

PRELIMINARY INSIGHTS INTO CYBERSLACKING IMPACT ON GRADUATE STUDENTS ACADEMIC PERFORMANCE: A CASE STUDY OF A BUSINESS SCHOOL IN GHANA

¹ACHEAMPONG OWUSU, ²EDITH MAWULI AFI BLEBOO, ³IVY HAWAH TAANA

^{1,2}Operations And Management Information Systems (Omis) Department, University Of Ghana Business School, Legon, Accra, Ghana

³limkokwing University Of Creative Technology, Cyberjaya, Malaysia

Email: ¹aowusu@ug.edu.gh, ²embleboo@st.ug.edu.gh, ³ivytaana@yahoo.com

ABSTRACT

The main objective of the study was to examine the impact of cyberslacking on graduate students' academic performance at a Business School in Ghana. The study was descriptive and was purely quantitative. The target population of this study comprised all graduate students at the School. Out of the entire population, three hundred (300) students were sampled for the study through convenience sampling. Questionnaires were used as the data collection tool. Findings from the analysis indicate that Cyberslacking correlates with students' academic performance. Students who are addicted to cyberslacking have difficulties in paying attention in class in comparison to those who do not cyberslack. The study, therefore, concludes that though cyberslacking has a negative effect on the attention of graduate students in the lecture room, it could not find a significant relationship between cyberslacking and academic performance. It is however recommended that instructors should integrate technology procedures in their curricula, explain their motivations, and enforce them. Also, the management of universities should ensure graduate students are mindful of their multitasking limits and cyberslacking's negative effect on learning. Although cyberslacking negatively influences attention and even student learning, several college students underrate this concern because they overrate their capacity to multitask.

Keywords: *Cyberslacking, Graduate Students, Academic Performance, Business School, Ghana*

1. INTRODUCTION

Digital technologies such as tablets, laptops, and smartphones generally found in classrooms are used by students, to gain access to course materials and educational videos, and audios [1]. Internet-enabled devices are also used by instructors to update course materials and connect with students [2]. Although it has been found that the use of Internet-enabled digital technologies improves students' attentiveness and participation in the class [3], there is also evidence that advocates that maladaptive use of such technologies can cause students to participate in actions that have little or no relation to the task at hand [4]. It is common for students to occupy themselves with other actions, such as checking email, surfing social media, reading news, photo sharing, and instant messaging through smartphones, rather than with assigned work in the class [5].

Cyberslacking ("also described as cyberloafing, cyber deviance, non-work-related computing,

Internet abuse, personal use at work, workplace Internet leisure browsing, and junk computing) is the use of the internet and mobile technology during school hours for personal purposes"[6]. Also, cyberslacking "is the use of internet-enabled or mobile-enabled technologies by students in a class for non-class related activities" [7]. The delivery of internet access at a university is intended to offer the opportunity for students to freely access online material resources to enhance their mastery of the targeted learning materials [4]. The current environment in university learning shows the existence of internet-related equipment such as smartphones and laptops which students carry with them to class. The "availability of internet access on campus offers challenges to lecturers in classrooms, owing to the propensity of students to surf non-academic content, such as social media, to update status or access games, and to browse other websites irrelevant to the learning materials being discussed in the class" [2].

From an educational perspective, “the Internet and ICTs are increasingly becoming a part of the learning environment and college students are more connected to the Internet than ever before. For most college students, the mobile Internet has become an indispensable part of their studies and personal lives” [8]. The use of “Internet technologies can positively improve learner outcomes by giving students access to more timely, relevant, and updated material. However, the Internet can also be used for non-academic purposes, creating an impediment to the effective integration of the Internet and ICTs into the learning environment” [9]. The effects of cyberslacking in the classroom are relatively well established as it has been related to poor learner outcomes, such as lower classroom performance and low-grade point average (GPA). With the presence of internet or mobile-enabled devices in the classroom, students attempt to multitask which affects the time, and attention that could have been devoted to what was being taught in class and inhibits deeper learning [10]. Cyberslacking “also consumes students’ cognitive resources that could have otherwise been used for classroom learning, much like multitasking, which has also been found to have adverse impacts on classroom learning and academic achievement, and the negative academic effects still hold regardless of students’ intelligence, motivation, and interest” [4]. Research on “cyberslacking grouped several antecedents to this behaviour, in educational settings, such as ineffective lecturers, learning materials, and the learning environments. Lecturers with valuable teaching methods tend to make students more engaged in the classroom which in turn deters them from accessing social media in the class” [8]. From viewpoint of learning materials, students who find the related course materials to be immaterial to their needs, or difficult “to understand, tend to engage in cyberslacking during lectures. From the perspective of the class environment, students joining large classes tend to engage in inappropriate activities with their laptops” [1]. The antecedents of cyberslacking behaviors, from the perspective of students, show that demographic factors influence students to participate in cyberslacking in class, such as locus of control, learning motivation, self-regulation, and self-efficacy [11]. The “power of self-regulation becomes the decisive factor in students engaging in cyberslacking, despite a less than supportive class environment” [1]. Students “who can regulate themselves well, in trying to achieve their learning objectives, will strive to focus on the learning materials to solve any distraction-arousing learning

problems, including the inclination to engage in cyberslacking”. Another influencing factor is the tendency of students to multi-task which could influence the need to use the internet or mobile-enabled devices in class which then results in cyberslacking in the classroom [7].

Notwithstanding these innovations, the effects of cyberslacking on students’ performance remain vague as there are mixed results. For example, Wentworth & Middleton [12] “failed to find a relationship between the number of daily hours students spent on smartphones and social networks and their overall GPA”. Rashid & Asghar [13] “found daily social media use to be positively correlated with GPA but did not find a significant relationship between daily Internet use and GPA”. Furthermore, a recent study by Doleck & Lajoie [14] “reviewed 23 studies in an attempt to clarify the relationship between students’ use of social networking sites and academic performance, finding mixed results and concluding more research is needed”. One coherent reason for mixed findings is that in-class and out-of-class cyberslacking have different effects. Existing research on cyberslacking in “educational settings has been performed in western countries, namely the United States and Canada among others”, but not in Ghana. “It seems inappropriate to generalize the results from studies performed in the west on Ghanaian students because students from eastern and western cultures take different approaches to learning” [15]. It is for this reason the study seeks to examine the impact of cyberslacking on graduate students’ academic performance within the Ghanaian context.

The main purpose of the study is to examine the impact of cyberslacking on graduate students’ academic performance, a case study of a public university in Ghana. The specific objectives of the study are to:

1. Investigate whether graduate students at the Business School indulge in cyberslacking
2. Examine the reason behind cyberslacking by graduate students at the Business School
3. Analyze the relationship between cyberslacking and academic performance

This study will give a new dimension to the present pool of information and literature on the argument of the correlation between cyberslacking and academic performance amongst students by studying the phenomenon with students in Ghana. This study will also enable academic institutions in Ghana to know whether to continue to allow internet or mobile enabled devices in class s it seeks to find out if there is any relationship between cyberslacking and the academic performance of students. Due to the

increasing need to serve the growing needs of students, this study will inform the benefits and challenges of adopting internet or mobile-enabled devices in lecture rooms. The Ministry of Education (MoE) and the Ghana Education Service (GES) and other policymakers might use the findings of this study to set policies that promote or curb the use of the internet or mobile-enabled devices in lecture rooms.

The rest of the paper is organized as follows: a literature review with the concept of cyberslacking follows. Then the methodology, analysis, and discussion follow. The study then concludes with recommendations and suggestions for future studies.

2. LITERATURE REVIEW

2.1 Cyberslacking

The presence of mobile technology (e.g., smartphones, laptops) has changed how college students and instructors approach classroom learning [16] and “how students approach learning outside of class” [17]. The term cyberslacking or cyberloafing was initially used to “describe employees who access the internet for non-working materials during working hours” [18]. However, several researchers found that students also perform cyberslacking behaviour during class hours. The conceptual definition difference between cyberslacking at the workplace and in educational settings is the research subjects. Cyberslacking in academic settings is mostly defined as the behavioural tendencies of students in using the internet or mobile-enabled devices for non-academic purposes.

This phenomenon, “wherein individuals use mobile technology for off-task purposes, is commonly referred to as cyberslacking” [10], [1] and is suggestive “of how the Net Generation is not influenced to exploit technology for their professional or academic betterment”. Although cyberslacking is a fairly new learning phenomenon, students acceding to diversions is not. Student misbehaviour has long been recognized as an obstacle to learning in college settings [19]. In fact, many off-task events (e.g., holding side conversations, studying for other classes,) prevalent in earlier decades are still widespread among today’s students [20]. In this sense, student cyber-slacking represents a new means for continuing the age-old practice of off-task behaviour.

Although off-task behaviour “is not a new phenomenon, the nature of how students use mobile technology today has positioned cyberslacking as a more potent distraction source than those faced by

previous generations of students. For instance, college students have described how habitual use of social media and mobile devices has created a situation wherein it is difficult to suppress this habituated behaviour while attending classroom lectures or while doing schoolwork outside of class” [21]. Similarly, “college students indicated that habitually checking websites (e.g., Facebook) for leisure purposes outside of the classroom makes it difficult to resist the temptation to check those websites while using a laptop during class” [22].

Members of the Net Generation “have logged thousands of hours sending and receiving text messages, shopping online, using video conference services (e.g., Skype) to communicate with family and friends, and sharing information about their lives through social media” [23]. These practices have changed the Net Generation into avid mobile technology users. In fact, “Net Generation college students spend nearly 5h/day using their devices” [24] – “sending over 150 text messages” [12] and “logging nearly 100 min on Facebook” [25]. Switzer & Switzer [26], for example, “contend that Net Generation members, although experienced at using mobile technology for social and entertainment purposes, fail to apply technology for their professional or academic betterment”. Similarly, Thompson [15] found that “Net Generation members frequently use technology for social or leisure purposes (e.g., texting, social networking, playing games) but minimally use it for professional or academic purposes (e.g., contributing to a Wiki) aside from what is required of them by instructors or employers”.

Instead of leveraging “technology for their personal betterment, the Net Generation is often pulled off-task by mobile technology, whether they are working” [9], driving [27], on a date [28], attending a classroom lecture (e.g., [1], doing homework (e.g., [19]), or studying [30]. Meanwhile, “using mobile technology for off-task purposes while handling academic tasks has been associated with detriments to homework completion rates” (e.g., [29]), test scores [31], final course grades (e.g., [32]), and more.

Moreover, researchers have recommended that habitual mobile technology use has attained the point of obsession for many college-aged students [32].

Cyberslacking “college students frequently cyberslack while attending classroom lectures or while studying and completing homework outside of class. The following two subsections discuss the frequency and consequences of cyberslacking inside and outside the classroom”. Cyberslacking is a regular occurrence in college classrooms. 70 to

90% of college students in the USA “regularly text during class” [33] – “sending an average of 12 texts per class period” [34]. In fact, “54% of college students believe texting should be allowed in the class” [35]. Additionally, “25 to 60% of college students bring their laptops to class” [4] and “spend up to 60% of class time using laptops for non-class-related activities” [4]. Unfortunately, experimental, and self-report studies have linked classroom cyberslacking with diminished note-taking, course test, course grades, and cumulative college grade-point average” [36].

2.2 Cyberslacking Activities and Behaviours

This study differentiates four distinct activities of cyberslacking and four separate behaviours of cyberslacking. Cyberslacking thus will be deemed as a multi-dimensional concept comprising of events and behaviours. This multi-dimensionality has not obtained much attention in previous research. The considered multi-dimensional construct of Cyberslacking will be discussed below.

2.2.1 Cyberslacking Activities

Blanchard & Henle [37] define two levels of Cyberslacking: minor and serious Cyberslacking. Minor Cyberslacking consists of “sending and receiving private email in class as well as surfing mainstream news and financial websites and shopping online” [37]. Serious Cyberslacking involves “visiting adult-oriented web sites, maintaining one’s website, and interacting with others online through chatrooms, blogs, and personals ads, gambling online, and downloading music” [37]. It is believed that the attitude of ones’ colleagues towards Cyberslacking impacts the behaviours of minor Cyberslackers. In other words: how other personnel thinks of minor Cyberslacking is associated with the amount of minor Cyberslacking. Serious Cyberslackers on the other hand are less affected by the belief of their colleagues because this personnel is already aware of their misbehaviour.

From these typologies, the typology used by Li & Chung [38] presents “the most overarching framework and seems to be more suitable for the long term. Due to changes within the technology and changes in the effect of Cyberslacking activities, the other two typologies are less immune to time. Although new activities of the Internet are being discovered continuously, they all can be classified within the four activities mentioned because of the abstract levels of these activities”. The four activities

of Cyberslacking that was used in this study are based upon the article of Li & Chung [38] and are described as follows: “(i) Social activity: the social activity involves expressing yourself (e.g. Facebook, Twitter) or share information via blogs (e.g. Blogger) (ii) Informational activity: the informational activity consists of searching information like news sites (CNN). (iii) Leisure activity: the leisure activity contains activities like playing games online or downloading music (e.g. Youtube) or software (Torrent-sites) for leisure purposes. (iv) Virtual emotional activity: the virtual emotion activity describes online activities that cannot be categorized within the other activities. Examples of these activities are shopping online or searching for a relationship online”.

2.2.2 Cyberslacking Behaviours

Cyberslacking is recognized in four behaviours. These are obtained from several literature fields. The four behaviours are: “(i) Development behaviour: developmental behaviour considers the process of Cyberslacking as a potential source for learning. Cyberslacking from this point of view provides an increase of skill that could be used in future activities by students” [39]. “(ii) Recovery behaviour: recovery behavior takes the health of the student into account. Cyberslacking can reduce discomfort and has positive effects on the student” [40]. “(iii) Deviant behaviour: the deviant behaviour considers Cyberslacking as unwanted behaviour aimed against academic performance. This behaviour clearly considers Cyberslacking as behaviour with negative consequences (e.g. decreased productivity) for students” [41], and “(iv) Addiction behaviour: this behaviour could be caused by engaging in Cyberslacking as a habit and could result in problematic behaviour. The origin of addiction could lie in the history of a student in terms of impulse control and addictive disorders or could be caused as a way to respond to dissatisfaction or boredom” [42].

2.4 Consequences of Cyberslacking

Cyberslacking may be beneficial when it helps students and the institution. However, it can be devastating when it prevents students from being valuable. Many researchers argue that cyberslacking is wasteful. Other researchers, however, “do not believe that cyberslacking is necessarily bad or even inappropriate. They argue that the Internet provides a much-needed diversion which can lead to creativity, flexibility, and foster a conducive learning environment” [37].

Positive Consequences: While cyberslacking is typically portrayed as a negative behaviour leading to losses, engaging in it for brief periods on tasks not related to academic work may have positive effects, including relief from boredom, fatigue, or stress, greater satisfaction or creativity, increase in the well-being of students, recreation and recovery and overall have happier students [9]. Stanton [43] found that “frequent Internet users reported higher levels of satisfaction than less frequent users”. Garrett & Danziger [44] found “a positive relationship between the expected productivity benefits of the Internet and cyberslacking activity” [9].

When the student intends to escape routine practices and discharge anxiety, then cyberslacking becomes a form of constructive behaviour [45]. Cyberslacking may function as a tool to decrease academic work stress and inspire creativity [46]. It is found that taking time off academic work to browse websites for personal purposes may help to increase productivity. Thus, scholars must examine how and when cyberslacking can have a positive effect on academic work so that its potential benefits can be harnessed [47].

Negative Consequences: Institutions are experiencing an increase in cyberslacking behaviour [44]. There is substantial evidence to conclude that this behaviour results in significant costs to institutions. Cyberslacking can lead to reductions in productivity and the inefficient use of network resources, resulting in an uncompetitive institution [48]. Cyberslacking is destructive and constitutes a form of student deviance [49] in so far as it represents a voluntary behaviour that violates significant institutional norms and in so doing threatens the well-being of an institution, its members, or both [45]. Similarly, processing distracting information at school through cyberslacking depletes the cognitive resources necessary to perform tasks [50].

2.5 Review of Related Studies

A study done by Le Roux & Parry [51] presents remarkable and crucial results. Through “a survey-based study of 1,678 students from ten different faculties at a large university in South Africa, they find that the subject area does influence the relationship between students’ in-class use of media (e.g. laptops, tablets, and smartphones) and academic performance. Their study finds that a significant negative correlation exists between in-lecture media use and academic performance for students in the Arts and Social Sciences” [51].

In another study, Taneja et al. [1] “investigated the factors influencing students’ attitudes and intentions to use technology during class for non-class related purposes. The results indicated that student consumerism, escapism, lack of attention, cyberslacking anxiety, and distraction by others’ cyberslacking behavior influenced students’ attitudes”.

Also, Akbulut et al. [52] “developed a new and more comprehensive scale to address contemporary cyberslacking behaviours during lectures through literature review, expert panels, and observations. They found factors such as sharing, shopping, real-time updating, accessing online content, and gaming/gambling as a five-factor structure that explained 70.44% of the total variance”.

Again, McBride et al. [53] “examined the cyberslacking behaviour of graduate students from Arkansas University who were employed by school districts as classroom teachers. It was found that 51% of their university work was submitted when they were employed in the school, i.e. when they were present in classrooms or during their time of preparation or supervision. Based on their findings, the authors recommended that professors do not allow interaction when students should be engaged in their school activities”.

Moreover, Mendoza et al. [54] found “that having cell phones in a short lecture has its largest impact on attention and learning 10–15 min into the lecture”. Wu, Mei, & Ugrin [55] examined “the in-class and out-of-class cyberslacking activities of students in China and the results indicated cyberslacking as a harmful distraction in the classroom and supported a negative relationship between in-class cyberslacking and academic performance”. Yılmaz & Yurdugul [56] found “that students’ cyberslacking behaviour is influenced by their psycho-social perceptions, attitudes, and learning strategies. However, the results also revealed that the motivation for the course does not influence their cyberslacking behaviour”.

3. RESEARCH METHODOLOGY

Descriptive research was used in that it is designed to find out the existing situation of a particular phenomenon of concern. The target population was all the graduate students of a Business School in Accra, Ghana. Out of the total population, 300 samples were conveniently selected for this study. Data collection was done through a survey questionnaire. The first section of the questionnaire dealt with the demographic data of the respondents. The second and third sections dealt with the first and

second objectives and had eight and seven questions respectively. The last section dealt with the third objective and had three questions.

3.1 Data Processing and Analysis

The Statistical Package for Social Sciences (SPSS.v.21.0) was used to analyze the data collected. Representations used included tables, pie charts, etc. to ensure easy and quick interpretation of data. The items in the questionnaire were grouped based on the responses given by the respondents and coded for easy usage.

4. FINDINGS

Table 1 gives the gender composition of the respondents. 70% of the respondents were female while 30% of the respondents were male.

Regarding the Age distribution of the respondents, 59% representing 177 students were between the ages of 30-39 years while 30% representing 91 students were between the ages of 40-49 years. On the other hand, 11% of the respondents representing 32 students were between 20-29 years. In terms of the Academic Qualification, 37% representing the majority were pursuing MBA students while 24% representing 72 persons were pursuing a PhD. Also, 21% representing 62 persons were MSc while 18% representing the minority were MPhil. Regarding the Marital Status, 64% of respondents representing the majority said they have married while 36% representing the minority were single. In terms of the employment status of the respondents, the majority of the respondents representing 84% were employed while 16% representing 49 persons were unemployed.

Table 1. Descriptive Statistics of Respondents

Variable	Item	Frequency	Percentage
Gender	Male	90	30%
	Female	210	70%
Age	20-29	32	11%
	30-39	177	59%
	40-49	91	30%
Academic Year	First Year	94	31%
	Second Year	206	69%
Academic Qualification	MPhil	54	18%
	PhD	72	24%
	MSc	62	21%
	MBA	112	37%
Marital Status	Single	107	36%
	Married	193	64%
Employment Status	Unemployed	49	16%
	Employed	251	84%

4.1. Graduate Students Involvement in Cyberslacking

4.1.1. Level of Attention

In Table 2, the respondents were asked to describe their level of attention in class. 142 respondents

representing 47% asserted that they are somewhat attentive in class, 31% representing 94 persons were always attentive while 21% representing the minority rarely pay attention in class. Thus, most of the respondents asserted that they are attentive in class.

Table 2. Level of Attention

Response	Frequency	Percentage
Always attentive	94	31%
Somewhat attentive	142	47%
Rarely attentive	64	21%
Total	300	100%

4.1.2. Usage of the Internet During Lectures

Table 3 shows whether the respondents use the internet during lectures for non-lecture related activities. The majority representing 52% said sometimes, 32% said they do whiles 16%

representing the minority said do not use the internet during lectures for non-lecture-related activities. This implies that most of the respondents do use the internet during lectures for non-lecture related activities.

Table 3. Usage of the Internet During Lectures

Response	Frequency	Percentage
Yes	47	16%
No	96	32%
Sometimes	157	52%
Total	300	100%

4.1.3. Awareness of Cyberslacking

When asked whether they were aware of cyberslacking, all 300 respondents representing

100% said yes as presented in Table 4. Thus, all of the respondents said they are aware of what cyberslacking is even though some of them did not know the actual term for it.

Table 4: Awareness of Cyberslacking

Response	Frequency	Percentage
Yes	300	100%
Total	300	100%

4.1.4. Practice Cyberslacking

When asked whether they practice cyberslacking during lectures, 58% representing the majority said

sometimes while 42% representing 63 persons said always. Figure 1 below captures the summary of the analysis. This implies that most graduate students do practice cyberslacking during lectures.

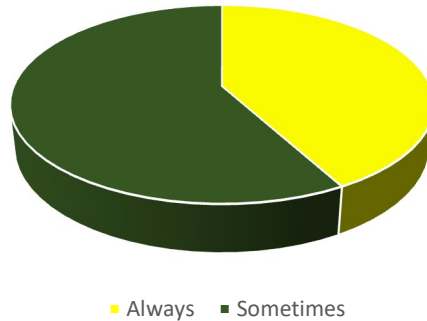


Figure 1: Practice Cyberslacking

4.1.5. How Often is Cyberslacking Practiced

Out of the 300 respondents, 56% representing the majority said they rarely cyberslack, 27% said they

cyberslack very often whiles 17% representing the minority said they often as shown in Table 5. Thus, most of the respondents asserted that they rarely cyberslack during lectures.

Table 5: Frequency of Cyberslacking

Response	Frequency	Percentage
Very Often	80	27%

Often	52	17%
Rarely	168	56%
Total	300	100%

4.1.6. Cyberslacking at Every Lecture

When asked whether they cyberslack at every lecture, 70% of the respondents representing 209

said no whiles 30% representing 91 persons said yes as indicated in Table 6. Thus, the majority of the respondents do not cyberslack at every lecture. This implies that the respondents may be engaging in cyberslacking activities during particular lectures.

Table 6: Cyberslacking at Every Lecture

Response	Frequency	Percentage
Yes	91	30%
No	209	70%
Total	300	100%

4.1.7. Ability to Cyberslack and Concentrate

Out of the total respondents (300), the majority representing 63% asserted that they do not concentrate fully in class when cyberslacking, 21%

representing 63 persons said they sometimes concentrate whiles 16% said they can concentrate while cyberslacking as shown in Table 7. This goes to show that most graduate students cannot fully pay attention in class and cyberslack at the same time.

Table 7: Ability to Cyberslack and Concentrate

Response	Frequency	Percentage
Yes	48	16%
No	189	63%
Sometimes	63	21%
Total	300	100%

4.2. Reasons Behind Cyberslacking

4.2.1. Reasons Why Students Cyberslack

When asked the reasons why students cyberslack during lectures (figure 2), 47% said they cyberslack because they are addicted to the usage of their phone/laptop whiles 22% said they are addicted to social media and other web pages. Also, 14%

representing 21 persons said the lack of lecture rules and regulations is the reason why students cyberslack whiles 13% said they cyberslack because the lecture or lecturer is boring. On the other hand, 4% representing the minority said they cannot concentrate on lectures for too long. The findings conclude that the major reason for graduate students' cyberslacking is gadget (phone/laptop) addiction.

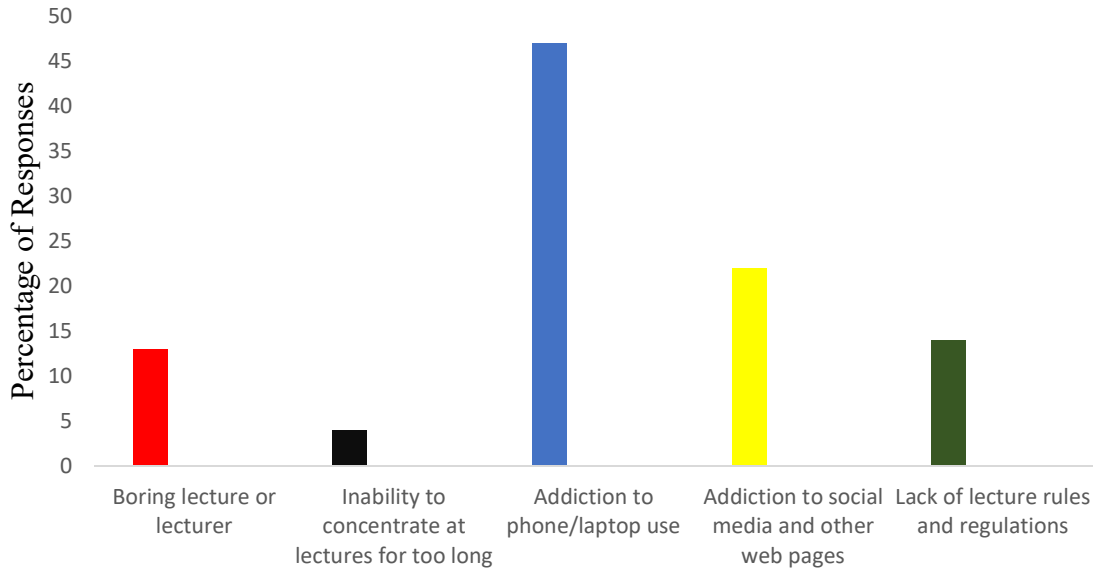


Figure 2: Reasons Why Students Cyberslack

4.2.2. Activities Engaged in When Cyberslacking

When asked what they do on the internet when they cyberslack (figure 3), 36% of respondents said they engage in interpersonal communication and social media activities while 21% said they engage in social media activities when cyberslacking. Also, 16% representing 24 persons said they engage in purchasing and personal businesses while 13% said

they seek and view information about the lecture. On the other hand, 11% representing 16 persons said they engage in interactive entertainment while the minority representing 3% said they improve their understanding of the lecture through cyberslacking. The findings of the study conclude that engaging in interpersonal communication and social media activities was the major activities graduate students engaged in when they cyberslacked.

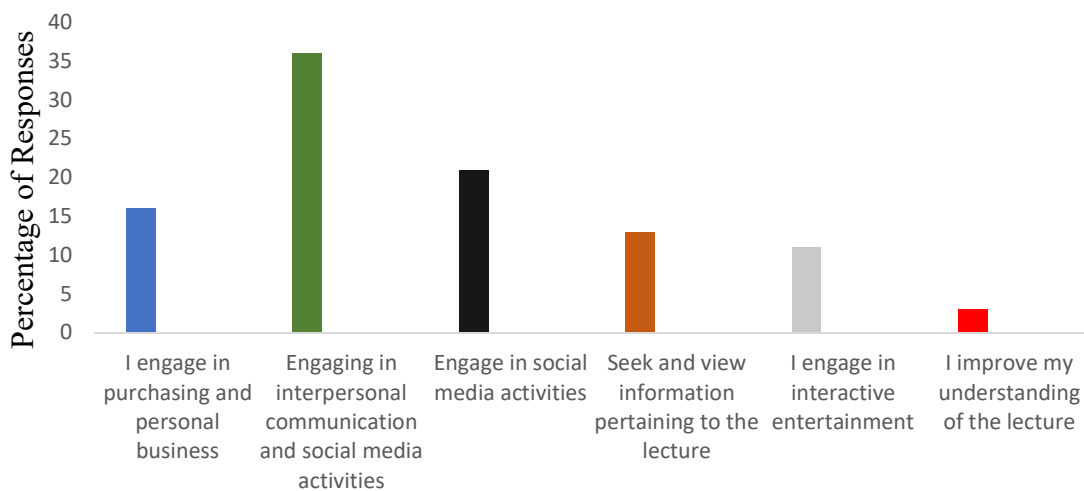


Figure 3: Activities Engaged in When Cyberslacking

4.2.3. Ways of Reducing Cyberslacking

When asked how cyberslacking can be reduced amongst graduate students (figure 4), 31% of the respondents said adopting and enforcing technology policies whiles 23% representing 34 persons said there is the need to encourage students to defer gratification from mobile technology. Also, 21% representing 31 persons agree that there is a need to incorporate active classroom learning whiles 11% agree to incentivize students to voluntarily

relinquish mobile devices. While 9% said teaching students to self-regulate can help reduce cyberslacking, 4% said to improve student awareness of cyberslacking consequences. Minority representing 1% said incorporating mobile technology as a teaching tool is also a sure way to reduce cyberslacking. The findings of the study conclude that adopting and enforcing technology policies is the most preferred choice for reducing cyberslacking activities in the lecture room according to the respondents.

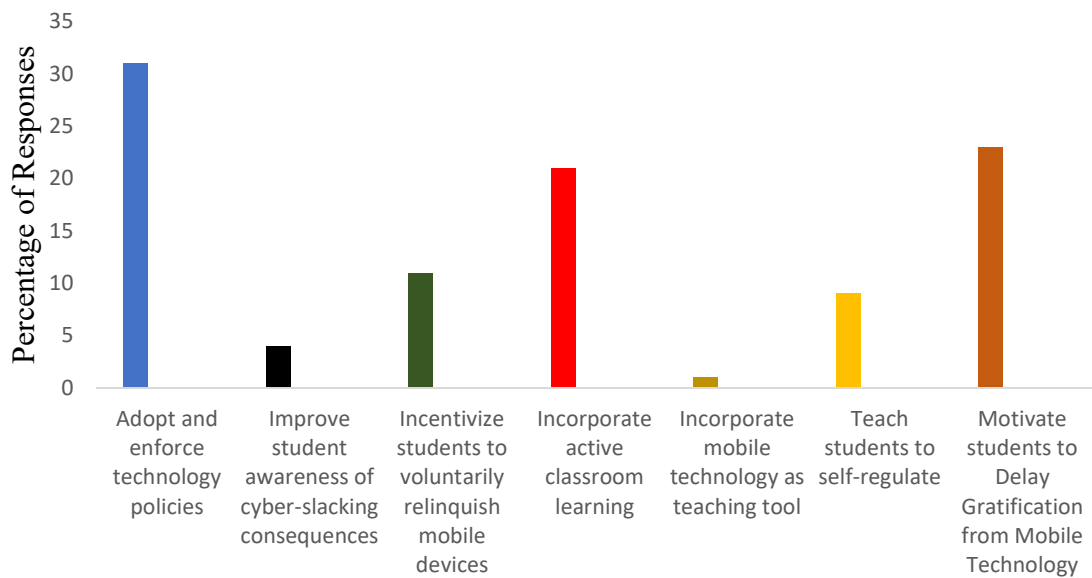


Figure 4: Ways of Reducing Cyberslacking

4.2.4. Possibility of Curtailing Cyberslacking Amongst Graduates

From Table 8, when asked whether cyberslacking can be curtailed

amongst graduates, 51% said maybe, 35% representing 106 persons said yes whiles 14% also said no. Thus, most of the respondents agree that there may be a possibility of curtailing cyberslacking amongst graduate students.

Table 8: Possibility of Curtailing Cyberslacking Amongst Graduates

Response	Frequency	Percentage
Yes	106	35%
No	42	14%
Maybe	152	51%
Total	300	100%

4.2.5. Penalizing Students Caught Cyberslacking

From Table 9, out of the 300 students, the majority representing 54% said students who are caught

cyberslacking should be penalized while 32% said students should not be penalized. On the other hand, the minority representing 14% said students should sometimes be penalized. Thus, most of the respondents asserted that students caught cyberslacking should be penalized.

Table 9: Penalizing Students Caught Cyberslacking

Response	Frequency	Percentage
Yes	161	54%
No	97	32%
Sometimes	42	14%
Total	300	100%

4.2.6. Ban or Regulate Cyberslacking

When asked whether cyberslacking should be banned or regulated amongst graduate students (figure 5), 93% asserted that it should be regulated

while 7% of the total respondents said it should be banned. The findings of the study conclude that most of the respondents believe cyberslacking should be regulated.

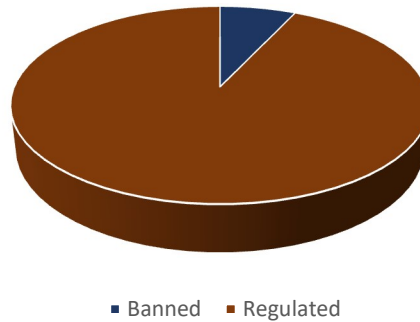


Figure 5: Ban or Regulate Cyberslacking

4.3. Relationship Between Cyberslacking and Academic Performance

4.3.1. Reduced Cyberslacking Leads to Better Academic Performance

When asked whether they think limiting access to their internet/phone during lectures would yield better academic performance (Table 10), the majority (75%) asserted that yes while 25% representing the minority said maybe. Thus, most of the respondents asserted that a reduction in cyberslacking will lead to better academic performance.

Table 10: Reduced Cyberslacking Leads to Better Academic Performance

Response	Frequency	Percentage
Yes	224	75%
Maybe	76	25%
Total	300	100%

4.3.2. Non-Lecture Activities Effect on Academic Performance

When asked whether non-lecture related activities during a lecture over the internet/phone affect their academic performance (Table 11), the majority

representing 64% said non-lecture related activities during a lecture affects their academic performance, 27% representing 81 persons said no it does not while 9% representing the minority said maybe it does. Thus, most of the respondents asserted that non-lecture activities affect academic performance.

Table 11: Non-Lecture Activities Effect on Academic Performance

Response	Frequency	Percentage
Yes	193	64%
No	81	27%
Maybe	26	9%
Total	300	100%

4.3.3. Current CGPA of Respondents

When asked their current Cumulative Grade Point Average (CGPA), 47% of respondents said their CGPA is between 3.0-3.5 while 23% representing 70 persons said they were between 2.5-2.9. Also, 19% representing 56 persons said they fall between

grade 3.6-4.0 while 11% representing the minority said they were between grade 2.0-2.4 as shown in Table 12. This indicates that though most of the respondents admitting to cyberslacking in the lecture room, 66% have their Grade Point Average between 3.0-4.0 which is still encouraging.

Table 12: Current CGPA of Respondents

Response	Frequency	Percentage
2.0-2.4	32	11%
2.5-2.9	70	23%
3.0-3.5	142	47%
3.6-4.0	56	19%
Total	300	100%

4.4 Discussion of Findings

The objective sought to investigate whether graduate students of a Business School in Ghana indulge in cyberslacking. The study revealed that 58% of the respondents said they practice cyberslacking sometimes and 42% of the respondents said that they always practice cyberslacking very often. The study also revealed that 77% of the respondents said that their colleagues cyberslack. The study is in tandem with that of [57]. Fried [57] asserted that graduate students usually engage in cyberslacking. She further on went to emphasize that, “graduate students use their laptops to check emails, surf the net, and play games during lectures”. The “results of her study show that the level of laptop use hurts student learning, including their understanding of course material and overall course performance”. Also, Ugrin & Pearson [58] found “that students use the Internet during class to browse social networking sites. Students are also found reading news,

watching sports, and shopping online in class”. Therefore, this study concludes that graduate students of the University of Ghana Business School do indulge in cyberslacking.

The second objective sought to examine the reason behind cyberslacking by graduate students at a Business School in Ghana. The study revealed that the major reason behind graduate students' cyberslacking is because they are addicted to the usage of their phone/laptop, social media, and other web pages. This finding supports the findings by Taneja et al. [1] who “investigated the factors influencing students' attitudes and intentions to use technology during class for non-class related purposes”. The results of Taneja et al. [1] “indicated that student consumerism, escapism, lack of attention, cyberslacking anxiety, and distraction by others' influenced students' attitudes”. Similarly, Akbulut et al. [52] “found factors such as sharing, shopping, real-time updating, accessing online

content, and gaming/gambling as a five-factor structure that explained 70.44% of the total variance was captured by these factors”.

The third and last objective sought to analyze the relationship between cyberslacking and academic performance. The study could not identify a significant relationship between cyberslacking and academic performance. Even though 63% of the respondents said they cannot cyberslack and pay full attention in class, cyberslacking could not be linked to a poor academic performance given that the majority of the respondents represented by 89% had

a CGPA of 2.5 and above. The results of this study are consistent with the findings of Wimpie [59] which investigated the impact of cyberslacking behaviours on the academic performance of Accounting students’ and concluded that cyberslacking in the classroom has no significant influence on academic performance. This study, therefore, concludes that there is no significant relationship between cyberslacking and academic performance. Table 13 shows a summary of the findings.

Table 13: Summary of Findings

Research Question	Research Objective	Findings
Do graduate students of the Business School indulge in cyberslacking?	Identify whether graduate students of the Business School indulge in cyberslacking.	The study revealed that graduate students of the Business School do engage in cyberslacking very often with the majority also saying that their colleagues also cyberslack in the lecture room.
What are the reasons behind cyberslacking by graduate students of the Business School?	Examine the reason behind cyberslacking by graduate students of the Business School.	The study revealed that the major reason behind graduate students cyberslacking is because they are addicted to the usage of their phone/laptop, social media, and other web pages
What is the relationship between cyberslacking and academic performance?	Analyze the relationship between cyberslacking and academic performance.	The study could not identify a significant relationship between cyberslacking and academic performance.

5. Conclusion

A fair number of graduate students’ cyberslack often, always updating, socializing, and communicating with colleagues, friends, and family. Even though the study could not find a significant relationship between Cyberslacking and academic performance, it was established that graduate students are fully aware of cyberslacking. Although the majority asserts that they do not always cyberslack in the lecture room, the study did find that students who are addicted to cyberslacking admitted to using their mobile or internet devices for non-class related activities. The study also showed that the majority of graduate students have a negative perception of cyberslacking and assert that it not possible to cyberslack and concentrate fully in class. The study also shows that students believe that reduced cyberslacking in the lecture room results in better academic performance. The study, therefore, concludes that though cyberslacking has a negative effect on the attention in the lecture room, it could not link the effects of cyberslacking to poor academic performance.

- Instructors should integrate technology procedures in their curricula, explain their justifications, and implement them. Watching a fellow student get scolded or punished reduces cyber-slacking in the classroom. Management of universities should make sure graduate students are mindful of their multitasking limits and cyberslacking’s negative impact on learning. Although cyber-slacking negatively impacts student learning, many college students underestimate this consequence because they overestimate their ability to multitask. Lecturers should create active classroom experiences. Students have identified passive lectures as catalysts to cyberslacking. Instead of relying on traditional practices such as lecturing, lecturers should use active learning practices such as debates, small-group work, and problem-based learning to offset cyber-slacking temptations. Graduate students must learn to control their desire to cyberslacking through self-regulation (e.g., monitor attention, employ effective learning strategies, and plan time).
- Instructors should turn mobile devices into instructional tools by asking students to respond to classroom polls or to look up lecture-relevant information on their mobile phones or laptops.

5.1. Recommendations for Practice and Policy Making

Based on the findings of this research, it is recommended that:

5.2. Limitations of the Study

Due to the Covid-19 pandemic, the study took a longer period to complete than expected. Also, getting most of the students to respond to the questionnaire proved quite challenging due to the fact that all lectures were now being conducted online.

5.3 Recommendation for Future Studies

The study recommends that future studies on cyberslacking amongst graduate students should focus more on lecturers' perspectives and roles in strengthening or weakening cyberslacking amongst students.

REFERENCES

- [1]. A. Taneja, V. Fiore, and B. Fischer, "Cyberslacking in the classroom: Potential for digital distraction in the new age", *Computers & Education*, vol. 82, 2015, pp. 141–151.
- [2]. P. Galluch, and J. Thatcher, "Maladaptive vs. faithful use of internet applications in the Classroom: An empirical examination", *Journal of Information Technology Theory and Application*, vol. 12, no. 1, 2011, pp. 5–21.
- [3]. P. J. Samson, "Deliberate engagement of laptops in large lecture classes to improve attentiveness and engagement," *Computers in Education*, vol. 1, no. 2, 2010, pp. 1-19.
- [4]. E. D. Ragan, S. R. Jennings, J. D. Massey, and P. E. Doolittle, "Unregulated use of laptops in large lecture classes", *Computers & Education*, vol. 78, 2014, pp. 78–86.
- [5]. H. Keser, M. Kavuk, and G. Numanoglu, "The relationship between cyber-loafing and internet addiction", *Cypriot Journal of Educational Sciences*, vol. 11, no. 1, 2016, pp. 37–42.
- [6]. G. Bock, Y. Shin, P. Liu, and H. Sun, "The Role of Task Characteristics and Organisational Culture in Non-Work-Related Computing: A Fit Perspective", *Advances in Information Systems*, vol. 41, no. 2, 2010, pp. 132-151.
- [7]. N. Rana, Y. Dwivedi, E. Slade, and B. Lal, "Cyber-slacking: Exploring students' usage of internet-enabled devices for non-class related activities", San Diego, USA: AMCIS 2016.
- [8]. S. M. Ravizza, D. Z. Hambrick, and K.M. Fenn, "Non-academic internet use in the classroom is negatively related to classroom learning regardless of intellectual ability", *Computers & Education*, vol. 78, 2014, pp. 109–114.
- [9]. J. Vitak, J. Crouse and R. LaRose, "Personal Internet use at work: Understanding cyberslacking", *Computers in Human Behaviour*, vol. 27, 2011, pp. 1751-1759.
- [10]. J.E. Gerow, P.S. Galluch, and J.B. Thatcher, "To slack or not to slack: Internet usage in the classroom", *Journal of Information Technology Theory and Application*, vol. 11, no. 3, 2010, pp. 5–23.
- [11]. F. Sana, T. Weston, and N.J. Cepeda, "Laptop multitasking hinders classroom learning for both users and nearby peers", *Computers & Education*, vol. 62, 2013, pp. 24–31.
- [12]. D. K. Wentworth and J.H. Middleton, "Technology use and academic performance", *Computers & Education*, vol. 78, 2014, pp. 306-311.
- [13]. T. Rashid and H.M. Asghar, "Technology use, self-directed learning, student engagement and academic performance: examining the interrelations", *Computers in Human Behaviour*, vol. 63, 2016, pp.604–612.
- [14]. T. Doleck and S. Lajoie, "Social networking and academic performance: A review", *Education and Information Technologies*, vol. 23, no. 1, 2018, pp. 435-465.
- [15]. P. Thompson, "The digital natives as learners: Technology use patterns and approaches to learning", *Computers & Education*, vol. 65, 2013, pp. 12–33.
- [16]. M.J. Berry and A. Westfall, "Dial D for distraction: The making and breaking of cell phone policies in the college classroom", *College Teaching*, vol. 63, no. 2, 2015, pp. 62-71.
- [17]. K. Mokharti, J. Delello and C. Reichard, "Connected yet distracted: Multitasking among college students", *Journal of College Reading and Learning*, vol. 45, no. 2, 2015, pp. 164–180.
- [18]. M.T. Whitty and A.N Carr, "New rules in the workplace: Applying object-relations theory to explain problem Internet and email behaviour in the workplace", *Computers in Human Behaviour*, vol. 22, 2016, pp. 235-250.
- [19]. D.R. Tindell and R.W. Bohlander, "The use and abuse of cell phones and text messaging in the classroom: A survey of college students", *College Teaching*, vol. 60, no. 1, 2012, pp. 1–9.
- [20]. G.M. Johnson and A. Culpa, "Dimensions of Online Behaviour: Toward a User Typology", *Cyberpsychology and Behaviour*, vol. 10, No. 6, 2017, pp. 773-779.
- [21]. A.E. Flanigan and W.A. Babchuk, "Social media as academic quicksand: A phenomenological study of student experiences in and out of the

- classroom”, *Learning and Individual Differences*, vol. 44, 2015, pp. 40–45.
- [22]. J. Aagaard, “Drawn to distraction: A qualitative study of off-task use of educational technology”, *Computers & Education*, vol. 87, 2015, pp. 90–97.
- [23]. W. M. Baker, E. J. Lusk and K.L. Neuhauser, “On the use of cell phones and other electronic devices in the classroom: Evidence from a survey of faculty and students”, *Journal of Education for Business*, vol. 87, no. 5, 2012, pp. 275–289.
- [24]. A. Lepp, J.E. Barkley and A. Karpinski, “The relationship between cell phone use and academic performance in a sample of US college students”, *SAGE Open*, vol. 5, no. 1, 2015, pp. 1–9.
- [25]. R. Junco, “Too much face and not enough books: The relationship between multiple indices of Facebook use and academic performance”, *Computers in Human Behaviour*, vol. 28, no. 1, 2012, pp.187–198.
- [26]. J. S. Switzer and R.V. Switzer, “The myth of the tech-savvy student: The role of Media educators in a web 2.0 world”, *Journal of Media Education*, vol. 4, no. 4, 2013, pp. 15–27.
- [27]. L. Hill, J. Rybar, T. Styer, E. Fram, G. Merchant and A. Eastman, “Prevalence of and attitudes about distracted driving in college students”, *Traffic Injury Prevention*, vol. 16, no. 4, 2015, pp. 362–367.
- [28]. M. A. Harrison and A.L. Gilmore, “U txt WHEN? College students’ social contexts of text messaging”, *The Social Science Journal*, vol. 49, no. 4, 2012, pp. 513–518.
- [29]. R. Junco and S.R. Cotten, “No A 4 U: The relationship between multitasking and academic performance”, *Computers & Education*, vol. 59, 2012, pp. 505–514.
- [30]. L.D. Rosen, L.M. Carrier and N.A. Cheever, “Facebook and texting made me do it: Media-induced task switching while studying”, *Computers in Human Behaviour*, vol. 29, no. 3, 2013, pp. 948–958.
- [31]. C.A. Bjornsen and K.J. Archer, “Relations between college students’ cell phone use during class and grades”, *Scholarship of Teaching and Learning in Psychology*, vol. 1, no. 4, 2015, pp. 326–336.
- [32]. J. Roberts, L. Yaya and C. Manolis, “The invisible addiction: Cell-phone activities and addiction among male and female college students”, *Journal of Behavioural Addictions*, vol. 3, no. 4, 2014, pp. 254–265.
- [33]. B.R. McCoy, “Digital distractions in the classroom phase II: Student classroom use of digital devices for non-class related purposes”, *Journal of Media Education*, vol. 7, no. 1, 2016, pp. 5–32.
- [34]. T.F. Pettijohn, E. Frazier, E. Rieser, N. Vaughn, and B. Hupp-Wilds, “Classroom texting in college students”, *College Student Journal*, vol. 49, no. 4, 2015, pp. 513–516.
- [35]. R.C. Emanuel, “The American college student cell phone survey”, *College Student Journal*, vol. 47, no. 1, 2013, pp. 75–81.
- [36]. S. Bellur, K.L. Nowak and K.S. Hull, “Make it our time: In class multitaskers have lower academic performance”, *Computers in Human Behaviour*, vol. 53, 2015, pp. 63–70.
- [37]. A. L. Blanchard and C.A. Henle, “Correlates of Different Forms of Cyberloafing: the Role of Norms and External Locus of control”, *Computers in Human Behaviour*, vol. 24, 2008, pp.1067-1084.
- [38]. S. Li and T. Chung, “Internet function and Internet addictive behaviour”, *Computers in Human Behaviour*, vol. 22, 2016, pp. 1067-1071.
- [39]. T.G. Weatherbee, “Counterproductive use of technology at work: Information & communications technologies and cyberdeviancy”, *Human Resource Management Review*, vol. 20, 2010, pp. 35-44.
- [40]. V.K.G Lim and D.J.Q. Chen, “Impact of Cyberloafing on Affect, Work depletion, Facilitation and Engagement”, *Conference Paper SIOP*, 2009, pp. 1-20.
- [41]. K.S. Young, “Policies and procedures to manage employee Internet abuse”, *Computers in Human Behaviour*, 2010, pp. 1-5. R. LaRose, J.H. Kim and W. Peng, “Social networking: Addictive, compulsive, problematic, or just another media habit?” In Z. Papacharissi (Ed.), *A networked self: Identity, community, and culture on social network sites*, 2010, pp. 59-81. NY: Routledge.
- [42]. J.M. Stanton, “Web addict or happy employee?” *Communications of the ACM*, vol. 45, no. 1, 2012, pp. 55-59.
- [43]. R.K. Garrett and J.N. Danziger, “On Cyberslacking: Workplace Status and Personal Internet Use at Work”, *Cyberpsychology & Behaviour*, vol. 11, no. 3, 2008, pp. 287-292.
- [44]. C.D. Beugre and D. Kim, “Cyberloafing: Vice or Virtue?” in *Mehdi Khosrow-Pour-Ed.book, Emerging Trends and Challenges in Information Technology Management*, 2006, pp.834-835.

- [45]. M. Anandarajan and C.A. Simmers, "Constructive and Dysfunctional Personal Web Usage in the Workplace: Mapping Employee Attitudes", 2015.
- [46]. V.K.G Lim and D.J.Q. Chen, "Impact of Cyberloafing on Affect, Work depletion, Facilitation and Engagement", *Conference Paper SIOP*, 2009, pp. 1-20.
- [47]. B. Liberman, G. Seidman, K.Y. McKenna and L.E. Buffardi, "Employee Job Attitudes and Organizational Characteristics as Predictors of Cyberloafing", *Computers in Human Behaviour*, vol. 27, no. 6, 2011, pp. 2192–2199.
- [48]. V.K.G. Lim, "The IT way of loafing on the job: Cyberloafing, neutralizing and organisational justice", *Journal of Organisational Behaviour*, vol. 23, no. 5, 2012, pp. 675-694.
- [49]. R. Rajah, and V.K. Lim, "Cyberloafing, Neutralization and Organizational Citizenship Behaviour", *PACIS 2011 Proceedings*, Paper 152, pp. 24-40
- [50]. D.B. Le Roux and D.A. Parry, "In-lecture media use and academic performance: Does subject area matter?" *Computers in Human Behaviour*, vol. 77, 2017, pp. 86-94.
- [51]. Y. Akbulut, Ö. Ö. Dursun, O. Dönmez and Y.L. Şahin, "In search of a measure to investigate cyberloafing in educational settings", *Computers in Human Behaviour*, vol. 55, 2016, pp. 616–625.
- [52]. J. McBride, J. Milligan and J. Nichols, "Cyberslacking" in the classroom: The reactions of classroom teachers", *College Student Journal*, vol. 47, no. 1, 2013, pp. 212–218.
- [53]. J.S. Mendoza, B.C. Pody, S. Lee, M. Kim and I.M. McDonough, "The effect of cellphones on attention and learning: The influences of time, distraction, and nomophobia", *Computers in Human Behaviour*, vol. 86, 2018, pp. 52–60.
- [54]. J. Wu, W. Mei and J.C. Ugrin, "Student cyberloafing in and out of the classroom in China and the relationship with student performance". *Cyberpsychology, Behaviour, and Social Networking*, vol. 21, no. 3, 2018, pp. 199–204.
- [55]. R. Yilmaz and H. Yurdugul, "Cyberloafing in IT classrooms: Exploring the role of the psychosocial environment in the classroom, attitude to computers and computing courses, motivation and learning strategies", *Journal of Computing in Higher Education*, vol. 30, no. 3, 2018, pp. 530–552
- [56]. C.B. Fried, "In-class laptop use and its effects on student learning", *Computers and Education*, vol. 50, 2008, pp. 906-914.
- [57]. J.C. Ugrin and M.J. Pearson (2013). "The effects of sanctions and stigmas on cyberloafing", *Computers in Human Behaviour*, vol. 29, 2013, pp. 812-820.
- [58]. Y.S. Wimpie, "The Impact of Cyber-slacking on Accounting Students' Academic Performance: A Preliminary Study," *Review of Integrative Business & Economics Research*, vol. 20, no. 8, 2019, pp. 352.