations have been carried out on the motives and imports of stress associated with technology in diverse milieus, no study has been carried out on technostress, supposed utility and dispositions towards portable technology as predictors of continuance intentions to use portable technology in Nigeria. In this study, three research questions were answered through the implementation of a correlational research design. 480 preservice STM teachers from 4 universities in southwest Nigeria formed the sample. A reliable and valid survey of 13 items was deployed for the collection of the study data. The data were coded and its analysis done via SPSS version 20 involving standard deviation, mean, Pearson product-moment correlation and multiple regression analysis at 5% level of significance. The study established that the preservice STM teachers recorded low technostress, high attitudes towards portable technology, high supposed utility and high continuance intents to utilize portable technology. Also, the study affirmed the numerically momentous associations amid technostress, attitudes towards portable technology, supposed utility and continuance intents to deploying portable technology among preservice STM teachers. The construct of technostress, attitudes towards portable technology and supposed utility made numerically weighty contributions of 85.7% to the forecast of continuance intents to use portable technology. In line with the study findings, it was supported that the STM teacher educators should integrate portable technology into the teacher training programmes of preservice STM teachers to stimulate the use of portable technology in their studies. Preservice STM teachers and teacher educators could benefit from the results of this study.

KEYWORDS: Technostress; supposed utility; attitudes towards portable technology; continuance intents to use mobile technology; preservice science; technology teachers; mathematics teachers

1 ARTICLE STRUCTURE

The swift revolution and evolving novel advances of portable technologies have numerous paybacks for people and cultures. For instance, portable technologies can decrease the requisite time to complete particular jobs and improve efficiency among final consumers. Reception and implementation of a novel technology is contingent mostly on its usefulness and efforts required for its usage (Kim & Park, 2018). The awareness of paybacks of utilizing portable technology for final consumers is a major dynamic revealed in famous prototypes of reception technology including Technology Acceptance Model (TAM), originated by Davis (1989), and Unified Theory of Acceptance and Use of Technology model (UTAUT), postulated by Venkatesh et al. (2003). The TAM prototype uses the supposed utility of technology as a vital element prior to its reception and utilization (Davis, 1989). In line with the study carried out by Khlaif (2018), teachers utilize portable technology for educational purposes only if it will benefit their practice and improve their instructional enactment in the classroom.

The Expectation Confirmation Model (ECM) employs principles for comprehending the continuance utilization of evolving technology. It hypothesizes that gratification is reliably affected by disapproval of principles and supposed act, and is ramblingly affected by prospects and supposed act through a mediational association which moves via the disapproval construct (Steelman & Soror, 2017). The essential function of the utility of portable technology in its reception and implementation has been authenticated by numerous prior scholarly works (Khlaif, 2018; Leong et al., 2018; Oladipo, 2013; Yang & Wang, 2019). It is evident that continuance intents influence utilization of portable technology (Cheng & Yuen, 2018) as tutors are inspired to adopt portable technology to increase their productivity and accomplish their learning objectives (Domingo & Gargante, 2016; Oladipo, 2013). Nevertheless, despite the merits of portable technology in teaching, its integration by teachers is far below the required standard envisaged by school management (Goh & Sigala, 2020; Oladipo, 2013). In some previous studies, supposed utility of technology incorporation and its continuance usage were not weighty in influencing technology incorporation (Moorthy et al., 2019). Portable technology has a constructive influence on enhancing students' rendezvous in learning tasks and smoothing admittance to digital properties (Domingo & Gargante, 2016). A major objective of adopting new technology in schools is to reduce the everyday problems amid tutors and decrease the time needed to complete teaching tasks. Deploying a new technology could upsurge a tutor's job, particularly if the technology requires time to master and incorporate it into

training (Wang, Tan & Li, 2020). Currently, technology adoption is described as the utilization of technology for the very first time while technology acceptance is defined as the sustained utilization of technology (Kollmann, 2004).

Presently in this study, portable technology is described as a small device that has editing functionality, handy, and has an Internet connection. In the Nigerian educational system, such mobile technologies like tablets and mini laptops have been introduced (Awofala et al., 2021). In spite of the numerous merits of utilizing portable technologies in education context around the world, Nigerian teachers are indisposed in utilizing them in their teaching practices (Adeniyi & Oladipo, 2017; Awofala et al., 2021). Prior investigations have shown that novel technologies entwine tutors' unrestricted time with their work time and distorts the discrepancy amid job and domestic life (Khlaif, Sanmugam, & Ayyoub, 2022; Khlaif, 2018; Salazar-Concha, Ficapal-Cusi, Boada-Grau & Canacho, 2021). The absence of precincts amid work and family lives via functioning virtually could escalate technostress among workers, together with panic, exhaustion, and heaviness (Abilleira, Rodicio-Garcia, Rios-de Deus, & Mosquera-Gonzalez, 2021; Joseph, Thomas, & Nero, 2021; Oksanen et al., 2021). Studies have shown that technostress is an emotional condition that can be used to assess technology utility (Steelman & Soror, 2017) in the classroom and it is vital to comprehend the role of preservice teacher technostress in integration of portable technology in the classroom (Khlaif etal., 2022). In the present study, technostress is described as stress associated with individuals using a new or updated technology (Tarafdar, Maier, Laumer & Weitzel, 2020). It is evident that teachers could experience varying levels of technostress in their usage of developing technologies like portable technology and instructional and public broadcasting podiums (Joo et al., 2018). Majority of the investigations on the adverse impacts of technostress have centred on a business or industrial work milieu (Fuglseth and Sørebø, 2014; Jena, 2015; Tarafdar et al., 2015; Hsiao, 2017; Marchiori et al., 2019; Salanova, 2020); however, an increasing amount of research is currently being focused on the educational context (Özgür, 2020; Abilleira et al., 2020).

Clearly, few studies exist that examine continuance intents to adopting portable technology and the role of technostress in continuance intents of using portable technology (Panisoara et al., 2020; Verkijika, 2019), and this is a need for impending investigation (Al-Emran, Arpaci & Salloum, 2020). Thus, in this study technostress is introduced as an emotional state that can elucidate the role of supposed utility of portable technology incorporation into pedagogical discourse in the Nigerian milieu, from the viewpoints of preservice tutors (Khlaif etal., 2022). Evidence suggests the negative influence of technostress amid tutors utilizing a novel technology (Joo et al., 2018) and studies have shown that teachers restrict their utilization of new technology as a result of their experience of aggravated echelons of technostress (Panisoara et al., 2020; Yang & Wang, 2019). In Nigeria, shortage of prior studies exists that examined technostress, supposed utility and attitudes towards portable technology as predictors of continuance intents to use portable technology amid preservice science, technology and mathematics teachers and this is the purpose of this study. More so, previous studies have used TAM to forecast operator intent to deploy technology by linking supposed utility and ease of use at the expense of technostress integration. However, this study result is expected to add to the body of knowledge and literature and elucidate the association amid diverse dynamics of supposed utility, continuance intents, attitudes toward portable technology and technostress. The results could augment the creation of expert training programmes on incorporation of portable technology amid preservice STM teachers in Nigeria.

1.1 Research Questions

The following research questions were stated for this study.

RQ1. What is the level of preservice STM teachers' (a) technostress (b) supposed utility of portable technology (c) continuance intents to use portable technology and (d) attitudes towards portable technology?

RQ2. What is the relationship between preservice STM teachers' supposed utility, continuance intents to use portable technology, attitudes towards portable technology and technostress?

RQ3. What is the contribution of preservice STM teachers' technostress, supposed utility, and attitudes towards portable technology to the prediction of continuance intents to use portable technology?

2 METHOD

2.1 Research Design

This investigation was carried out using the quantitative procedure of a correlational research design (Awofala, Lawal, Arigbabu & Fatade, 2022).

2.2 Participants

The participants were recruited using a convenience sampling technique because it allows the collection of information speedily and easily with minimum expenses (Emerson, 2015). Quantitative research is more amenable to convenience sampling (Etikan, Musa & Alkassim, 2016). The study sample consisted of senior preservice STM teachers in Nigeria with diverse backgrounds, teaching subjects and cumulative grade point average. The major benchmarks in selecting the participants were being preservice STM teachers, who own portable technologies and use them for educational purposes. The purpose of the study and the criteria for selecting the participants were explained to them. All participants were communicated that their involvement in the study was intended and anonymous. The participants consisted of 480 seniors prospective STM teachers (230 females and 250 males) from four degrees awarding institutions in Southwest Nigeria. The age of the participants ranged from 19 to 28 years ($Mean_{age}$= 21.5 years; SD=1.6 years).

2.3 Instrument

One questionnaire developed along the TAM theoretical framework was used for the collection of data for the study. The questionnaire consisted of two sections: participant demographic information which centred on gender, course of study and age and items of the constructs of the model. The survey deployed consisted of 13 items related to four constructs and its items were culled and adopted from a recent study that examined the espousal, reception, and continuance intents of diverse high-tech creativities, as well as mobile technology (Khlaif et al., 2022). The questionnaire used a 5-Likert scale ranging from 1 ''strongly disagree'' to 5 ''strongly agree.'' Table 1 below showed that the internal reliabilities for all the constructs were between 0.88 and 0.94 as computed using the

Cronbach alpha and these reliabilities were accepted (Khlaif et al., 2022). It should be noted that the adopted ítems of the questionnaire were pilot-tested on a small sample of 80 preservice teachers not part of the main study sample in order to determine the scale reliability.

Construct	Cronbach's Alpha	Composite reliability	AVE
Supposed utility (3 Items)	0.92	0.93	0.89
Attitudes toward technology (3 Items)	0.88	0.89	0.83
Continuance intents (4 Items)	0.89	0.91	0.81
Technostress (3 Items)	0.94	0.95	0.85

Table 1 Cronbach's Alpha, composite reliability and average variance extracted (AVE)

2.4 Procedures

The prospective STM teachers were encouraged to fill the questionnaire after appropriate approvals had been given and informed consent returned. The investigators and four research subordinates helped in the administration of the questionnaire to the target participants. Voluntary participation and anonymity were encouraged and no one was penalized for pulling out of the study. The data collection procedure took two weeks.

2.5 Data analysis

The information collected through the questionnaire were coded on the SPSS version 20 and the three research questions for the study were answered using standard deviation, mean, frequency, Pearson product-moment correlation coefficient and multiple regression analysis. All statistical tests were carried out at 5% level of significance.

3 RESULTS

3.1 Research Question One

What is the level of preservice STM teachers' (a) technostress (b) supposed utility of portable technology (c) continuance intents to use portable technology and (d) attitudes towards portable technology?

The attainable scores in the technostress ranged from 3 (3×1) to 15 (3×5) and the mid-point is 9. Any score above 9 shows a high technostress, any score below 9 shows a low technostress while any score equals 9 shows a moderate technostress. Out of the 480 preservice STM teachers examined, 285 (59%) pooled a score lower than 9 (M =7.25, SD=2.32, 95%CI 7.17–8.11) and 195 (41%) pooled a score higher than 9 (M =10.96, SD=2.07, 95%CI 10.28–11.07). No participants recorded a score equal to 9 meaning that there was no moderate level of technostress. The entire sample mean is (M =8.12, SD=2.02, 95%CI. 8.23–8.89). This outcome reveals that on the regular, the prospective STM teachers involved had a low level of technostress. The attainable scores in the supposed utility ranged from 3 (3×1) to 15 (3×5) and the mid-point is 9. Any score above 9 shows a high supposed utility, any score below 9 shows a low supposed utility while any score equals 9 shows a moderate supposed utility. Out of the 480 preservice STM teachers examined, 160 (33%) pooled a score lower than 9 (M =7.01, SD=2.02, 95%CI 6.87–8.81) and 320 (67%) pooled a score higher than 9 (M =13.23, SD=3.42, 95%CI 12.56–14.09). No participants recorded a score equal to 9 meaning that there was no moderate level of supposed utility. The entire sample mean is (M =11.56, SD=2.46, 95%CI. 10.23–13.72). This outcome reveals that on the regular, the prospective STM teachers involved had a high level of supposed utility.

The attainable scores in the attitudes towards portable technology ranged from 3 (3×1) to 15 (3×5) and the mid-point is 9. Any score above 9 shows a high attitude toward portable technology, any score below 9 shows a low attitude while any score equals 9 shows a moderate attitude toward portable technology. Out of the 480 preservice STM teachers examined, 130 (27%) pooled a score lower than 9 (M =7.46, SD=2.52, 95%CI 6.91–8.93) and 350 (73%) pooled a score higher than 9 (M =13.94, SD=3.55, 95%CI 12.66–14.23). No participants recorded a score equal to 9 meaning that there was no moderate level of attitude toward portable technology. The entire sample mean is (M =11.87, SD=2.78, 95%CI. 10.45–13.89). This outcome reveals that on the regular, the prospective STM teachers involved had a high level of attitude toward portable technology. The attainable scores in the continuance intents to use portable technology ranged from 4 (4×1) to 20 (4×5) and the mid-point is 12. Any score above 12 shows a high continuance intent, any score below 12 shows a low continuance intent while any score equals 12 shows a moderate continuance intent. Out of the 480 preservice STM teachers examined, 135 (28%) pooled a score lower than 12 (M =10.23, SD=2.45, 95%CI 9.86–11.54) and 345 (72%) pooled a score higher than 12 (M =18.52, SD=4.20, 95%CI 17.24–19.45). No participants recorded a score equal to 12 meaning that there was no moderate level of continuance intents to use portable technology. The entire sample mean is (M =16.21, SD=4.01, 95%CI. 15.24–18.64). This outcome reveals that on the regular, the prospective STM teachers involved had a high level of continuance intents to use portable technology.

3.2 Research Question Two

What is the relationship between preservice STM teachers' supposed utility, continuance intents to use portable technology, attitudes towards portable technology and technostress?

The outcomes of the associations amid the supposed utility, continuance intents to use portable technology, attitudes towards portable technology and technostress are shown in Table 2 below. The table revealed that there was a weighty constructive association amid the preservice STM teachers' supposed utility and continuance intents to use portable technology (r=.518, $p<.01$) and attitudes towards portable technology (r=.491, $p<.01$). Likewise, there was a weighty constructive association amid continuance intents to use portable technology and attitudes towards portable technology (r=.608, $p<.01$). There were weighty negative associations amid technostress and supposed utility (r=-.408, $p<.01$), continuance intents to use portable technology (r=-.316, $p<.01$) and attitudes towards portable technology (r=-.326, $p<.01$).

	1	2	3	4
1.Technostress	1			
2. Supposed utility	-.408*	1		
3. Attitudes towards portable technology	-.326*	.491*	1	
4. Continuance intents to use portable technology	-.316*	.518*	.608*	1
Mean	8.12	11.56	11,87	16.21
SD	2.02	2.46	2.78	4.01
N	480	480	480	480

*Correlation is significant at the .01 level (2-tailed).

Table 2. Correlations matrix for the relationship between supposed utility, continuance intents to use portable technology, attitudes towards portable technology and technostress

3.3 Research Question Three

What is the contribution of preservice STM teachers' technostress, supposed utility, and attitudes towards portable technology to the forecast of continuance intents?

The R-value of 0.926 in Table 3 below revealed a modest high association in the current investigation. Therefore, 85.7% which showed the R^2-value revealed the shared role of the predictors (technostress, supposed utility and attitudes towards portable technology) to the elucidation of change in preservice STM teachers' continuance intents to use portable technology. The proportional input is weighty with F value of 507.451 at 5% level of significance. Thus, the regression equation close-fit the data. In table 3, the marginal contributions of the independent variables to the prediction of the dependent variable were given. Henceforth, attitudes towards portable technology was the greatest meaningful forecaster of continuance intents to use portable technology in preservice STM teachers (β = 1.714, t = 18.896, p=.000). This was followed by supposed utility, which positively predicted preservice STM teachers' continuance intents to use portable technology (β = 1.503, t = 13.357, p=.000). Finally, technostress made the least negative and meaningful contribution to the prediction of continuance intents to use portable technology (β =.406, t = -8.001, p=.000).

Model summary					
Multiple R= .926		Multiple $R^{2=.857}$		Multiple R2 (Adjusted)= .856	
Standard Error Estimate= 5.224		F=507.451	p<.001	df1=3	df2=476
Model	Undstandardized coefficients		Standardized coeff.	t	Sig
	B	Std.Error	Beta		
Constant	7.23	.265	-.406	11.082	.000
Technostress	-1.234	.057	1.503	-8.001	.000
Supposed utility	2.508	.072	1.714	13.357	.000
Attitudes	2.623	.089		18.896	.000

Table 3. Model summary, coefficient and t-value of multiple regression analysis of technostress, supposed utility, attitudes towards portable technology and continuance intents to use portable technology

This section showed the regression equation and is expressed by Continuance intents to use portable technology$_{predicted}$=7.23 - 1.234 technostress + 2.508 supposed utility + 2.623 attitudes towards portable technology.

4 DISCUSSION

This study investigated technostress, supposed utility and attitudes towards portable technology as predictors of continuance intents to use portable technology among preservice STM teachers in Lagos State, Nigeria. Attitudes towards portable technology, supposed utility and technostress are vital construct determining the continuance intents to use portable technology as well as in the espousal and reception procedure (Khlaif etal., 2022; Al-Emran et al., 2020; Upadhyaya, 2021). The results showed that attitudes towards portable technology and supposed utility have positive influence on preservice STM teachers' continuance intents to use portable technology. The implication of this is that the STM teacher educators should promote the development of expert training programmes that showcase the significance and paybacks of portable technology in the pedagogical process. Technostress as a boundary condition (Khlaif etal., 2022) is a variable that has a negative influence on preservice STM teachers' continuance intents to use portable technology for educational resolutions (Kim & Lee, 2021; Khlaif, 2018). The low level of technostress and high level of supposed utility, attitudes towards portable technology and continuance intents to use portable technology among preservice STM teachers in the present study showed the importance and paybacks of adopting portable technology in the educational process. The positive influence of attitudes towards portable technology and supposed utility on continuance intents to use portable technology is consistent with previous studies (Khlaif etal., 2022; Khlaif, 2018) and at variance with some other studies (Cheng & Yuen, 2018; Yang & Wang, 2019). The adverse impact of technostress on continuance intents to use portable technology is consistent with previous studies (Zhao, Xia & Huang, 2020) and

this is at variance to the finding of previous studies (Khlaif etal., 2022) that showed that technostress had no unswerving influence on the continuance intents to adopt portable technology.

The discrepancy in the results of the present study with previous studies might be as a result of the differences in cultural contexts of the study which was the Nigerian preservice STM teachers. More so, in the present study, attitudes towards portable technology, supposed utility and technostress are important factors that influence continuance intents to adopt portable technology among preservice STM teachers in Nigeria. Technostress had an adverse relationship with attitudes towards portable technology, supposed utility and continuance intents to use portable technology and this is consistent with prior studies (Joo et al., 2018; Khlaif, 2018; Verkijika, 2019). Technostress had an undesirable effect on intentions to use portable technology in this study and this is consistent with previous studies (Goh & Sigala, 2020; Al-Emran et al., 2020) but negated some other studies (Khlaif etal., 2022).

The present study has shown that attitudes towards portable technology, supposed utility and technostress are important predictors of continuance intents to use portable technology among preservice STM teachers in Nigeria. This finding further cements the relationships that exist among the independent variables and dependent variable. The robust influence of attitudes towards portable technology, supposed utility and technostress on continuance intents to use portable technology provides great prospects for STM educators to promote preservice STM teachers' continuance intents to use portable technology for educational purposes. Since attitudes towards portable technology, supposed utility and technostress were meaningfully associated with continuance intents to use portable technology, they should be regarded as antecedents of preservice STM teachers' continuance intents to use portable technology. These predictor variables provide further prospects for STM educators to bolster the growth of continuance intents to use portable technology in preservice STM teachers. Attitudes towards portable technology is vital for growth in continuance intents to use portable technology for academic purposes. Early detection of flair for the adoption of portable technology for academic purposes and a thoughtful determination to enhance it can go a long way in growing preservice STM teachers' continuance intents to adopt portable technology for educational purposes.

Supposed utility serves as an enrichment to continuance intents to use portable technology for educational purposes as portable technology has the capacity to improve preservice STM teachers' teaching methods. Also, supposed utility will motivate preservice STM to integrate portable technology into their learning of contents thereby making pedagogical discourse more efficient. Preservice STM teachers whose supposed utility of portable technology for academic purposes is high will achieve the objectives of the lessons set out by the STM educators. Technostress could have decreased because of the disaster perpetuated by the eruption of COVID-19 which might have affected dispositions towards adopting novel technology since everybody was forced to go virtual. The low level of technostress recorded in the present study might be the nimbleness and dexterity of the preservice STM teachers to adapt to the workload through using portable technology in pedagogical discourse. Also, the energy and dexterity arising from portable technology usage and joyful activities connected with portable technology could result into preservice STM teachers' low level of technostress recorded in this study. With innovative machinery, specifically portable technology, scholars anticipated that technostress might increase among final consumers of a given technology (Khlaif etal., 2022; Huang, 2019). Therefore, preservice STM teachers should adopt strategies that would enable them cope with and mitigate the impact of technostress on continuance intents to use portable technology for educational resolutions.

5 CONCLUSION

This study has widened our perspectives of the role of technostress, attitudes towards portable technology and supposed utility in continuance intents to use portable technology for educational purposes among preservice STM teachers in Nigeria. While this is the first study in Nigeria, the findings of the study revealed that preservice STM teachers recorded low level of technostress, high attitudes towards portable technology, high supposed utility of portable technology and high continuance intents to use portable technology for educational purposes. More so, there were significantly meaningful relationships among technostress, attitudes towards portable technology, supposed utility and continuance intents to use portable technology for educational purposes. Lastly, technostress, attitudes towards portable technology and supposed utility were meaningful predictors of continuance intents to use portable technology for educational purposes among preservice STM teachers in Nigeria. Since this study was conducted using correlational research design, we need experimental investigations of effect of technostress on supposed utility and the continuance intents to use new technology to be able to make a generalization of the results of this study. This is a limitation of the study. This study was conducted in Lagos State, southwest Nigeria with preservice STM teachers having heterogeneous characteristics and this may make it impossible to generalize these results to the remaining five geo-political zones of the country. In conclusion, impending investigations should be carried out to evaluate technostress as a regulating element impelling supposed utility and attitudes toward portable technology to forecast preservice STM teachers' continuance intents to use portable technology for educational purposes in Nigeria. Based on the findings of this study, it was recommeded and supported that the STM teacher educators should integrate portable technology into the teacher training programmes of preservice STM teachers to stimulate the use of portable technology in their studies.

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UN ESTUDI DE SIMULACIÓ DE L'ESTRÈS TECNOLÒGIC DELS PROFESSORS DE STM EN FORMACIÓ SEGONS LA SUPOSADA UTILITAT, LES ACTITUDS CAP A LA TECNOLOGIA PORTÀTIL I LES INTENCIONS DE CONTINUÏTAT D'ÚS

El ràpid avenç de les tecnologies en evolució ha fet que la integració de la tecnologia portàtil a les pràctiques docents de ciència, tecnologia i matemàtiques (STM) del professorat en formació sigui imprescindible per millorar els objectius d'aprenentatge i millorar el seu desenvolupament professional. Tanmateix, els professors d'STM de formació inicial no són entusiastes a l'hora d'incorporar tecnologia portàtil a la instrucció quan surten a les pràctiques com a resultat de l'estrès associat a la tecnologia anomenada tecnoestrès. Tot i que s'han dut a terme nombroses investigacions sobre els motius i les importacions de l'estrès associat a la tecnologia en diversos entorns, no s'ha realitzat cap estudi sobre el tecnoestrès, la suposada utilitat i les disposicions cap a la tecnologia portàtil com a predictors de les intencions de continuïtat d'utilitzar la tecnologia portàtil a Nigèria. En aquest estudi, es van respondre tres preguntes de recerca mitjançant la implementació d'un disseny de recerca correlacional. 480 professors de STM de 4 universitats del sud-oest de Nigèria van formar la mostra. Es va desplegar una enquesta fiable i vàlida de 13 ítems per a la recollida de les dades de l'estudi. Les dades es van codificar i la seva anàlisi es va fer mitjançant SPSS versió 20 amb desviació estàndard, mitjana, correlació de Pearson i anàlisi de regressió múltiple a un nivell de significació del 5%. L'estudi va establir que els professors de STM en formación van registrar un baix tecnoestrès, altes actituds cap a la tecnologia portàtil, una suposada utilitat elevada i una alta continuïtat d'intencions d'utilitzar la tecnologia portàtil. A més, l'estudi va confirmar les associacions numèricament transcendentals entre el tecnoestrès, les actituds cap a la tecnologia portàtil, la suposada utilitat i les intencions de continuïtat per desplegar la tecnologia portàtil entre els professors de STM en formació. La construcció de tecnoestrès, les actituds cap a la tecnologia portàtil i la suposada utilitat van obtenir una contribució numèrica del 85,7% a la previsió d'intencions de continuïtat d'utilitzar la tecnologia portàtil. D'acord amb les conclusions de l'estudi, es va recolzar que els formadors de professors de STM haurien d'integrar la tecnologia portàtil als programes de formació de professors de STM de formació inicial per estimular l'ús de la tecnologia portàtil en els seus estudis. Els professors de STM i els formadors de professors podrien beneficiar-se dels resultats d'aquest estudi.

PRAULES CLAU: Tecnoestrès; suposada utilitat; actituds cap a la tecnologia portàtil; intencions contínues de fer servir tecnologia mòbil; professors de ciència en formació; professors de tecnologia; professors de matemàtiques

UN ESTUDIO DE SIMULACIÓN DEL ESTRÉS TECNOLÓGICO DE LOS PROFESORES DE STM EN FORMACIÓN SEGÚN LA SUPUESTA UTILIDAD, LAS ACTITUDES HACIA LA TECNOLOGÍA PORTÁTIL Y LAS INTENCIONES DE CONTINUIDAD DE USO

El rápido avance de las tecnologías en evolución ha hecho que la integración de la tecnología portátil en las prácticas docentes de ciencia, tecnología y matemáticas (STM) del profesorado en formación sea imprescindible para mejorar los objetivos de aprendizaje y mejorar su desarrollo profesional. Sin embargo, los profesores de STM de formación inicial no son entusiastas a la hora de incorporar tecnología portátil a la instrucción cuando salen a las prácticas como resultado del estrés asociado a la tecnología llamada tecnoestrés. Aunque se han realizado numerosas investigaciones sobre los motivos y las importaciones del estrés asociado a la tecnología en diversos entornos, no se ha realizado ningún estudio sobre el tecnoestrés, la supuesta utilidad y las disposiciones hacia la tecnología portátil como predictores de las intenciones de continuidad de utilizar la tecnología portátil en Nigeria. En este estudio, se respondieron a tres preguntas de investigación mediante la implementación de un diseño de investigación correlacional. 480 profesores de STM de 4 universidades del suroeste de Nigeria formaron la muestra. Se desplegó una encuesta fiable y válida de 13 items para la recogida de los datos del estudio. Los datos se codificaron y su análisis se realizó mediante SPSS versión 20 con desviación estándar, media, correlación de Pearson y análisis de regresión múltiple a un nivel de significación del 5%. El estudio estableció que los profesores de STM en formación registraron un bajo tecnoestrés, altas actitudes hacia la tecnología portátil, una supuesta utilidad elevada y una alta continuidad de intenciones de utilizar la tecnología portátil. Además, el estudio confirmó a las asociaciones numéricamente trascendentales entre el tecnoestrés, las actitudes hacia la tecnología portátil, la supuesta utilidad y las intenciones de continuidad para desplegar la tecnología portátil entre los profesores de STM en formación. La construcción de tecnoestrés, las actitudes hacia la tecnología portátil y la supuesta utilidad obtuvieron una contribución numérica del 85,7% a la previsión de intenciones de continuidad de utilizar la tecnología portátil. De acuerdo con las conclusiones del estudio, se apoyó que los formadores de profesores de STM deberían integrar la tecnología portátil en los programas de formación de profesores de STM de formación inicial para estimular el uso de la tecnología portátil en los sus estudios. Los profesores de STM y los formadores de profesores podrían beneficiarse de los resultados de este estudio.

PALABRAS CLAVE: Tecnoestrés; supuesta utilidad; actitudes hacia la tecnología portátil; intenciones continuas de utilizar tecnología móvil; profesores de ciencia en formación; profesores de tecnología; profesores de matemáticas