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Cyberloafing in the classroom: A qualitative study with Nigerian undergraduate students

Ciberescapismo na sala de aula: Um estudo qualitativo com estudantes universitários nigerianos

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Abstract

Background and Objective: The rise of academic cyberloafing — the non-academic use of internet connections during class — has emerged as a concern within the university context. While cyberloafing in the workplace has received ample attention, its counterpart in educational settings, particularly in Nigeria, remains less explored. This study aimed to explore and describe the experiences and perspectives of undergraduate students at a private Nigerian university regarding cyberloafing. **Method**: Using an adaption of the Cyberloafing in Educational Settings Scale, this study targeted a class of 15 final-year library and information science students. Data collected online underwent qualitative description and was presented verbatim. **Results**: Though students were unfamiliar with the term 'cyberloafing,' they acknowledged participating in such behaviors. The findings revealed habitual social media use during class hours, the employment of online tools for academic purposes, and a prevalent trend of gaming activities, often driven by internet addiction and boredom. Students also conveyed an understanding of the potential downsides and benefits of digital engagements during academic hours. **Conclusion**: The study urges university policymakers to implement measures promoting positive internet use and incorporate ethical cyber behavior awareness into curricula. It further recommends that parents and lecturers foster proper online usage and advocates for society-wide campaigns to raise awareness about ethical digital technology behavior.

Keywords: Cyberloafing; Undergraduate students; Internet Behavior; Cyber Ethics; Qualitative Research.

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Resumo

Contexto e Objetivo: O aumento do *ciberescapismo* (*cyberloafing*) académico — o uso da *internet* para fins não académicos durante as aulas — emergiu como uma preocupação no contexto universitário. Embora o ciberescapismo no local de trabalho tenha recebido ampla atenção, o tema tem sido menos explorado em contextos educacionais, particularmente na Nigéria. Este estudo visou explorar e descrever as experiências e perspetivas de estudantes universitários de uma universidade privada nigeriana sobre o cyberloafing. **Método**: Utilizando a *Cyberloafing in Educational Settings Scale* para a recolha de dados, o estudo focou numa turma de 15 estudantes de ciência da informação e ciências bibliotecárias do último ano. Os dados recolhidos via *online* foram sujeitos a descrição qualitativa e apresentados de forma verbatim. **Resultados**: O estudo constatou que, embora os estudantes não estivessem familiarizados com o termo *cyberloafing*, reconheceram participar em tais comportamentos. Os resultados mostraram um padrão regular de uso das redes sociais durante as aulas, a utilização de ferramentas *online* para fins académicos e uma tendência prevalente para atividades de jogo, frequentemente impulsionadas por adição à *internet* e aborrecimento. Os alunos também demonstraram compreender os potenciais benefícios e desvantagens dos envolvimentos digitais durante as horas académicas. **Conclusão**: O estudo insta os decisores políticos universitários a implementar medidas que promovam o uso positivo da *internet* e a incorporar a consciencialização sobre o comportamento ético cibernético nos currículos. Além disso, recomenda que os pais e professores promovam o uso adequado da *internet* e defende campanhas de sensibilização social para o comportamento ético com a tecnologia digital.

Palavras-chave: Ciberescapismo; Estudantes universitários; Comportamento na *Internet*; Ética Cibernética; Pesquisa Qualitativa.

Introduction

The onset of the technological era has imposed an expectation of appropriate behavior, particularly in the realm of digital engagement. Technology and internet advancements have fostered global communication and idea exchange (Dunmade, 2022), revolutionizing academic work. Students now harness online resources to complete assignments, research, and attend classes remotely.

However, the benefits of this digital transition are counterbalanced by an increase in cyber behaviors, specifically *cyberloafing*, among students. The Covid-19 pandemic and the resultant surge in internet usage have further emphasized the need for ethical behavior. Indeed, the ubiquitous use of technology and internet connectivity has transformed the educational landscape, compelling educators to optimize information and communication technologies to enhance pedagogy (Archambault et al., 2022; Mhlanga et al., 2022).

The influence of technology in molding human behavior is a burgeoning issue that merits further inquiry, given its escalating relevance. Despite the various advantages, digital device usage poses considerable challenges that demand resolution (Ahmaddien et al., 2022). Thus, in this technological era, maintaining appropriate behavior is not merely desirable but essential. Though technology and internet advancements have fostered global communication and idea exchange, there is an urgent need to address unethical cyber behaviors like cyberloafing.

Research Objectives

The study aimed to explore and describe the experiences and perspectives of university undergraduates at a private university in Nigeria concerning their engagement in cyberloafing. Specifically, the objectives of the study were to understand and describe undergraduates' experiences and perspectives related to cyberloafing through social media, online academic resources, and gaming activities.

Literature Review

Cyberloafing

Cyberloafing, sometimes referred to as *cyberslacking* or *internet loafing*, is the practice of using internet access for personal purposes during work hours (Mujtaba, 2003; Tandon et al., 2022). Initially identified as a form of production deviant behavior in the workplace, cyberloafing involves using the internet for non-work-related activities during designated working times (Lim et al., 2002). The definition has since been broadened to include all usage of devices during learning periods, representing a deviation from focused academic activities (Gökçearslan et al., 2023). Despite contextual differences, cyberloafing at work and school share the core similarity of time wastage. Whether students use the internet for personal reasons during class or employees do not focus on their tasks, both instances detract from the primary goal: learning or working. This technologically facilitated diversion is increasingly conspicuous in contemporary educational and work environments.

From an academic standpoint, cyberloafing presents a significant hurdle to effective knowledge transfer, an issue of growing concern among educators. It involves students using the internet for non-course-related activities, such as browsing social networking sites, watching online videos, playing games, tweeting, listening to online music, or sending emails (Khomiakova, 2022; Mlotek-Marion, 2022; Turan et al., 2021; Varol & Yildirim, 2019). Like professionals who do not concentrate on their work, students engaging in cyberloafing divert their attention and energy from the learning process.

Cyberloafing Assessment

To better assess cyberloafing behavior among undergraduate students, Saritepeci and Uğurcan (2021) proposed a new scale that was applied to Turkish institutions, the *Cyberloafing in Educational Settings Scale* (CESS). The researchers postulated the presence of three distinct types of cyberloafing within an educational environment. This up-to-date scale acknowledges the limitations of its predecessors by considering the contemporary and evolving nature of cyberloafing, which older models might fail to capture accurately due to outdated assumptions about Internet usage patterns. Consequently, if emergent forms of cyberloafing are not incorporated into the assessment, there is a risk of inaccurate results. The revised 26-item scale, thus, integrates current literature and identified concerns related to cyberloafing, providing a modern, valid, and reliable measurement model.

Saritepeci and Uğurcan (2021) categorized cyberloafing into three types. The first, Social-Purpose Cyberloafing, highlights a significant portion of cyberloafing activities rooted in social interactions, both real and virtual (Wu & Lee, 2020). The second type, Game-Purpose Cyberloafing, involves online gaming, a behavior common across various age groups (Luersen, 2021). Lastly, Academic Cyberloafing denotes using the internet and other information and communications technologies to access diverse content for personal development or educational/professional responsibilities (Akgün, 2020; Durak, 2019).

Several researchers have contributed to developing valid and effective instruments to measure the level of cyberloafing behaviors exhibited by university students in educational environments. Contributions from Akbulut et al. (2016), Blanchard and Henle (2008), Henle and Blanchard (2008), Koay (2018), Ugrin et al. (2018), and Yaşar and Yurdugul (2013) have been instrumental in this regard, underpinned by cyberloafing-related literature and previously established scales. However, as Dunmade (2022) noted, the swift alterations in social networking platforms inevitably change the behavior of ICT users.

This constant evolution in the ICT landscape calls for updated measurement instruments, such as the CESS by Saritepeci and Uğurcan (2021). Thus, this study adapted the CESS as a standardized measure of cyberloafing behavior and a measure to capture qualitative responses among the participants.

Method

Overview of Research Design

The study employed a qualitative methodology to investigate the phenomenon of cyberloafing among university undergraduates in Nigeria.

An online survey, adapted from the CESS as a standardized cyberloafing behavior measure, was used for data collection. Comprising a set of questions designed to capture qualitative responses, the survey was disseminated to students via their class WhatsApp group. Students could respond by typing their answers or sending voice notes to the researchers. Notably, all students favored voice notes as their response medium. These voice notes were securely downloaded, stored, and transcribed for analysis.

The collected data underwent a qualitative descriptive analysis, in line with the constructivist approach adopted for this investigation. This approach underscores the importance of subjective experiences and perspectives in interpreting one's environment. Thus, this method enabled exploring varied and nuanced views on cyberloafing among Nigerian university students. The constructivist approach facilitated an understanding of personal interpretations of cyberloafing, with an appreciation for cultural and societal contexts. Additionally, it provided an in-depth analysis of social and cultural factors influencing cyberloafing behaviors, taking into account potential individual or group variances.

Study Participants

The participants of this study were undergraduate students from Adeleke University, Ede, Osun State, Nigeria. This selection was purposefully made, given the study's focus on examining cyberloafing behavior in university classrooms. Before the instrument's deployment, it underwent a pre-test with two undergraduate students: one from Covenant University, Ota, and one from Bowen University, Iwo. Additionally, a Library and Information Science expert specialized in internet-enabled surveys checked the instrument to ascertain content validity.

The total sample included fifteen final-year students from the Department of Library and Information Science, representing the entire population of that department's senior class. As per university policy, all the participating students resided where internet connectivity was readily available.

Investigator Description

The authors of this study were experienced scholars in Information Science with expertise in information behavior and societal issues related to Information and Communication Technology (ICT). The first author had on the connection between information behavior and societal aspects influenced by ICT. Both authors had extensive experience conducting qualitative research, including formulating research questions, selecting methodologies, collecting and analyzing data, and interpreting findings. Their expertise also included working with university students in Nigeria, providing them with a nuanced understanding of cyberloafing's cultural and social aspects. Their combined knowledge contributed to the research's credibility and depth.

Researcher-Participant Relationship

In this study, the researchers maintained a respectful and professional stance with the participants, with whom no prior relationship existed. Ethical standards were upheld throughout the process; participants were informed of their right to voluntary participation and the option to withdraw without penalty or negative consequences. The emphasis on these principles sought to ensure that individuals did not feel pressured or obligated to continue if they chose to leave the study. Furthermore, the researchers explicitly stated that there were no known or anticipated risks associated with the survey participation, fostering transparency and trust while prioritizing the well-being of the participants.

Participant Recruitment and Selection

Recruitment was conducted via the participants' class WhatsApp, where the researchers communicated the study's objectives and approach. After identifying individuals willing to participate, the researchers utilized the WhatsApp group to ensure an efficient and convenient method of communication and coordination. This method facilitated the smooth sharing of the standardized CESS measure of cyberloafing behavior, along with related questions and collection of responses, all aligned with the study's three objectives. Using the class WhatsApp group platform streamlined the recruitment process and provided a familiar and accessible setting for participation. The participants' active interest and willingness to engage in the study were evident through this approach, which underscores the researchers' adept utilization of technology to simplify data collection while respecting the participants' comfort and convenience. Items on the CESS were used as items for the interview guide.

Data Collection

Data were collected on January 18, 2022, using an open-ended survey incorporating items adapted from the CESS subscales (Saritepeci & Uğurcan, 2021). In the first subscale, respondents answered questions based on the following items:

- "I frequently check notifications on my social media (Instagram, Facebook, Twitter, TikTok, etc.) accounts."
- "I like and comment on social media (Instagram, Facebook, Twitter, TikTok, etc.) posts."
- "I often check for instant online messaging apps (WhatsApp, Messenger, etc.)."
- "I browse through social media (Instagram, Facebook, Twitter, TikTok, etc.) posts."
- "I canvass my friends' social media (Instagram, Facebook, Twitter, TikTok, etc.) profiles."
- "I share stories on social media (Instagram, Facebook, Twitter, TikTok, WhatsApp, etc.)."
- "I share text, photos, videos, etc., on social media (Instagram, Facebook, Twitter, TikTok, etc.)."
- "I take a photo or a selfie."

In the second part, respondents answered questions focused on academic activities:

- "I read digital texts on the issue covered in the course."
- "I watch videos on the subject covered in the lesson."
- "I try to find the answer to a question asked during the lesson on the internet."

The third part focused on gaming activities:

- "I play games (Fortnite, Codm, PubG, Minecraft, etc.) that more than one person can play over the internet."
- "I play digital games (candy crush, angry bird, arcade games, etc.) that do not require an internet connection."
- "I download games or apps."

Copies of the questionnaire were distributed to students during a class session, and they were encouraged to complete them at their convenience, returning the filled documents the following day.

Data Registration and Transformation

Out of 15 students, six provided suitable and complete responses for analysis. The respondents comprised three males and three females aged between 19 and 21. The internet skill levels were diverse, with one self-rating as an intermediate user, four as advanced users, and one as an expert user.

The respondents were designated as R1 through R6, in no particular order. Data were transcribed by transferring participant verbatim responses to Microsoft Word, part of the Office 365 Productivity suite. A document was organized with headings for each question and subheadings for individual responses. Unnecessary repetitions and words were removed, grammatical errors corrected, and responses were returned to the respondents to check that their verbatims were adequately documented.

Data Analysis Strategies

The research employed qualitative description; a method focused on systematically portraying phenomena. This approach facilitated the exploration of the characteristics and experiences of the subject without undue theoretical interpretation, aiming for a rich and detailed account. Selected for its aptness in addressing the specific research questions, qualitative description enabled the findings to be conveyed clearly and accessibly, aligning with recognized standards in the field (Colorafi & Evans, 2016; Doyle et al., 2020).

Results

Comprehension of Cyberloafing for Social Purposes

The results related to the first objective, which aimed to understand the undergraduates' comprehension of cyberloafing for social purposes, reveal a habitual social media use pattern during class time. Extracted from responses to the CESS subscale, participants provided a nuanced recognition of both the allure and the potential negative impact of engaging with social media during class time. The verbatim responses, organized, coded, and summarized, were as follows:

R1: "I can say that I have a good understanding of the use of social media platforms. It's funny that once I get carried away checking my notifications, I may even forget that I am in class. I check notifications on my friends' social media pages, update my posts, and comment on trends. TikTok is like an escape valve for me. The videos are short and exciting, and one thing leads to another. Before I know it, I have spent thirty minutes of class time checking different handles. I am so much a social media addict."

R2: "I do so much on social media. I use it virtually 24-7. Once my phone beeps, I check it to see what is going on, and from there, I keep on checking what is up in the life of my social circle. It's always good to keep up with my friends. I make several videos on so many different platforms: Snapchat, TikTok, Instagram, and the like. It's always good to share them, just for laughs and for fun."

R3: "I am so used to my social media accounts. It's always so much fun for me to keep up with SM. I update my status, share stories, and do so many other things, as do my friends as well, sometimes I miss some important lessons in class due to social media addiction."

R4: "Occasionally, it's lovely to share something on social media while seated in the classroom with my peers, in some cases, I even tag them in a particular post on Instagram or Twitter just to keep them updated. I believe the major reason I love using social media is that it is where I get all the latest trends and information around the world, this leads to me getting distracted and getting misinformed in some situations."

R5: "When it comes to socializing and staying connected with peers scattered around the globe, SM is one thing I can barely do without, even when I am receiving lectures. While the lecturer is distracted, I can quickly respond to pending messages and check up on hashtags that are making waves at that particular moment on Twitter."

R6: "During lectures, I like to capture moments using Snapchat with my classmates while lessons are ongoing so I can share and upload them on my snaps. Occasionally, we take pictures while lessons are ongoing and we post them on our

class's page for fun and jest after the class has ended, this results in us not paying attention when some cogent lessons are being taught."

Cognizance of Cyberloafing for Academic Purposes

The results related to the second objective, which sought to evaluate the students' cognizance of cyberloafing for academic purposes, unveil a mixed pattern of behaviors that link online tools to academic engagement. Whether enhancing understanding through videos, accessing digital texts, or seeking instant answers during discussions, participants demonstrated an awareness of the potential benefits and drawbacks of integrating digital resources into their academic experience. The following are selected verbatim responses, which have been organized, coded, and condensed:

R1: "Using SM made accessing class notes and other relevant information easier because of tools like Slideshare and Google Drive, which allow me to download course materials in DOC, PPT, and PDF formats, which I can always access from time to time on my mobile phone or laptop."

R2: "Some of the lessons I am taught are readily available on YouTube, and it is usually detailed there; this usually gives me a better understanding and knowledge of the course as a whole."

R3: "Whenever we are having a brainstorming session, I tend to go online to source answers to give me an edge during such sessions, this has been a thing with me for several semesters as it makes me seem bright among my peers"

R4: "Out of fear or lack of confidence to ask for further explanation from my lecturer, I preferably watch videos online to give me a clearer picture of what is being addressed as the lesson is going on. This is because after the lesson has ended, I might be occupied with something else and forget to follow up on the lesson taught."

R5: "One time during a lesson taught in company law, I was much more invested in a particular issue, I went online to check on the said issue, and before I knew it, I had gone from that issue to another, and I kept going till that lesson was over. I was so deep into it; I didn't take any notes as soon as I went online."

R6: "Most lessons I take are practically inclined, with some of us having no prior knowledge. In place of this, I tend to read digital texts, research websites, and watch videos on YouTube to give me an insight into what is to be done while the lesson and practical session are going on in the laboratory."

Awareness of Cyberloafing for Gaming Purposes

Addressing the third objective, which focused on assessing the students' awareness of cyberloafing for gaming purposes, the findings uncovered a prominent trend of gaming activities among the student population. The students' responses demonstrate a pattern of engagement with various types of online and offline games, often as a means to relax or divert attention from class content they find uninteresting. Several respondents preferred playing games with friends or classmates, underscoring the social aspect of gaming. Here is a summary of participants' responses, each shedding light on a unique aspect of gaming behavior:

R1: "While lessons are being taught, I play Call of Duty mobile with some of my friends and even classmates to kill time especially if I am getting uninterested in the lesson being taught at the moment, this is usually fun due to the circumstances surrounding it and we share banter while at it."

R2: "I love to download games on the university's internet whenever I go to read as it is faster at night, I do this whenever I have read and need a break to relax or unwind while resting."

R3: "Concentrating during lessons is harder as I tend to play candy crush, it is more or less like an addiction to me, probably a ritual as I always look forward to unlocking the next stage in the game, this has been going on for quite several semesters."

R4: "I usually play Pubg at school with my friends and classmates to help me relax from school work, and it makes me feel at ease. Oftentimes, break time is the best time to play Pubg but sometimes I play Pubg even during class hours. I secretly play while the facilitator is busy discussing."

R5: "Personally, playing Codm is one of the best past-times I acquire especially with my clique. Playing Codm is just more than fun to me, sometimes it is a competition as there are tasks to beat while playing it. I believe this makes me sharper intellectually as I get to experience a soldier's life and it helps me reduce educational and work stress while at it."

R6: "Games like Cooking Madness, Angry Bird and Fishdom are my favorites, I am always hooked while playing them both in classes and when I am free, it is a way of whiling away time and relieving stress, sometimes I play these games when I am already tired in the class sometimes to prevent me from sleeping off while lectures are ongoing."

Discussion

Digital transformation in academia presents both opportunities and challenges. The present qualitative study sought to delve into the experiences and perspectives of undergraduates at a private university in Nigeria concerning their engagement with cyberloafing through social media, academic online resources, and gaming.

Our exploration concerning the use of social media demonstrated that undergraduates often find themselves swayed by the lure of notifications and interactions on platforms such as Instagram, Facebook, Twitter, and TikTok. This allure, coupled with the need for social recognition and connection, resonated with previous findings by Khomiakova (2022) and Mlotek-Marion (2022), who highlighted educators' concerns about students' internet-based distractions. The present study further affirms the findings of Sevinç and Dogusoy (2022), who suggested that cyberloafing poses a substantial barrier to effective knowledge transfer, pointing to a potential disruption in the learning trajectory.

When evaluating undergraduates' experiences with online academic resources, we found a mixed pattern of behaviors intertwining online tools with academic endeavors. This dichotomy, where digital tools can either aid or distract from academic pursuits, is echoed in extant literature. Li and Finley's (2022) are aligned with our findings, wherein students, despite recognizing the academic potential of digital tools, still drift towards activities like online chatting. They postulate that technology controls could be a key deterrent to such distractions. Similarly, the repercussions of cyberloafing — including tardiness for classes, procrastination, and self-imposed social isolation — highlighted by Meurer and Costa (2022), further underline the potential pitfalls of unchecked digital immersion. Beyond these immediate consequences, the broader academic outcomes stemming from cyberloafing have garnered much attention. Mihelič et al. (2023) and Tarik et al. (2023) underscore that cyberloafing can seriously hamper students' focus, information retention, and engagement, thereby compromising meaningful learning.

This assertion is further bolstered by Gökçearslan et al. (2023) and Cook (2017), who have drawn correlations between high levels of cyberloafing and diminished academic performance. In contrast, some researchers argue for a more nuanced understanding of the cyberloafing-academic performance link. For instance, Lim and Teo (2022) posited that moderate levels of cyberloafing could serve as a mental break, allowing students to recharge and refocus on their academic tasks. This view was also reiterated by She and Li (2023). Additionally, Rahman et al. (2022) suggested that the type of cyberloafing activity could be relevant in understanding its impact on academic performance, with some activities having a more detrimental effect than others.

The insights related to gaming purposes revealed a pattern of engagement in gaming, often at the cost of academic attention. Many students reported that gaming served as both an escape from academic pressures and a medium for social connection. This behavior, especially the communal aspect of gaming, finds resonance with the observations of Metin-Orta and Demirtepe-Saygılı (2021), who observed that individuals with a higher propensity for gaming frequently engaged in cyberloafing activities, even during lectures.

Building on our primary findings and echoing our participants' experiences, we recognize that the contemporary Nigerian academic landscape, influenced by digital proliferation, presents challenges and opportunities. In Nigeria, much like in other countries (Pérez-Juárez et al., 2023), the prevalent use of digital devices and internet access potentially facilitates cyberloafing among students. The study brings to the forefront hypothetical explanations, such as the the competitive nature of the education system encouraging alternative coping strategies, including procrastination and cyberloafing (Spiratos, 2021), and the integration of technology in classrooms which may promote multitasking and distractions (Wang, 2022).

While our study reaffirms educators' concerns about classroom cyberloafing for social purposes (Khomiakova, 2022; Mlotek-Marion, 2022; Sevinç & Dogusoy, 2022), previous research has identified various factors contributing to cyberloafing behavior, such as cultural factors, boredom, and low engagement in academic activities (Dmour et al., 2020; Rana et al., 2019). Regarding the Nigerian context, it is worth exploring whether cultural values, educational policies, or other socioeconomic factors might encourage students to engage in cyberloafing activities during class. Our insights on academic and gaming-related cyberloafing resonate with recent Nigerian research indicating the versatility of students' online behaviors (Nwakaego & Angela, 2018; Twum et al., 2021). Prior research has shown that factors like increased internet accessibility, availability of digital devices, and educational institutions' policies can contribute to cyberloafing behavior (Baturay & Toker, 2015). Investigating these factors in the Nigerian context could help identify the reasons behind the prevalence of cyberloafing among undergraduate students and inform potential interventions.

Drawing from our primary findings and the broader literature on cyberloafing, it becomes evident that potential interventions need to be implemented to mitigate the negative effects of cyberloafing on academic performance and learning outcomes among Nigerian undergraduate students. Wu et al. (2019) suggested that implementing technology controls, promoting digital literacy, and integrating technology

into curricula meaningfully could help reduce cyberloafing. By applying these strategies in the Nigerian context, educators and policymakers may be able to address the challenges posed by cyberloafing and improve academic performance among undergraduate students.

Continuing this trajectory, we suggest the following interventions to curb the negative implications of cyberloafing among Nigerian undergraduates:

1. Educational institutions should establish clear policies and guidelines regarding the acceptable use of the internet and digital devices in the classroom (Ribble & Park, 2022). Such a policy could include restricting personal devices, blocking certain websites or apps, and closely monitoring internet activities.

2. Educators should implement pedagogical strategies that engage students in active learning and minimize opportunities for cyberloafing (Beri & Gulati, 2022). For instance, incorporating interactive and collaborative activities, purposefully using technology, and providing regular feedback could promote student engagement and reduce potential distractions.

3. Educators and institutions should provide training and support to help students develop time management and digital literacy skills, which can help them better navigate the demands of academic work and reduce the temptation to engage in cyberloafing (Reizer et al., 2022).

4. Furthermore, the introduction of technology controls, as evidenced by Koay and Poon (2022) and Li and Finley (2022), could also be instrumental. Their research showed that software blocking access to non-educational sites during lectures can minimize cyberloafing among university students. Similarly, Meurer and Costa (2022) suggested using browser extensions that limit access to distracting websites during study time as a potential intervention.

Limitations and Future Research

In contextualizing our findings, it is essential to acknowledge certain limitations of this study:

1. The research was confined to a private university setting, potentially limiting its applicability across the broader student population in Nigerian universities.

2. The CESS does not encompass the latest cyberloafing indicators, like live streaming and photo editing.

3. The current cyberloafing indicators for gaming do not capture the essence of contemporary gaming experiences, such as the customization and world-building opportunities present in games like Minecraft and Roblox.

These limitations point to several avenues for upcoming research:

1. While cyberloafing's detrimental effects on academic performance are recognized, the potential advantages of moderate cyberloafing and the varied impacts of distinct cyberloafing activities merit further exploration.

2. The expanding use of ICT underscores the need to study the encompassing social and behavioral challenges, not limited to cyberloafing but spanning emerging aspects of cyber-ethical conduct.

3. The overlooked behaviors stemming from digital age activities, such as online dating and shopping, warrant inclusion in future cyberloafing scales to ensure a comprehensive measurement of this phenomenon.

4. The study utilized a newly developed scale to explore university students' cyberloafing behaviors. Given the increased embrace of technology during the COVID-19 era, especially in remote learning contexts, delving into this relationship and the evolving dimensions of cyberloafing can provide insightful outcomes. Evaluating cyberloafing's significance in Open and Distance learning models can be particularly impactful.

5. Lastly, given the prominence of social-purpose cyberloafing in terms of duration and engagement, understanding students' social cognizance becomes integral in future studies on the topic.

Conclusion

This study comprehensively analyzes undergraduate students' engagement in cyberloafing activities in Nigeria. Our exploration into cyberloafing for social, academic, and gaming purposes revealed that many students, aware of its magnetic pull and potential detriments, engage in social media during instructional times. Additionally, while online academic tools can augment learning experiences, they also introduce opportunities for distractions. Gaming, both digital and traditional, emerges as a favored diversion for many, serving as both an escape and a means of bonding with peers. Given these insights, the necessity for structured educational interventions becomes clear. There is a pressing need for educators, counselors, and parents to collaborate, ensuring the beneficial and purposeful use of online tools. Promoting a responsible digital academic culture remains paramount, and continued research will further aid in shaping informed strategies to tackle the complexities of the digital academic landscape.

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