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Exploring the Interplay between Digital Phobias and Blended Learning Effectiveness among Secondary School Teachers

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Abstract

This study examines the correlation between teachers' digital phobia and the effectiveness of blended learning in Ibadan Metropolis, Oyo State, Nigeria. Through a multistage sampling process involving 186 teachers from private and public secondary schools, the research sheds light on various aspects. It highlights a predominance of female teachers, with public schools hosting a majority of educators. Notably, social media tools like WhatsApp are extensively used for instructional purposes in public schools. The study observes instances of public-school teachers teaching multiple subjects, contrary to specialization policies. Blended learning approaches, particularly the Generic model, are favored, with digital phobias such as Loremophobia and Nomophobia being prevalent. Analysis reveals a strong positive correlation between digital phobia and blended learning effectiveness, emphasizing the importance of teacher commitment in overcoming technological anxieties. Private schools demonstrate superior performance in blended learning effectiveness, potentially due to better access to technology and training. However, private school educators' exhibit heightened digital phobias, possibly driven by increased expectations and job insecurity. In conclusion, the study underscores the intricate relationship between digital phobias and the efficacy of blended learning among secondary school educators, emphasizing the pivotal role of teachers in leveraging technology for enhanced learning outcomes.

Introduction

Since the inception of education in18th-century Nigeria, tracing its roots back to the days of Socrates, the dynamics of teaching and learning within school settings have adhered to a traditional paradigm. This is when teachers and students confined within the four walls of a classroom, engaging in face-to-face interactions. Chalk dust fills the air as instructors employ various methods on the blackboard, while diligent students diligently scribble away with pen and paper.

As time progressed, the developed world embraced a transformative approach known as blended learning a fusion of online elements with the traditional face-to-face model in the teaching-learning process (Chandraiah, 2021; Radovan & Radovan, 2024). Fast forward to the pivotal year 2020, a paradigm shift occurred, catapulting blended learning into an imperative for 21st-century education, extending its reach even to underdeveloped and developing nations. The classroom landscape has undergone a profound evolution, ushering in a new era where the integration of technology and traditional methods is not just a choice but a necessity (Chee & Sanmugam, 2023; Swargiary, 2024).

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In the 1960s, the foundational principles of blended learning emerged in corporate and higher education in the United States. The term "Blended Learning" was officially coined in 1999 when the American Interactive Learning Center introduced software programs designed for web-based teaching. Essentially, Blended Learning (BL) integrates both online and traditional face-to-face classes to enhance the learning experience. For example, a student might attend in-person classes while receiving other coursework through multimedia, allowing for self-paced learning and collaboration with peers (Anderson et al., 2010).

Blended learning models vary, ranging from rotational, flex, ala carte, to enrich virtual (Tucker, 2022; Wells, 2023). The Rotation Model includes flipped, station, lab, and individual rotational sub-models. The Flipped Classroom Model emphasizes independent study before class, enabling active learning during face-to-face sessions. Station Rotational Model involves smaller group interactions, while the Individual Rotational Model tailors learning to individual needs (Ahmed Aldukhi, 2021). Lab Rotational Model sees students rotating to a computerlab for online learning within a physical school.

The Ala carte Model allows students to take additional online courses alongside the core curriculum, providing flexibility in scheduling. Flex Model emphasizes independent student coursework, guided by a teacher either online or in-person. The Enriched Virtual Model combines online coursework with occasional face-to-face interactions or webinars, offering a flexible alternative to full-time online learning (Muscat, 2023). During the COVID-19 pandemic, blended learning became a norm worldwide, adapting to the circumstances in both developed and developing nations. The flexibility and adaptability of blended learning models played a crucial role in maintaining educational continuity during challenging times (Mukherjee & Hasan, 2020).

In 2020, a year etched in global memory as the onset of a silent "World War 3," the emergence of the COVID-19 pandemic reshaped the landscape of teaching and learning. Initially reported to the World Health Organization in December 2019, the novel corona virus swiftly led to unprecedented disruptions across economic sectors worldwide. Lockdown measures, primarily through social distancing, were implemented globally to curb the virus's spread, causing profound impacts on education, livelihoods, transport, and trade. Unlike familiar disruptions such as natural disasters or political unrest, the scale and speed of the pandemic's impact were unparalleled.

In Nigeria, a country familiar with challenges in its education sector, the pandemic exacerbated existing issues. With approximately 20% of the world's out-of-school children, demographic pressures, and regional disparities, the education system faced significant hurdles even before the pandemic. The Northern part of Nigeria struggled with high illiteracy rates, gender disparities, and security threats to schooling. However, COVID-19 presented an unprecedented challenge, leading to the closure of schools nationwide. To address the academic set back, virtual or digital learning methods were introduced, marking a significant departure from the traditional ban on phone usage in schools (Tomczyk et al., 2021).

The pandemic forced both teachers and students into the digital realm, demanding a rapid adaptation to virtual learning (Shamir-Inbal & Blau, 2021). Teachers, often regarded as academic and moral guides, had to acquire new skills to navigate digital platforms. Similarly, students had to familiarize themselves with the shift from traditional learning to the virtual world. The complexities of the digital realm, involving training, unlearning obsolete practices, and mastering new skills, posed challenges for educators and learners alike.

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In the face of this digital transformation, teachers encountered a unique obstacle: digital phobia. This fear of using digital technologies, manifesting in various forms such as technophobia and cyberphobia, became a significant barrier for those unaccustomed to the digital landscape. Overcoming these fears became imperative for educators and students alike, as the digital world reshaped education in ways previously unimaginable before the advent of COVID-19. Yet, for a teacher grappling with an ingrained fear, particularly in the realm of technology, nurturing a fondness for the teaching profession becomes an uphill battle.

A phobia, an excessive and irrational fear or reaction, encompasses a vast array of types, spanning from Achluophobia to Zoophobia. Within this spectrum lies digital phobia, a fear of engaging with digitalized technologies, manifesting in various forms like technophobia, nomophobia, cyberphobia, telephonophobia, selfiephobia, loremophobia, ovetechnophobia, nosophobia, ergophobia, and clasmaphobia. Conquering these fears necessitates both teachers and students mastering the virtual method of knowledge dissemination, demanding the acquisition of skills and expertise in navigating digital platforms. The year 2020 not only marked a global health crisis but also a transformative moment in the world of education, pushing it into an era where technology and virtual learning became indispensable tools for academic continuity.

Statement of the Problem

The absence of the conventional teaching- learning activities in schools for about six months in the year 2020 due to Covid-19 lock-down left a knowledge gap and introduced the era of digital learning forcefully in Nigeria. Before the pandemic, teaching and learning took place in the four walls of the classrooms where teachers could monitor the effectiveness of their teaching. Phones where basically used for texting and calls as earlier said and there where limited exposure to technology and many in the rural areas could not even use smart phones. However, with the advent of Covid-19, and the inclusion of digital learning, teaching-learning process took a new turn, teachers had to figure out how to blend the limited face to face time with virtual learning.

Students took the direct hit, as well as majority of the teachers who were not conversant with the use of smart-phones and technology before the pandemic. Now, COVID-19 lock-down is now history but there is still a need not only to gain lost grounds but to implement a learning process that will take the students outside the walls of the classroom, motivate them to learn beyond the curriculum and also help teachers to build contents that will fit into the modern day living. Moreover, there is a need to guide against complete education standstill that happened in the year 2020.Therehavebeenresearchesonblendedlearning, however, much work has not been done on digital phobia and blended learning effectiveness especially in Ibadan Metropolis, Oyo State. This study, therefore, aims to investigate the interplay between digital phobia and blended learning effectiveness in Ibadan Metropolis, Oyo State.

The objectives of the study are to (1) identify the most prominent blended learning type being used by teachers in both private and public secondary schools in Ibadan Metropolis, Oyo State; (2) identify the type of digital phobia among both private and public secondary school teachers in Ibadan Metropolis, Oyo State; (3) examine school type differences in teachers digital phobia in both private and public secondary schools in Ibadan Metropolitan, Oyo State.

The study aims to explore critical aspects of blended learning and digital phobia among secondary school teachers in Ibadan Metropolis, Oyo State, by addressing two key research questions. Firstly, it seeks to identify the most prominent type of blended learning currently being employed by teachers in both private and public secondary schools within the metropolis.

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This question is essential in understanding how educational institutions are integrating digital tools and resources into their teaching practices, and which models are most favored in this context. Secondly, the study investigates the most significant digital-phobia, or fear of using digital tools, prevalent among these teachers. By uncovering these fears, the research will highlight potential barriers to the effective implementation of blended learning in the region, contributing to the broader discourse on digital literacy and education reform.

To address these research questions, the study formulates three hypotheses. The first hypothesis (H01) posits that there will be no significant relationship between digital phobia and the effectiveness of blended learning in Ibadan Metropolis. This hypothesis tests whether the apprehension towards digital tools among teachers impacts the success of blended learning strategies. The second hypothesis (H02) asserts that there will be no significant difference in digital phobia between teachers in private and public secondary schools. This hypothesis seeks to determine if the type of school influences the level of digital anxiety among teachers. Lastly, the third hypothesis (H03) suggests that there will be no significant difference in the effectiveness of blended learning between private and public secondary schools. By testing these hypotheses, the study aims to provide a nuanced understanding of the factors influencing blended learning and digital-phobia in the educational landscape of Ibadan Metropolis, offering insights that could inform policy and professional development initiatives.

Methods

Research Design

Descriptive research design was adopted in this research study as it is suitable for unveiling and describing the relationship between the dependent variable of digital phobia and the independent of blended learning effectiveness among teachers in the selected secondary schools in Ibadan Metropolis, Oyo State. The descriptive design was used since it was effective in studying the variables in their natural environment without seeking to alter anything.

The sampling procedure adopted in this study was multistage and stratified in order to include a sample that was representative of different strata of the population. In other to capture the differences in the educational systems, Ibadan Metropolis was classified into the urban and the semi-urban. From these areas, three Local Government Areas (LGAs) were purposively selected: It has Ibadan North-West, Ido, and Lagelu. The choice of these LGAs hinged on their demographic profile in terms of the population density and proportion of post primary institutions and socio-economic status of the populace.

In the six LGAs, 207 secondary schools were established and selected for the study. The schools were grouped based on their nature, in size, location and type, including private schools and public schools. This was followed by use of stratified random sampling to obtain a sample of 2007 secondary school teachers from among these institutions. This way of the sampling also made it possible to have high representation of both private and public schools and thus had a balanced view of the problem under investigation. Thus, the final sample comprised of 186 respondents which drown from different educational network in Ibadan Metropolis.

Instrumentation

The main data collection tool utilized in this study was the structured questionnaire developed and administered with a view to capturing affairs concerning blended learning practices and digital phobia amongst chosen secondary school teachers in Ibadan Metropolis, Oyo State. The construction of this instrument was a careful process that started with the authors' review of the literature on the models of blending learning, digital phobia and teachers' performance. In this review, the authors proposed the theoretical background according to which a set of key

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variables and constructs to be assessed were defined. Basing on related studies, experts' recommendations and on the nature of secondary education in Nigeria, an initial list of items was developed. To address the issue of content validity the items were subjected to peer review by a panel of scholars in educational management and practicing teachers of secondary schools. These experts had to review all the items with regard to clarity, relevance, and comprehensiveness The intended revisions included the following.

The final questionnaire was structured into four main sections: demographic factors, use of online, offline or hybrid delivery methods, fear of technology and the efficiency of operating in a blended fashion. The demographic part collected the basic identification data about the respondents including gender, age, teaching experience, type of school and number of subjects the respondents teach. The items in the section on practices in blended learning were based on the extent of utilization of different models of blended learning like the Generic Model, Station Rotation and Lab Rotation and others. The respondents self-administered a questionnaires to rate the level of usage of these models on a 5-Likert scale. The section specifically dedicated to the digital phobia aimed at revealing the levels and kinds of teachers' digital phobia, as well as detailed micro-phobias connected with technology application. Last was the blended learning effectiveness whereby the perception of the teachers was determined on the extent to which the blended learning had promoted the engagement of the students, improved academic performance, and the effectiveness of teaching outcomes. The instrument was pilot-tested with a small group of teachers to test its reliability where Cronbach alpha gave a coefficient of 0. 82, which ranged within high level of internal consistency.

Data Collection Process

Data collection was thus done systematically after designing the study and taking four weeks to ensure among other things that the research objectives were achieved as well as ensure that the data collected were both reliable and valid. A group of research assistants was employed and given the necessary skills on the use of questionnaires. The training was conducted in reference to the objectives of the study, the code of ethics and the correct procedure to follow while administering and receiving the filled questionnaires. This training was important in ensure conformity to different data collection centres. The questionnaires were personally administered to the members of the target population by research assistants who physically went to each selected school in Ibadan Metropolis. Such an approach also let the researchers interact with the respondents, in case of any clarifications that may be required, this was easily done. In-person distribution also had a role to play in high response rate because it met the teachers who could not be well acquainted with online surveys.

To increase the response rate higher follow up visits were conducted to schools which had least response or where teachers took time to fill the questionnaires. This constant probing was in fact instrumental in resulting in a large, hard-to-source sample. The collection of data was done in compliance with the set ethical requirement. The participants were fully enlightened on the goals of the study, their anonymity and the anonymous nature of their responses were guaranteed, and consent forms were signed by the teachers. The response was voluntary and the teachers were informed that they could withdraw from the study at any time offer no reason for doing so. After the questionnaires had been completed they were examined to ensure that all relevant sections had been answered and the entries correctly made before they were computerized using the Statistical Package for the Social Sciences (SPSS). The task of entry of data was done carefully to give accurate information, and measures were taken such as checking of entries twice to reduce cases of mistakes as much as possible.

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Data Collection Process

Data collection was done for a period of four weeks as mentioned above. Face to face administration of the questionnaires was used so that the authors could get a high rate of response and also, more importantly, where respondents appeared to be uncertain or had questions on some of the items, the authors were able to explain to them. As for the questionnaires, trained research assistants were used to administer and retrieve the questionnaires with the aim of maintaining equal standards in all the selected schools.

However, where there was poor teacher response or, sometimes, no teachers at all in the selected classes, subsequent visits were made to increase the participation. The total number of questionnaires was 235 and of them 186 were filled and returned that gives a response rate of 79.1%. The high response rate can be attributed to the constant follow up and the good relationship the researcher has with the respondents which are the school administrators.

Data Analysis Techniques

Each of the collected data was analysed by coding and entering the data collected in Statistical Package for the Social Sciences (SPSS). The quantitative data was analysed using Descriptive analysis with the aid of frequencies, percentages, means and standard deviations so as to present the demographic details and opinions of the respondents in a generalised form. In order to verify the hypotheses of the study, the t-test for independent measures was used to compare digital phobia and perception of blended learning between participants from the private and public secondary schools. The t-tests were chosen because they are appropriate for comparing the means of two independent groups and to indicate whether, and to what extent, there are differences in the groups. Also, Pearson correlation analysis was used to determine the association between digital phobia and blended learning effectiveness. In all tests of hypotheses , the level of significance was taken as equal to p < 0. 05.

Results and Discussion

Teaching-learning Platforms

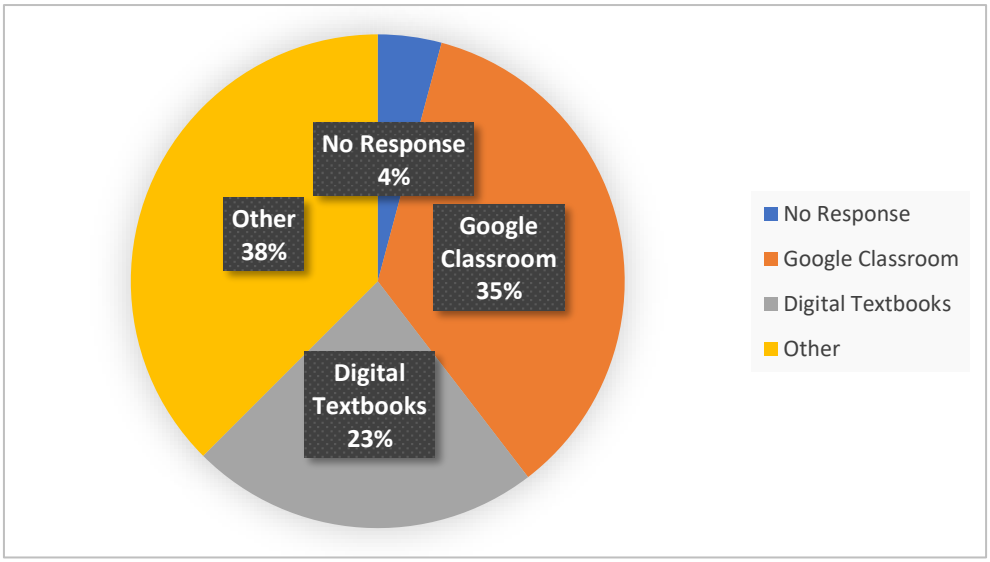

Figure 1. Frequency

Source: Fieldwork, 2023

What is the most prominent blended learning type being used by teachers in both private and public secondary schools in Ibadan Metropolis, Oyo State?

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Table1. The Most Prominent Blended Learning Type Being Used by Teachers in Both Private and Public Secondary Schools in Ibadan Metropolis, Oyo State

Items (Model)	Always	Very Often	Sometimes	Rarely	Never	Mean
	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)	
Generic	77.5 (41.7)	20 (10.8)	24 (12.9)	12.5 (6.7)	52 (28.0)	3.31
Station Rotation	35.5 (19.1)	45 (24.2)	51.5 (27.7)	20 (7.8)	34 (18.3)	3.15
Lab Rotation	42.5 (22.9)	20.5 (11)	23 (12.4)	42.5 (22.9)	57 (30.9)	2.72
Flip Classroom	42 (22.6)	34 (18.3)	29.5 (15.9)	27.5 (14.8)	53 (28.5)	2.92
Individual Rotation	19 (10.2)	41.5 (22.3)	50 (27.0)	35 (18.9)	40 (21.6)	2.81
Flex	8 (4.4)	14 (7.6)	22 (11.9)	27.5 (14.8)	114.5 (61.6)	1.78
ALa Carte	26.5 (14.3)	34.5 (18.6)	44.5 (23.9)	25.5 (13.8)	55 (29.6)	2.74
Enriched Virtual	17.5 (9.4)	36 (19.4)	24.5 (13.2)	26.5 (14.3)	81.5 (43.8)	2.36

Source: Author's Fieldwork,2023

Decision Rule: 0–1.49=VeryLow,1.50-2.49=Low,2.5–3.49 =High, 3.50 –4.0=Very High

The table above reveals that the Generic Blended Learning Model (Rotation Model) stands as the most prevalent blended learning approach among teachers in Ibadan Metropolis, Oyo State, Nigeria. This Rotation Model encompasses four distinct types: station, lab, flip, and individual rotation models. Notably, most teachers in Ibadan Metropolis seam less integrate these four Rotation Model types using WhatsApp as their learning platform.

Research Question Two

What is the most prominent digital- phobia among secondary school teachers in Ibadan Metropolis, Oyo State?

Table 2. The Most Prominent Digital-Phobia among Secondary School Teachers in Ibadan Metropolis, Oyo State

Items	Always	Sometimes	Rarely	Never	Not Applicable	Mean
	Freq (%)	Freq (%)	Freq (%)	Freq (%)	Freq (%)	
Techno phobia	34.5 (18.6)	36 (19.3)	27 (14.5)	69.5 (37.4)	19 (10.2)	2.99
Nomophobia	35 (18.8)	41.5 (22.3)	32 (17.2)	57 (30.7)	20.5 (11.0)	3.07
Cyberphobia	24.5 (13.2)	19.5 (10.5)	27.5 (14.8)	93.5 (50.2)	21 (11.3)	2.64
Telephonobia	7 (3.7)	14 (7.5)	13.5 (7.3)	121 (65.1)	30.5 (16.4)	2.16
Selfiephobia	20.5 (11.0)	35 (18.8)	47 (25.3)	54.7 (29.4)	28.8 (15.5)	2.72
Loremophobia	41.5 (22.3)	40 (21.5)	36 (19.4)	53 (28.5)	15.5 (8.3)	3.19
Ovetechnophobia	27 (14.5)	25 (13.5)	26.5 (14.2)	91.5 (49.2)	16 (8.6)	2.77
Nosophobia	16.5 (8.9)	28.5 (15.3)	24.5 (13.0)	86 (46.2)	30.5 (16.6)	2.54
Ergophobia	3 (1.6)	17 (9.1)	18 (9.7)	116 (62.4)	32 (17.2)	2.16
Clasmaphobia	16.5 (8.9)	23 (12.3)	23 (12.3)	98.5 (53.0)	25 (13.5)	2.50

Source: Author's Fieldwork, 2023

Decision Rule:0–1.49=VeryLow,1.50-2.49=Low,2.5–3.49=High, 3.50 –4.0=Very High

The table above outlines the prevalence of digital phobia among secondary school teachers in Ibadan Metropolis, Oyo State. The identified digital-phobias include Technophobia (fear of technology or discomfort around advanced technology), Nomophobia (fear of being without a mobile device), Cyberphobia (fear of computers or the Internet), Telephonobia (fear of telephones), Selfiephobia (fear of taking a photograph of oneself), Loremophobia (fear of losing a phone), Ovetechnophobia (fear of overwhelming technology), Nosophobia (abnormal fear of virtual teaching), Ergophobia (persistent fear), and Clasmaphobia (fear of virtual class management). Examining the data, Loremophobia (fear of losing a phone) emerges with the highest frequency, followed by Nomophobia (fear of being without a mobile device). On the

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other end of the spectrum, Ergophobia (persistentfear) and Telephonobia (fear of phones) exhibit the least reported instances among secondary school teachers in the region.

Hypotheses

H01: There will be no significant relative influence of digital phobia on blended learning effectiveness in Ibadan Metropolis, Oyo State

Table 3. the results imply that the coefficients of digital phobia variables

Model		Unstandardized Coef		Standardized Coef	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.739	0.548		17.767	0.000
	Digital Phobia	0.774	0.026	0.913	30.277	0.00
a. Dependent Effectiveness Variable: Blended Learning						

Source: Author's Fieldwork, 2023

The results imply that the coefficients of digital phobia variables are statistically significantly predicators of blended learning effectiveness. With one-unit increase in digital phobia, the blended learning effectiveness increases by 0.774, which was found to be a significant change, t (184) = 30.277 p< 0.05.

H02: There will be no significant school type difference in digital phobia in private and public secondary schools in Ibadan Metropolis, Oyo State.

Table 4. independent samples t-test was conducted to assess differences in digital phobia

Group Statistics					
School Type		N	Mean	Std. Dev.	Std. Error Mean
Digital Phobia	Private	69	26.7391	5.29054	0.6369
	Public	117	16.4615	4.72071	0.4364

Source: Author's Fieldwork, 2023

An independent samples t-test was conducted to assess differences in digital phobia between private and public secondary schools in Ibadan Metropolitan City, Oyo State. The results showed a noteworthy school type difference in digital phobia among secondary schools in the region (t=13.311, df=130.043; p<0.05). As a result, the hypothesis is rejected at the 0.05 significance level. This shows a substantial difference in digital. Phobia between private and public secondary schools in Ibadan Metropolis, Oyo State, with digital phobia being more prevalent in private secondary schools. The mean values for private and public respondents are 26.7391 and 16.4615, respectively, while the standard deviation values for private and public schools are 5.29054 and 4.72071, respectively.

H03: There will be no significant school type difference in blended learning effectiveness in private and public secondary school in Ibadan Metropolis, Oyo State

Table 5. independent-samples t-test was conducted to assess the distinction in blended learning effectiveness

Group Statistics					
School Type		N	Mean	Std. Dev.	Std. Error Mean
Blended Learning	Private	69	30.8116	2.34693	0.2825
Effectiveness	Public	117	22.2564	5.06365	0.4681

Source: Author's Fieldwork, 2023

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An independent-samples t-test was conducted to assess the distinction in blended learning effectiveness between private and public secondary schools in Ibadan Metropolis, Oyo State. The analysis reveals substantial school type differences in blended learning effectiveness among secondary schools in the region ($t=15.646$, $df=176.051$; $p<0.05$). Consequently, the hypothesis is rejected at the 0.05 level of significance. This signifies a noteworthy variance in blended learning effectiveness between private and public secondary schools in Ibadan Metropolis, Oyo State, with blended learning effectiveness being more pronounced in private secondary schools. The mean values for private and public respondents in the table above are reported as 30.8116 and 22.2564, respectively, while the standard deviation values for private and public schools are 2.34693 and 5.06365, respectively.

The study finds out that a significant portion (47.31%) utilized social media tools like WhatsApp for teaching and that most public-school teachers worked in schools with 31to40 teachers, and the majority (76.9%) had less than ten years of teaching experience in their current school. Notably, some public-school teachers in remote areas teach more than six subjects, contrary to the policy emphasizing specialization in senior secondary schools. Generic rotation blended learning was the most common (41.7%), while the Flex Model was the least used (4.4%). The study suggested that blended learning, particularly Flexible and Enriched Virtual Models, holds promise for 21st-century teaching.

Regarding digital phobias, Loremophobia (fear of losing one's phone) and Nomophobia (fear of being without a mobile device) emerged as the most common, indicating potential increase in teacher familiarity with technology. The research established a significant positive correlation between digital phobia and blended learning effectiveness, proposing that committed teachers were better equipped to overcome digital phobias, thereby enhancing blended learning outcomes.

The study also identified higher effectiveness in blended learning in private schools, potentially attributed to their commitment to delivering quality education. Significant differences in digital phobia were found between private and public schools, with private school teachers experiencing higher levels which may be due to greater expectations and potential job loss. Their search highlighted the intrinsic relationships between digital phobia and blended learning effectiveness among teachers in Ibadan Metropolis, underscoring the importance of addressing digital phobias to enhance blended learning outcomes.

The survey has seen an odd coupling of Digital phobia and blended learning effectiveness among teachers in secondary schools in Ibadan Metropolis, Oyo state, Nigeria that requires fresh analysis than simply categorizing teachers into adopters or non-adopters of tech integration in education. Although digital phobia as a concept is properly defined as an inert force that inhibits the students' educational advancement, in the context of this particular narrative it behaves as a two-fold force: a hindrance as well as an encouragement. The results obtained in the present study, pointing to a high positive relationship between the level of digital phobia and the effectiveness of the use of blended learning, open a discussion of the contours of teacher appropriation of digital tools in a continuously changing educational environment.

In fact, the initial observation of such relationship seems quite counterintuitive given the fact that technology anxiety, which is basically known as digital phobia, increases with blending learning effectiveness. In the older models, such as TAM, perceived ease of use and perceived usefulness are determined to have a significant impact on technology acceptance (Wicaksono, & Maharani, 2020). Normally, higher state anxiety about digital tools in teaching should lead to low efficiency in employing the digital tools. However, as consistent with the findings of

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this study, in places that teachers are forced through the employment desk to deliver quality instruction-for-instance private school sponsorship-a pointer to digital phobia is likely to result in enhanced use of the blended learning tools. The TPB expands upon that further, and points out that even when psychological reactance is present, the strength of one's behavioral intentions can overpower it. Given teachers' roles and responsibilities, their concern with the students' academic progress and their personal professional image might also force them to use new tools, though apprehensive, as part of the teaching and learning mandates they have taken an oath to discharge.

This reinterpretation of 'digital phobia' can be related to the general psychological concept of eustress beneficial stress that does not hinder performance, but boosts it. So, in certain private school based conditions when the stakes are considerably higher, digital phobia may well be redefined as some form of eustress that should make teachers go out of their ways and thus ensure proper and optimal interactions with technologies outside the traditional classroom. This discovery raises the question of whether some types of anxiety may, in fact, be used as a means of promoting personnel development, if not in this position, then in another one.

This research established the variation in between the two sets of teachers and this can be said to be an indication of the variation in the organizational culture and paradigm as well. For instance, one can easily imagine that since private school students are assumed to be subjected to higher parental expectations as well as more competitive environments, that there are situations which create conditions in which the digital phobia is compounded by considerations regarding the loss of professional status. This does a lot in supporting the views that Ertmer & Ottenbreit-Leftwich (2010) have advocated for asserting that culture of an institution is key to defining use of technology by teachers. In such settings, fear brings pressure whereby by digital phobia becomes a prod that may compel teachers feel as though they have to reverse the phobia of the tools of technology they have developed in order not to let down the whole institution.

In contrast, the present results have shown the decreased level of digital phobia among the teachers in the public school and the following reason might be observed: there are not fewer pressures, but less intensive ones when technologies are not so linked to the prospective job performances. But this may have compromised innovation and effectiveness: The lower rank of the effectivenes of the blended learning might be caused by the fact that the incorporation of media-enhanced instruction in such environment is considered less difficult. This is in agreement with the study of Omotayo & Tiamiyu (2017), in their study they stated that it could be that in low pressure learning conditions or environment the teacher may not have the external pressure to adopt new technologies.

However, as other local digital phobia such as Loremophobia and Nomophobia manifest in both formal and informal computing environment it can be then argued that these are more than institutional based phenomenon but rather part and parcel of digital society. These phobias are core to the broader dependence on the digital environment and are more general than professional ones. That is why it is possible to state that interventions intended for the reduction of digital anxiety can only be integrated and the major focus must be made not only on the technological aspect of a particular type of digital anxiety but the psychologic one too.

Implications for Educational Practice and Policy

These findings have implications which go beyond the place of study that is Ibadan Metropolis in our search for information and knowledge in a world that is increasingly becoming a 'global village. For educational leaders and policymakers the task is to grasp the both possibilities

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opened by the digital phobia. The basic idea is to avoid the aggressive fight against anxiety and work on changing one's attitude instead of trying to rid oneself of anxiety, which might be impossible or even beneficial, one should strive to make it productive. It is important that contents of professional development programs reflect this, and are developed to enable the acquisition of technical knowledge and the development of educative capabilities as well as personal and organisational coping mechanisms (Webster-Wright, 2009). This could involve designing technology Mes if you will, where the potential for failure is not as high, and where the small successes, no matter how they are viewed, are trumpeted.

In the case of private schools where much emphasis is placed on students' performance, these pressures should be accompanied by support structures that do not make digital phobia a very cumbersome condition. Such could be peer observation and coaching of less self-assured teachers by more experienced teachers or learning networks where teachers discuss with their counterparts regarding the best practices and some of the challenges they have met at the learning institution. It should be possible to achieve a situation in which digital phobia would not be concealed or considered shameful, but controllable and comprehensible.

In contrast, mainstream schooling may be able to derive benefits from processes that incrementally raise the risks tied to using the technologies at hand, which should be enough to compel teachers into exploring the approaches marked by blended learning more intensively (O'Brien, 2015). This may be done through reward systems linked to the achievement of positive results that stem from the incorporation of the tools in learning, teaching and assessment; or through progressive career progression that fosters development of ECCE practitioners in using technologies in their job.

At the policy level these findings imply strong contextual nature of education and, therefore, the necessity to adopt corresponding changes in policy. One size fits all technology integration with little consideration for the level of digital phobia and institutional pressure varies across different types of schools will not work. However, what is important is a differentiated policy approach where policy interventions being made are subjected to the need and environment of the private and public schools. It should be possible to refine it as time goes on depending on the feedback and the rapidly changing environment of the digital world.

Reflection and the Path Forward

However, it is desirable to point out the limitations of this study, which may affect its generalization of the produced findings. Use of self- reported data is always inclined to social desirable response that may have caused the teachers to minimize their digital insecurities or overemphasize their use of blended learning. Furthermore, the cross sectional research design hampers the study possibility of having causal relationships. As for the study's limitations, the authors recommend the use of longitudinal research designs aimed at observing shifts in digital phobia and efficacy of blended learning over time. Such studies could offer an improved picture of how these variables are mutually related and in what way they might change in the process as teachers accumulate more experience using these technologies.

In addition, the study should generalise the findings by investigating more schools of different geographical location and different socio-economic status of the regions. Such a comparison can be made between urban and rural schools where, for example, the effectiveness of blended learning can also be compared with the presence or absence of digital phobia. Furthermore, qualitative studies, not limited to interviews with the teachers or focus groups could reveal personal and emotional aspects of digital phobia and would give much more perspective on further difficulties and possibilities.

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The nature of the relationship between digital phobia and blended learning effectiveness as evidenced in this study can be said to produce several research questions for future research (Anthony et al., 2019). One of the additional research directions is to identify the moderating effect of teacher self-efficacy concerning the effects of digital phobia. Self-efficacy which is operationalised as confidence in one's capacities to achieve in given context (Bandura, 1997) could be the factor that determines whether digital phobia acts as a barrier or motivation. Exploring the relationship between self- efficacy and digital phobia can help in understanding not only aspects of anxiety but also designing focused interventions that not only combat anxiety but also build up the teachers' confidence on the use of digital tools.

In addition, it would be meaningful to focus on the consequences of digital phobia on teachers' work: burnout and attrition. Since technology use in the classroom is progressing, comprehending how chronic digital stress impacts the teachers' employment progression may help educators prevent it and benefit the teachers. Although, quantitative research that aims to measure the impact of digital phobia on teachers, in general, may help identify the degree of this problem and the extent of its consequences, access to case, accounts of teachers' experiences of digital phobia could provide researchers with richer insights into the loss of relationship benefits, personal costs, and the resources necessary to address these losses.

Last but not the least, it would be possible to investigate how organizational culture affects both digital phobia and effectiveness of blended learning which could help school leaders. Schools that promote everyone within the institution to innovate, collaborate and engage in learning processes to embrace changes may assist teachers to overcome phobia and engage in the use of ICT. Research comparing schools with different organisational cultures could ascertain effective ways in which organisational cultures could universally adapt to enhance teachers' practice in the digital age.

Conclusion

In the current landscape of twenty-first-century education, teachers are expected to be proactive, committed, and unwaveringly dedicated to their craft, evolving beyond mere proficiency. The education sector is undergoing a profound transformation, emphasizing the necessity for educators to be technologically adequate in the teaching-learning process. Both the Nigerian government and the global community acknowledge the importance of student-centered learning, setting rigorous standards for its realization. The Teachers Registration Council of Nigeria upholds professional standards for teachers. However, it is concerning that fifteen percent of teachers still handle the responsibility of teaching more than six subjects in senior secondary schools. This practice not only contradicts the required specialized qualifications but also places an unsustainable burden on educators, impeding their ability to be wholeheartedly dedicated.

This situation underscores the need for a transformative approach to education, one that can adapt to the evolving demands of our time. Blended learning, particularly the Flex Model, emerges as a solution. While the disruptions caused by Covid-19 are now in the past, the paradigm shift initiating in traditional teaching and learning endures. Blended learning, especially the Enriched Virtual and Flex Models, has positioned itself as the future of education. Beyond the influence of Covid-19, factors like subsidy removal in Nigeria continually reshape the way we live and work. The ever-changing dynamics underscore the paramount importance of embracing blended learning. It provides the adaptability and resilience needed to navigate these shifts seamlessly. Our findings emphasize that digital phobia among secondary school teachers significantly impacts the effectiveness of blended learning. Therefore, educational stakeholders must foster a supportive organizational culture,

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address digital phobias, and introduce flexibility into teaching methods. Only by doing so can we unlock the full potential of twenty-first-century education and prepare our students for a future that is as dynamic as it is unpredictable.

Based on research findings, the following recommendations are suggested: (i) Promote the use of Flexible Models of Blended Learning: Flexible Models of Blended Learning are flexible and adaptable approaches to blended learning that can be tailored to the needs of different schools and students. This approach is also relatively cost-effective, making it a good option for schools with limited resources; (ii) Provide support for teachers in developing their digital skills: Many teachers may not have the digital skills necessary to use blended learning effectively in their classrooms. Schools can provide support for teachers by offering training and professional development opportunities; (iii) Create a positive and supportive school culture: Schools can create a positive and supportive school culture by rewarding and rewarding teachers for their efforts, and by providing opportunities for teachers to collaborate and learn from each other; (iv) Provide financial support for schools to implement blended learning: Blended learning can be a more expensive teaching and learning approach than traditional face-to-face instruction. Governments and other stakeholders can provide financial support for schools to implement blended learning, especially in low-resource areas; (v) Provide access to technology for all students. All students should have access to the technology they need to participate in blended learning. This includes providing students with tablets or laptops and ensuring that they have access to the internet.

In addition to the recommendations above, it is also important to note that blended learning is not a universal solution. Schools must carefully consider their own needs and resources when deciding how to implement blended learning. It is also important to involve students and parents in the planning and implementation process. By following these recommendations, schools can create blended learning environments that are effective and beneficial for all students.

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