

**IFE JOURNAL OF THEORY AND
RESEARCH IN EDUCATION**

ISSN: 0794-6754

IJOTRE

**Journal of the Institute of Education
Obafemi Awolowo University,
Ile – Ife.**

**Bi-Annual
Vol. 25 No. 1, 2024**

CALL FOR PAPERS
IFE JOURNAL OF THEORY AND RESEARCH IN EDUCATION
(IJOTRE)

NOTE TO CONTRIBUTOR

The Institute of Education Journal of Theory and Research in Education (IJOTRE) disseminates information derived from research findings and theoretical topics in the areas of Nursery, Primary, Secondary and Higher Education for practitioners, educators, educationist, academia, researchers, curriculum planners and policy - makers with the main goal of improving educational status. IJOTRE is a annual and peer - reviewed Journal.

Articles are expected to focus on any of the following topics:

1. Contribution on theoretical, methodological and practical teaching aspects of education.
2. Research notes and project reports
3. Articles representing scholarly opinions on contemporary issues and trends stemming from any aspects of education.
4. Book reviews that are significant in the field of education.

Guidelines for Papers Submission

- * Articles should not be longer than 15 A4 - sized pages using Times New Roman, font size of 12. Longer articles will attract additional publication fee.
- * Reference style should conform to the America Psychological Association format (6th Edition). This should be arranged in alphabetical order according to the surname of the authors.
- * Footnotes are not allowed.
- * Manuscripts' cover should include the title of the paper, author(s) name(s), institution affiliation and E-mail address.
- * Abstract should not be more than 250 words.
- * Two hard copies of the manuscripts should be submitted for review. Articles can also be submitted by post to The Managing Editor, IJOTRE, Institute of Education, Obafemi Awolowo University, Ile-Ife. Nigeria or electronically via e-mail to iedijotre@2022.
- * Assessment fee of ~~N~~5,000 shall be paid before any paper shall be reviewed.
- * Publication fee of ~~N~~40,000 (\$50), is a condition for publication that a manuscript submitted to Ife Journal of Theory and Research in Education (IJOTRE) has not been published and will not be simultaneously submitted or published elsewhere. All fees must be paid into the Institute Books and Journals, Account Number 1013534137 Zenith Bank

Submissions are published at the editor's exclusive discretion. Submission that do not conform to these guidelines may not be considered for publication.

Bi-Annual

IJOTRE, Vol. 25 No. 1, 2024

iv

EDITORIAL BOARD

Prof. H. O. Ajayi	(Editor – in – Chief)
Prof. P. O. Jegede	Member
Prof. C. O. Odejobi	Member
Prof. T. O. Bello	Member
Prof. O. E. Ojedokun	Member
Prof. B. A. Adeyemi	(Managing Editor)
Prof. O. S. Agboola	Member
Dr. O. O. Bakare	Secretary
Dr. Okewole	Member
Dr. S. O. Olajide	Member

EDITORIAL CONSULTANTS

Prof. D. Adeyemo –	Dept of Local Government Studies, Obafemi Awolowo University, Ile – Ife.
Prof. O. O. Obilade –	Dept. of Adult Education and Life Long Learning, Obafemi Awolowo University, Ile – Ife
Prof. B. I. Popoola –	Dept. Of Educational Foundations and Counselling, Obafemi Awolowo University, Ile – Ife.
Prof. B. A. Omoteso -	Dept.of Educational Foundations and Counselling, Obafemi Awolowo University, Ile – Ife.
Prof. M. A. Adeleke -	Dept. of Science and Technology Education, Obafemi Awolowo University, Ile – Ife.
Prof. O. A. Sofowora -	Dept. of Educational Technology and Library Studies, Obafemi Awolowo University, Ile – Ife
Prof. A. T. Akande-	Dept. of English, Obafemi Awolowo University, Ile – Ife
Prof. E. T. O. Babalola -	Dept. of English, Obafemi Awolowo University, Ile – Ife.
Prof. M. A. Ajayi -	Dept. of Human Kinetics and Health Education, University of Ibadan, Ibadan.
Prof. J. B. Bilesanmi-	Dept. of Curriculum Studies and Instruction Technology, Olabisi Onabanjo University, Ago-Iwoye, Ogun State.
Prof. J. A. Adegbile -	Institute of Education, University of Ibadan.
Prof. E. F. Bamidele -	Dept. of Science and Technology Education, Obafemi Awolowo University, Ile-Ife.
Prof. A. A. Adediwura -	Dept. of Educational Foundations and Counselling, Obafemi Awolowo University, Ile-Ife.
Pro. O. A. Ogunfowokan-	Dept. of Chemistry, Obafemi Awolowo University, Ile-Ife.
Prof. A. Akinlua -	Dept. of Chemistry, Obafemi Awolowo University, Ile-Ife.
Prof. O. I. Orimoogunje -	Dept. of Geography, Obafemi Awolowo University, Ile-Ife.
Prof. O. A. Ajala -	Dept. of Geography, Obafemi Awolowo University, Ile-Ife.
Prof. T. O. Akinbobola -	Dept. of Economics, Obafemi Awolowo University, Ile-Ife.
Prof. M. A. Fatiregun -	Dept. of Kinetic and Human Recreation, Obafemi Awolowo University, Ile-Ife.

Bi-Annual

IJOTRE, Vol. 25 No. 1, 2024

**TECHNOSTRESS AND TEACHERS' PRODUCTIVITY IN PUBLIC
JUNIOR SECONDARY SCHOOLS IN ADO-ODO/OTA LOCAL
GOVERNMENT, OGUN STATE, NIGERIA**

ORUNBON Nurudeen Olalekan,

Department of Educational Management,
Lagos State University,
Ojo, Lagos, Nigeria

ORCID ID: <https://orcid.org/0000-0002-7479-2624>

Email: orunbon.nurudeeno@gmail.com

AKINYEMI Isiaka Adeniran,

Department of Educational Management,
Lagos State University,
Ojo, Lagos, Nigeria

ORCID ID: <https://orcid.org/0000-0003-0185-7789>

E-mail: akinyemiia@gmail.com

ADELEKE Adawi Adeola,

Department of Educational Management,
Lagos State University,
Ojo, Lagos, Nigeria

ORCID ID: <https://orcid.org/0000-0001-6675-3046>

E-mail: adawi2308@gmail.com

&

AJAYI Bukola Rachael

An-Saru-Deen Comprehensive High School (Jnr)
Lafenwa Ota, Ogun State, Nigeria

ORCID ID: <https://orcid.org/0009-0000-0285-7815>

E-mail: ajayibukola19@gmail.com

Abstract

This study investigated techno-stress and public junior secondary school teachers' productivity in Ado-Odo/Ota Local government of Ogun State, Nigeria. Four research hypotheses were formulated and tested in the study. The descriptive survey design was adopted for the study. The population of the study comprised all the teaching staff and students from the 34 public junior secondary schools in Ado-Odo Ota local governments and their students. A sample of 192 teachers and 195 students which gave a total of 387 respondents were selected using a simple random sampling technique. A questionnaire divided into two, titled Teacher Techno-Stress

Questionnaire (TTSQ) and Teachers' Productivity Questionnaire (TPQ) were used for data collection. The validation of the research instrument was done using the face validity while the reliability was ascertained using test re-tests at 0.75 and 09 r-values respectively. The data collected were analyzed using Pearson's Product-Moment Correlation Analysis to test the hypotheses of the study which was facilitated by a statistical package for social sciences (SPSS) at 0.05 level of significance. The results show that there is no significant relationship between the four techno-stress creators and teachers' productivity in public junior secondary schools in Ado-Odo Ota Local government Ogun State, Nigeria. The study recommended therefore that educational institutions should provide comprehensive support and training for teachers to effectively navigate the ever-evolving technological landscape. Professional development programmes that focus on digital literacy, effective technology integration, and time management strategies can empower educators to harness the potential of technology while mitigating the negative impact of technostress.

Keywords: Teachers, Technostress, Productivity, Public Junior Secondary Schools.

Introduction

In an era where technology has become an integral part of our daily lives, the concept of technostress has emerged as a significant issue affecting individuals across various professions, including teachers in public junior secondary schools. Technostress refers to the stress and anxiety experienced by individuals due to their interactions with technology, such as computers, smartphones, and other digital devices. This phenomenon has become increasingly prevalent among educators, impacting their well-being and productivity in the workplace.

Teachers in public junior secondary schools are often required to utilize technology for administrative tasks, lesson planning, communication with students and parents, and professional development. While technology can enhance teaching practices and student learning outcomes, it also brings about challenges that can lead to technostress. Factors such as constant connectivity, information overload, rapid technological changes, and the blurring of boundaries between work and personal life contribute to the experience of technostress among teachers.

Technostress can have detrimental effects on teachers' productivity in public junior secondary schools. When teachers experience high levels of technostress, they may struggle to focus, prioritize tasks, and effectively manage their workload. This can result in decreased job satisfaction, burnout, and ultimately, lower performance in the classroom. Additionally, constant exposure to digital devices and online platforms can lead to distractions, reducing teachers' ability to engage fully in teaching and learning activities.

There have been many assertions that techno-stress has been in existence since the invention of technology but this reality is not known by many technology users, especially in the field of Education, hence studies on techno-stress vis-a-vis students' performance and teachers' productivity become a worthwhile academic

venture. To buttress this assertion, Saka, Alaba and Hassan (2020) stated that the digital economy desires students to acquire skills other than the usual academic skills which can be facilitated by integrating technologies into their educational practice. However, the Information and Communication Technology (ICT) integration comes with techno-stress. The use of technology has rapidly increased in the educational system in recent years and this has become almost a must rather than an option. The use of technology in educational processes brings about some adaptation issues due to the nature of technology (rapid development, cost, need for electricity, change of roles, and so on). An important professional activity is teaching, and the pressure it has on teachers result in the stress commonly referred to as technostress and the it has on teachers is as a result of the stress, (Ahmet, Erkan & Yusuf; 2017).

Techno-stress, according to Brod (1984) in Sethi, Pereira, and Arya (2022), is a modern disease resulting from the sense of incompetence while trying to adapt to computer technologies. Basically, technostress refers to negative feelings, ideas, behaviours and attitudes employees feel in their bodies, such as anxiety, during the time they should cope with new technologies (Kupersmith, 2002; Weil & Rosen, 1997). With the constant advancement of technology, many employees are suffering from technostress (Ahmad, Amin & Ismail, 2012). In recent years, some scientists (Brillhart, 2004) focused on a new structure called technostress. Technostress refers to the direct or indirect negative effects of the use of computer-based technologies on people's attitudes, thoughts, behaviours and psychologies (Tu, Wang & Shu, 2005). Psychologies and behaviours that prevent the best use of computer-based ICTs, such as fear, anxiety and enmity take the form of resistance (Shu, Tu & Wang, 2011). On the other hand, Salanova, et al., (2007) define techno-stress as anxiety, mental fatigue, scepticism and ineffectiveness resulting from the focus on ICT use or its future use. Many organisation employees are exposed to expectations of more efficiency with more complicated systems in order to adapt to rapid changes as a requirement of the information age, which requires them to increase their technological knowledge and skills. For this reason, techno-stress refers to the technology management problem that employees encounter in their work environment (Hung, Chen & Lin 2014). From the various definitions provided by authors on technostress, in the most basic sense, techno-stress is a stress phenomenon occurring before and after ICT use in work life.

Literature Review

Technostress is not limited to the non-education sector. Lei (2010); Coklar, Efilti, Sahin and Ackay (2016) noted that technostress is a problem for teaching profession as a result of integration of the ICTs. Teachers too experience technostress due to integration of technologies into teaching, learning and administrative processes (Roblyer & Doering, 2013). Also, the new focus of education which demands the development and nurturing of some 21st century skills such as critical thinking, collaboration, creativity and problem solving skills and the nature of technology (technical support, inability to use, vision of the school, and social

pressure) also contribute to technostress among teachers (Coklar, et al., 2016).

Teachers, who have an important role in the integration process (Roblyer, 2006), are affected from various factors. Technostress is one of these factors. In addition to the changing sense of education, the nature of technology (technical support, inability to use, vision of the school, social pressure, etc.) is among the reasons for technostress among teachers. Teachers especially experience technostress in the process of integrating new technologies, which is a common condition encountered with digital technologies (Lei, 2010; Lei & Zhao, 2007; Zhao & Frank, 2003). Moreover, the continuation of the pressure for technology integration in education both from the institutions and the society, and the lack of knowledge and support result in techno-stress among teachers (Longman, 2013).

The 21st-century digital economy requires teachers to learn other basic skills apart from the core curriculum. These include communication, collaboration, creativity, critical thinking, information literacy, media literacy, technology literacy, flexibility, leadership, initiative, productivity, and social skills. As these skills will serve as springboard for teachers digital knowledge. These skills are central to effective participation in the technology-driven globalized society (Stauffer, 2020). Thus, teachers need to change their method of teaching to the type that will facilitate learners' acquisition of these skills. One method capable of achieving this is the integration of Information and Communication Technologies (ICT) into teaching and learning. Recognizing the power of technology integration for learning, the Federal Republic of Nigeria (2014) states that technologies will be integrated into all tiers of education by providing appropriate facilities and enabling environment for their implementation. This is to boost the productivity of the teachers in terms of contribution to the goals of education and to enable students acquire necessary skills for productive societal participation. "ICT in education is a vendor of high efficiency, high productivity and high educational outcomes, including the quality of cognitive creative and innovative thinking" (Anikweze & Kanu, 2018: pg 7), The adoption and integration of ICT into teaching and learning activities provides a platform for students as well as teachers to work better to achieve modern educational purposes (Budhai & Taddei, 2015; Lawrence & Tar, 2018). However, the integration of technology into teaching and learning is not devoid of a change. Teachers need to learn certain skills to enable them to adopt or adapt the technologies for use in teaching and learning. These efforts, apart from being time-consuming, add to the teachers' workloads. Munoz, Penalba, Sanchez and Santos (2016) observed that teachers need to regularly update their ICT skills for effective integration of technologies because they are not usually trained to deal with problems emanating from such education practice. Productivity is often referred to as 'task productivity' and defined as the extent that an application improves the user's output per unit of time (Torkzadeh & Doll, 2009). Academic productivity using students' Grade Point Average (GPA). Tarafdar (2007) conceptualized productivity as increased work efficiency and output during hours through mobile technologies as perceived by staff members. Tarafdar (2007) found a negative impact of five techno-stress creators on

productivity at the workplace.

Productivity is a concept that applies to all aspects of life and therefore means different things to different people (Adu, Oshati & Eze, 2012). A general definition is that the relationship between the output produced by a production or service system and the input given to produce this output is productivity. Productivity is a mechanism by which inputs are turned into products and services to meet consumer needs (Yesufu, 2000). Efficiency and usage (doing it right) were of vital importance in the conversion process, while effectiveness ensured that the process resulted in the correct production or service to meet consumer needs (doing the right thing). In this service, both in social and economic terms, productivity must be taken into account. Job and accomplishment attitudes can be strengthened by the engagement of workers in planning goals, process execution and the sharing of productivity gains (Mohammed & Orunbon, 2020).

The attitude of individuals to work together is a key to productivity; it is very clear that lack of dedication is a very significant impediment to the improvement of productivity. In order to build the right environment and work attitudes for productivity, the active participation of all workers in the process of change is necessary (Adu, Oshati & Eze, 2012).

Indeed, the nation's wealth and its people's socio-economic well-being depend on the efficiency and effectiveness of its various subcomponents" (Yesufu, 2000). According to Yesufu, 2000. Labour is commonly considered to be the most complex of all the variables used to generate wealth, having the ability to energize and function as a catalyst for all other resources. Therefore, efficiency is of vital importance to the individual worker of whatever rank, to the organisation, whether commercial or not, and to the national economy as a whole, and, therefore, to the development of the citizen's welfare and the elimination, if not complete, of mass poverty (Yesufu, 2000).

Deduced from the aforementioned points, it is evident that technostress is in a way related to teachers' productivity hence, this study intends to investigate the influence of technostress on teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria.

Technostress and Teachers' Productivity

Although the literature has identified a number of classes of technostress producers, this study chose to focus on the four classes since Li and Wang's (2020) research on them was widely accepted and relevant when it comes to integrating technology to improve learning quality. These include techno-overload, invasion, complexity, and insecurity. Techno-overload occurs when people are compelled to work longer hours at a faster pace; techno-invasion occurs when people believe that their personal lives and work are blurred; and techno-complexity occurs when people believe that their technological know-how is inadequate because of the challenges associated with using new technologies. They thus struggle to dedicate time and energy to learning about and comprehending the various aspects of ICT;

techno-insecurity occurs when ICT users fear that their jobs will be taken by someone with greater ICT proficiency than they do.

Numerous research studies have documented the impact of technostress on the productivity of educators and users across various institutions. The impact of circumstances that lead to technostress on technology-enabled performance, innovation, and overall performance were examined by Tarafdar, Pullins, and Ragunathan (2015). The study also looked at organisational processes that avoided technostress and technological competence as potential remedies for those who cause technostress. The findings indicated a negative correlation between teachers' work performance and technostressors. In other words, teachers' productivity was lower due to technostress. Additional findings showed that teachers reported less technostress when they learned techniques to enhance their use of technology. This might be the outcome of gaining greater proficiency with technology. Similarly, Tagurum et al. (2017) evaluated how technostress affected the academic staff at the University of Jos in Nigeria in their ability to do their jobs. The findings showed that technostress dramatically decreased their ability to execute their jobs, with neck pain and impaired vision being the most prevalent symptoms. Effective time management and technology-based training were also included in the study as strategies to lessen the negative impacts of technostress.

In a similar vein, Li and Wang (2020) examined the effects on university teachers' job performance of particular technostress creators (technostress overload, techno-insecurity, techno-complexity, and techno-uncertainty) and inhibitors (literacy facilitation, technical support provision, and involvement facilitation). The findings demonstrated that techno-complexity and insecurity significantly impair productivity at work. Techno-overload, however, has been shown to enhance productivity. This could be the result of technology making activities easier to do, allowing for the completion of several tasks in a given amount of time. The study also found that, but not for techno-uncertainty, engagement facilitation in particular and the provision of technical help might greatly lessen the consequences of techno-overload, complexity, and insecurity. The study also demonstrated how literacy facilitation might encourage the development of people's own technostressors. This suggests that teachers' levels of technostress may be reduced by teaching them integration skills. Additionally, Marchiori, Mainardes, & Rodrigues (2018) looked at how individual characteristics affected the amount of stress that ICT users experienced. The study also examined and found the following factors: techno-complexity, overload, invasion, and uncertainty. According to the study, the consequences of technostress manifested as disorders in employees and losses in organisations as weariness, discontent, worry, and decreased productivity. These results support the hypothesis that technology users' productivity was negatively impacted by technostress.

Hypotheses

The following hypotheses were tested:

- H₀1: There is no significant relationship between techno-overload and teachers' productivity in Public Junior Secondary School in Ado-Odo/Ota, Ogun State in Nigeria.
- H₀2: There is no significant relationship between techno-invasion and teachers' productivity in Public Junior Secondary Schools Ado-Odo/Ota, Ogun State in Nigeria.
- H₀3: There is no significant relationship between techno-insecurity and teachers' productivity in Public Junior Secondary Schools Ado-Odo/Ota, Ogun State in Nigeria.
- H₀4: There is no significant relationship between techno-complexity and teachers' productivity in Public Junior Secondary School in Ado-Odo/Ota, Ogun State in Nigeria.

Methodology

The study adopted descriptive and correlational designs. The study describes the existing influence of independent variables on dependent variable of the study. On the one hand, it is a correlational design because it finds out the relationship that exists between technostress and teachers' productivity in public Junior Secondary School in Ado-Odo/Ota of Ogun State, Nigeria. The target population of the study consisted of all public junior secondary school teachers in Ado-Odo/Ota Local Government. The Ado-Odo/Ota Local Government comprised 34 (thirty four) Junior Secondary Schools. The purposive sampling technique was used to select 200 respondents from 20 schools which implies that there were 10 respondents from each school using simple random sampling techniques.

The instrument for data collection was questionnaire developed by the researcher. The questionnaire, which was divided into two titled Teacher Techno-Stress Questionnaire (TTSQ) and Teachers' Productivity Questionnaire (TPQ). The instrument had two (2) sections; Sections A and B. Section A dealt with demographic information while Section B contains 10 items based on the objectives of the study. The TTSQ and TPQ were used to elicit information from the teachers.

The reliability of the instrument was ascertained using test re-test method. A trial test was carried out in two occasions on respondents outside the sample to ascertain the reliability of the research instrument. Responses from the respondents enabled the researchers to identify the problem of ambiguity and irrelevance in the instruments. The data collected from the respondents on these two administrations of the instruments was correlated using Pearson's Product Moment Correlation of Inferential Statistics and the reliability co-efficient of the research instruments were found to be 0.75 and 0.79 r-values respectively. The results of the two tests indicated that there is high level of internal consistency of the instrument in testing Teachers' Technostress and Productivity.

The statistical technique used for the study was in accordance with the hypotheses generated for the study. The testing of the hypotheses was done using Pearson's Product Moment Correlation coefficients analysis of inferential statistics

for all the hypotheses formulated. The research hypotheses formulated were tested using the regression analysis with the aid of Statistical Package for Social Science (SPSS).

Results

Table 1: Relationship between Techno-overload and Teachers' Productivity in Public Junior Secondary Schools

		Techno-overload	Teacher's Productivity
Techno-overload	Pearson Correlation	1	-.036
	Sig. (2-tailed)		.621
	N	192	195
Teacher's Productivity	Pearson Correlation	-.036	1
	Sig. (2-tailed)	.621	
	N	192	195

Table 1 presents the relationship between techno-overload and teachers' productivity in public Junior Secondary Schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria. The result also showed that there is a negative relationship between techno-overload and teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria ($r = -.036$, $p > 0.05$). The implication is that the relationship that exists between techno-overload and teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria is not significant.

As such, the hypothesis which states that there is no significant relationship between techno-stress creator (techno-overload) and teachers' productivity in public Junior Secondary Schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria is hereby accepted.

Table 2: Relationship between Techno-invasion and Teachers' Productivity in Public Junior Secondary Schools

		Techno-invasion	Teacher's Productivity
Techno-invasion	Pearson Correlation	1	-.015
	Sig. (2-tailed)		.838
	N	192	195
Teacher's Productivity	Pearson Correlation	-.015	1
	Sig. (2-tailed)	.838	
	N	192	195

Table 2 presents the relationship between techno-invasion and teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria. The result also showed that there is a negative, and significant relationship between techno-invasion and teachers' productivity in public junior

secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria ($r = -.015, p > 0.05$). The implication is that the influence of techno-invasion on teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria is not significant.

Hence, the hypothesis which states that there is no significant relationship between techno-invasion and teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria is hereby accepted.

Table 3: Relationship between Techno-insecurity and Teachers' Productivity in Public Junior Secondary Schools

		Techno-insecurity	Teacher's Productivity
Techno-insecurity	Pearson Correlation	1	-.023
	Sig. (2-tailed)		.752
	N	192	195
Teacher's Productivity	Pearson Correlation	-.023	1
	Sig. (2-tailed)	.752	
	N	192	195

Table 3 also presents the results of relationship between techno-insecurity and teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria. The result showed that there is a negative relationship between techno-insecurity and teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria ($r = -.023, p > 0.05$). The implication is that techno-insecurity does not influence teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria negatively and is not statistically significant.

Therefore, the hypothesis which states that there is no significant relationship between techno-insecurity and teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria is hereby accepted.

Table 4: Relationship between Techno-complexity and teachers' productivity in Public Junior Secondary Schools

		Techno-complexity	Teacher's Productivity
Techno-insecurity	Pearson Correlation	1	-.013
	Sig. (2-tailed)		.862
	N	192	195
Teacher's Productivity	Pearson Correlation	-.013	1
	Sig. (2-tailed)	.862	
	N	192	195

Table 4 presents the results of relationship between techno-complexity and teachers'

productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria. The result showed that there is a negative relationship between techno-complexity and teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria ($r = -.013$, $p > 0.05$). The implication is that techno-complexity influences teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria negatively and the influence is not statistically significant.

Thus, the hypothesis which states that there is no significant relationship between techno-complexity and teachers' productivity in public junior secondary schools in Ado-Odo/Ota Local Government, Ogun State, Nigeria is hereby accepted.

Discussion of Findings

The study discovered that the factors that contribute to technostress viz-a-viz techno-overload, techno-invasion, techno-insecurity, and techno-complexity had major effect on senior secondary school teachers' productivity at work. Because of the effect of the technostress producers, the productivity of the instructors' jobs was greatly decreased. This might be the result of teachers' feelings that they are being replaced by more ICT-savvy educators and their incapacity to keep up with the constantly changing requirements for acquiring the skills needed to incorporate technology. This result supports that of Tarafdar et al. (2015), who found a correlation between teachers' work performance and technostressors. In other words, instructors' work performance was severely harmed by technostress. It also supports the results of Tagurum et al. (2017), who found that technostress has a major impact on university instructors' job performance. Furthermore, the results showed that all of the technological stressors this study looked at had a major negative influence on teachers' productivity at work. This implies that the productivity of teachers' jobs is greatly decreased by each of the technostressors. The intricacy of technology has the most detrimental effect. This implies that teacher productivity will decrease with increasing technological sophistication. This is to be expected as continuous skill updates are necessary for efficient integration because new technologies constantly replace older ones. It's possible that educators believe they lack the necessary abilities to adjust to the rapidly changing technologies in order to increase productivity. As a result, they may feel that they need to invest more time and resources in learning about the many features and applications of these technologies. Given that they might not be able to handle the necessity for regular skill updates and consequently experience poorer job productivity, this could seem like an added burden. If teachers are unable to effectively learn to adapt the technologies to advance their own quality of learning, they may feel insecure about their jobs and fear that other teachers who can adapt to technology will take their place. This could be the cause of teachers' perceived anxiety when it comes to technology. Additionally, this dread may reduce their productivity at work. This result is consistent with that of Li and Wang (2020), who found that technological complexity and instability significantly impair workers' ability to do their jobs well. It also

confirms the conclusions of Marchiori et al. (2018), who found a link between technostressors and the disorders that workers have been reported to exhibit as well as organisational losses that show up as weariness, unhappiness, worry, and decreased productivity.

Conclusion

In today's digital age, technology has become an integral part of education, offering a plethora of opportunities for both educators and students. However, the rapid advancement of technology has also brought about some significant challenges, particularly for teachers. The phenomena of techno-overload, techno-invasion, techno-insecurity, and techno-complexity have been identified as key factors affecting teachers' productivity in the modern educational landscape.

In the context of technostress creators and teachers' productivity, the results revealed that there was negative relationship between these variables. This shows that certain factors in technostress (Techno-overload, techno-invasion, techno-insecurity, & techno-complexity) did affect teachers' productivity. Therefore, this study demonstrates that techno-stress created by the usage of technology did negatively affect teachers' productivity. It is interesting to note that despite all the advantages associated to the use of technology in workplaces, technology can induce stress in the lives of teachers which can affect teachers' engagement.

Recommendations

Based on the findings, the following recommendations were made:

1. It is crucial for educational institutions to provide comprehensive support and training for teachers to effectively navigate the ever-evolving technological landscape. Professional development programmes that focus on digital literacy, effective technology integration, and time management strategies can empower educators to harness the potential of technology while mitigating the negative impact of techno-overload.
2. Government should foster a culture of mindfulness and boundaries around technology which can help alleviate the burden of techno-invasion.
3. Government should equip educators with the support, resources, training and skills necessary to effectively navigate the digital landscape in order to mitigate the burden of techno-insecurity.
4. Government should invest in user-centred design and prioritizing the creation of cohesive, integrated technological ecosystems can alleviate the burden of techno-complexity, enabling teachers to more seamlessly navigate their digital tools and resources.

References

Adu, F. O. Oshati, T. & Eze, I. (2012). Career advancement, school relation and

- support factors as determinants of teachers' productivity in public schools in Oyo State, Nigeria. *International Journal of Education*, 4(4); 27-28.
- Ahmad U. N. U., Amin S. M. & Ismail, W. K. W. (2012). The relationship between technostress Creators and organisational commitment among academic librarians. *Procedia-Social and Behavioural Science*, 40.
- Ahmet N. Ç., Erkan E., & Yusuf L. Ş. (2017). Defining Teachers' Technostress Levels: A Scale Development. *Journal of Education and Practice*, 8(21); 28-41.
- Alam, M (2016). Techno-stress and productivity: Survey evidence from the aviation industry. *Journal of Air Transport Management*, 50, 62-70.
- Anikweze, C., & Kanu, A. (2018). Information and communication technology (ICT) and 21st century education in Nigeria. *International Journal of Innovation and Research in Education Science*.
- Ayyagari et al. (2011). Technostress: Technological Antecedents & Implications. Research Article. *MIS Quarterly*, 35(4); 831-858.
- Ayyagari R., Grover V., & Purvis R. (2011). *Technostress: technological antecedents and Implications*. MIS Quarterly.
- Brillhart, P. (2004). Technostress in the workplace-managing stress in the electronic workplace. *Journal of American Academy of Business*, 5(1/2), 302-307.
- Budhai S. S. & Taddei, L. M. (2015). *Teaching the 4Cs with technology: How do I use 21st Century tools to teach 21st century skills*. Alexandria, VA: ASCD
- Coklar, A. N., Efiltili, E., Sahin, Y. L. & Ackay, A. (2016). Investigation of technostress levels of teachers who were included in technology integration process. *The Turkish Online Journal of Educational Technology* – November 2016, Special Issue for INTE 2016, 1331-1339
- Federal Republic of Nigeria (2014). *National Policy on Education*. Lagos: NERDC Press.
- Hung W. H., Chen K. & Lin C. P. (2014). Does the proactive personality mitigate the adverse effect of technostress on productivity in the mobile environment. *Telematics and Informatics*, 32(1); 143-157. DOI: 10.1016/j.tele.2014.06.002.
- Kupersmith, J. (2002). Technostress and the reference librarian. *Reference Services Review*, 20, 7-14.
- La Torre, G., De Leonardis, V., & Chiappetta, M. (2020). Technostress: how does it affect the productivity and life of an individual? Results of an observational study. *Public Health*, 189, 60-65.
- Lawrence J., & Tar U. (2018). Factors that influence teachers' adoption and integration of ICT in teaching/ learning process. *Educational Media International* 55(4):1-27. DOI:10.1080/09523987.2018.1439712
- Lei, J. (2010). Quantity versus quality: A new approach to examine the relationship between technology use and student outcomes. *British Journal of Educational Technology*, 41, 455-472.

- Lei, J. (2010). Quantity versus quality: A new approach to examine the relationship between technology use and student outcomes. *British Journal of Educational Technology*, 41, 455-472.
- Lei, J., & Zhao, Y. (2007). Technology uses and student achievement: A longitudinal study. *Computers & Education*, 49, 284-296.
- Li, L. & Wang, X. (2020). Technostress inhibitors and creators and their impact on university teachers work performance in higher education. *Cogn Tech Work*. <https://doi.org/10.1007/s10111-020-00625-0>
- Marchiori, D. M., Mainardes, E. W., & Rodrigues, R. G. (2018). Do individuals' characteristics influence type of technostress reported by worker? *International Journal of Human- Computer Interaction*, 35(3), 218-230. <https://doi.org/10.1080/10447318.2018.1449713>
- Marchiori, D. M., Mainardes, E. W., & Rodrigues, R. G. (2018). Do individuals' characteristics influence type of technostress reported by worker? *International Journal of Human- Computer Interaction*, 35(3), 218-230. <https://doi.org/10.1080/10447318.2018.1449713>
- Marisa Salanova, Susana Llorens & Eva Cifre (2013) The dark side of technologies: Technostress among users of information and communication technologies. *International Journal of Psychology*, 48:3, 422-436, DOI: 10.1080/00207594.2012.680460.
- Mohammed, M. O. B., & Orunbon, N. O. (2020). Influence of Toxic Leadership Behaviour on Teachers' Diligence and Productivity in Lagos State Senior Secondary Schools, Nigeria. *International Journal of Education and Evaluation*, 6(2), 36-46.
- Munoz, O.R., Penalba., F. A., Sanchez., J. F., & Santos., O.C. (2016). Reducing techno-anxiety in high school teachers by improving their ICT Problem-solving Skills. *Behaviour and Information Technology*, 36(3);1-14. 10.1080/0144929X.2016.1221462
- Ragu-Nathan, T.S., & Tarafdar (2008). Consequence of Technostress in End Users: Conceptual Development and Empirical Validation. *Information Systems Research* 19(4):417-433. DOI:10.1287/isre.1070.0165.
- Roblyer, M. D. & Doering, A.H. (2013). *Integrating educational technology into teaching* (6th Ed.). Boston, MA: Pearson.
- Roblyer, M. D. (2006). *Integrating Educational Technology Into Teaching*. (4th Edition). New Jersey: Merrill Prentice Hall.
- Saka, A. O., Alaba, A. O., & Hassan, O. A. (2020). The Impact of Technostressors on the Job Productivity of Senior Secondary Teachers in Nigeria. *Journal of Teaching and Teacher Education*, 2(105-113).
- Salanova, M., Llorens, S., Cifre, E., & Nogareda, C. (2007). *El tecnoestre's: Concepto, medida y prevencio'n* [Technostress: Concept, measurement and prevention]. Nota Te'cnica de Prevencio'n, 730. Madrid, Spain: INSHT.
- Sethi, D., Pereira, V., & Arya, V. (2022). Effect of Technostress on Academic Productivity: E-Engagement Through Persuasive Communication. *Journal*

- of Global Information Management*, 30(5); 1-19.
- Shu, Q., Tu, Q. & Wang, K. (2011). The impact of computer self-efficacy and technology dependence on computer-related technostress: A social cognitive theory perspective. *International Journal of Human Computer Interaction*, 27, (10), 923–939.
- Soumya, P. (2021). Impact of Technostress on Employees during Remote Work. SDMIMD International E Conference on Adapting to the New Business Normal – The way ahead.
- Stauffer, B. (2020). What are 21st century skills? [Blog Post]. Retrieved from <https://www.aeseducation.com/blog/whatare-21st-century-skills>
- Tagurum, Y. O., Okonoda, K. M., Miner, C. A., Bello, D. A. & Tagurum, D. J. (2017). Effect of technostress on job performance and coping strategies among academic staff of a tertiary institution in North Central, Nigeria. *International Journal of Biomedical Research*, 8(6), 312-319. <https://doi.org/10.7439/ijbr.v8i6.4176>.
- Tarafdar M., Cooper C.L., & Stich J. (2019). *The technostress trifecta-techno eustress, techno distress and design*: Theoretical directions and an agenda for research. *Information Systems Journal* 29(1); 6-42. DOI: 10.1111/isj.12169/full.
- Tarafdar M., Ragu-Nathan B., & Ragu-Nathan T. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems* 24(1);301-328. DOI: 10.2753/MIS0742-1222240109
- Tarafdar, M., Pullins, E. B. & Ragu-Nathan, T. S. (2015). Technostress: Negative effect on performance and possible mitigations. *Information Systems Journal*, 25(2), 103-132. <https://doi.org/10.1111/isj.12042>.
- Tolin, D. F., & Foa, E. B. (2006). Sex differences in trauma and posttraumatic stress disorder: A quantitative review of 25 years of research. *Psychological Bulletin*, 132(6), 959–992. <https://doi.org/10.1037/0033-2909.132.6.959>
- Torkzadeh, G. and Doll, W.J. (1999). The development of a tool for measuring the perceived impact of information technology on work. *The International Journal of Management Science*, 27(3), 327- 339.
- Tu, Q., Wang, K., & Shu, Q. (2005). Computer related technostress in China. *Communications for the ACM*, 48(4), 77-81. doi:10.1145/1053291.1053323.
- Weil, M.M. and Rosen, L.D. (1997) *Technostress: Coping with Technology @Work @Home @Play*. John Wiley & Sons Inc, Hoboken.
- Yesufu T.M. (2000). *The dynamics of industrial relations: The Nigeria experience*. Ibadan: University Press Limited.
- Zhao, Y., & Frank, K.A. (2003). Factors affecting technology uses in schools: An ecological perspective. *American Educational Research Journal*, 40, 807-840.