

Exploring The Antecedents And Situational Conditions Affecting Cyberloafing Behavior Among College Students: A Grounded Theory Approach

Mohmmad M.Dmour

Abstract: The researcher conducted a grounded theory study of cyberloafing among the IT college students in Jordan to explore adaptive and maladaptive aspects of factors that affect cyberloafing and to come out with a paradigm model of the antecedents of cyberloafing and to help the universities in Jordan and around the world to understand this behavior and find the solution to control the cyberloafing among the students and guide future empirical research. The researcher discusses previous research on the definition and dimensionality of cyberloafing and describe the study in which interview data were collected in 4 stages, where the number of informants was 48 students from four universities in Jordan, identifying 90 initial code and 7 macrothemes. Findings were validated by members' checks. The authors describe in detail informants' perceptions of cyberloafing, which were used to construct a 5-component paradigm model that includes adaptive and maladaptive dimensions of cyberloafing.

Index Terms: cyberloafing, cyberslacking, miss-use the Internet, education environment.

1 INTRODUCTION

AS the technology considered helpful in all the life sections and help the worker to develop and production increase, it helps the students to increase their skill and develop the education section, and it helps the people to get easier life. However, technology has been bringing a lot of problems that have not been before such as cyberloafing. There are many environments of cyberloafing, where the cyberloafing can be during the work by the employees in the work environment [1], or it can be during the lecture by the students or even out of class in the education environment [2]. Which the definition of cyberloafing is an activity involving the use of smartphones and computers in the workplace for personal activity by employees [3]. But this definition changes depending on the environment of cyberloafing, where the cyberloafing in education environments defined as students' behaviors or tendencies to use the Internet for a personal purpose unrelated to class during class time [4]. Cyberloafing is a new term introduced by the emergence of cyber sciences and the World Wide Web (WWW) in particular [3]. The cyberloafing term introduced for the first time by [5] in 1995 in New York Daily News under title of article "Cyber-loafing: Does employee time online add up to net losses?". Since then, this concept has become more popular in scientific circles due to the research was done by [6] in 2002 from the National University of Singapore [3]. The researchers in the previous studies have described the cyberloafing by many terms such as cyber deviance [7], cyberslacking [8], cyberlouching [9], Internet misuse [10], and many other terms.

However, the term of cyberloafing is more common and used in previous studies. Therefore, the researcher is using the cyberloafing term in this study. The cyberloafing concept arose in studies of the work environment [11]. Most of the previous studies on cyberloafing focused mostly on previous precedents of cyberloafing in the workplace [12]. However, studies of cyberloafing in educational environments are relatively different [13], and the number of studies focusing on cyberloafing in educational settings is very limited [14], as [15] have confirmed that the cyberloafing studies in educational settings are relatively novel. Today, most of the universities in Jordan provide technology tools for their students especially for the specializations that depend on technology such as Information Technology program and computer science [16]–[18]. Where the technology is available at universities and schools and used by employees and students offers great possibilities to improve the quality of education [19]. However, as the students use this technology for learning purpose there are many students also used this technology for personal purposes became more eminent [20]–[22]. Where cyberloafing behaviors cause different negative effects on students and the educational environment in general [22]. Cyberloafing is associated with poor low outcomes, such as low classroom performance and Grade Point Average (GPA), because it compels students to perform multiple tasks, reducing time, energy, and attention that could be allocated to learning [2], [23], [24], and it distracts the students' attention and prevents them from focusing on learning [25], [26]. Cyberloafing by the students during the classroom reduces student participation and active participation in learning activities in the classroom [26], which negatively affects students' academic performance by splitting them from classroom learning processes, resulting in more disengaged behaviors [2]. Therefore, the purpose of the current study was a highlight in the students they misuse the Internet during the class hours, which can also be referred to as cyberloafing, and will reveal all the factors that have an impact on the cyberloafing among the university students especially in Jordan by utilizing grounded theory mythology. The researcher is interested in the qualitative approach in

- Mohmmad Mosa Dmour has a Ph.D. degree program in Information and communication technology from UNIMAP University, Malaysia. E-mail: mohmmaddmour24@gmail.

general and the grounded theory for study the cyberloafing in education environment because of several reasons. Including procedures for understanding and interactions among social actors, flexibility in design, the potential to generate theory from data collected in the field, and the problem of cyberloafing requiring interpretation and qualitative analysis [27]. The qualitative content analysis is described as a method of classifying written or oral material into specific categories of similar meanings [28]. It is a method to systematically describe the meaning of qualitative materials [29]. The researcher has chosen a grounded theory for study the cyberloafing in the education environment as a way to develop a usable theory in cyberloafing situations because that there is relatively little research on cyberloafing among the students, even though it is a commonly occurring phenomenon among college students [15], and there is no any research about the cyberloafing among the students in Jordan, and most important to us, there is no existing theory or process model of cyberloafing in the education environment. The traditional approaches (for example, correlational, survey, experimental) are not entirely appropriate since the relative focus on each depends on the verification of the theory, and the grounded theory enables the researcher to find a ranking in the data, instead of testing certain hypotheses or fitting the results to an existing theoretical model [30]. In [15] stressed that grounding theory was chosen because it allows precisely the generation of the theory of observable data, rather than checking the components of the existing theory. As the researcher hoped to expand on this research by providing a more in-depth descriptive account of cyberloafing among students. Therefore, the grounded theory has chosen in the current study to generate a theory of cyberloafing at education environment, it is ideally suited to construct a data-based theory that can be used as a basis for future research [31]. Currently, the existing literature of cyberloafing in education settings is characterized by a lack of an explicit, testable theory and the view that cyberloafing has a negative impact on the academic section. Given the widespread nature of the phenomenon, when the cyberloafing considers as a regular occurrence in classrooms throughout the United States of America (USA) [32]. 70% to 90% of college students have regularly texting during the semester [24], [33]. The researcher tried to figure out what kind of perception that the university students have towards cyberloafing and the possibility of it to match the literature. The researcher believes that the extensive occurrence of cyberloafing phenomenon along with the other aspect of it can be explained by using a Grounded Theory. Grounded theory is a constant and inaugural way to gather data according to individual of group interviews with the aim to discover and analyze the bottom line of a phenomenon and its relation to potential causes, outcomes, and situational conditions that influence it [31], [34]. The grounded theory utilizes participants' encounters as information to develop and approve the new theory. The result of grounded theory is a worldview model that deliberately interfaces antecedents, situational conditions, adapting techniques, and outcomes to the phenomenon of intrigue [35]. However, in this study, the researcher will focus on the antecedents of cyberloafing and situational conditions that affect it and construct a paradigm model based on college students' self-reports.

2 OVERVIEW OF PREVIOUS RESEARCH

In [31] defined technical literature as research studies and

theoretical or philosophical papers characteristic of professional and disciplinary writing. In raising the question of how technical literature can enhance theory development, Strauss and Corbin described nine ways of using existing literature within a grounded theory study. They proposed that it is acceptable to enter the field of study, for example, "with some of the properties and relationships in mind and look for how their properties and dimensions might vary under a different set of conditions" (p. 50). Findings from a study may also be used to illustrate where the literature is "incorrect, is overly simplistic, or only partially explains phenomena" [31]. The following review of literature provides a summary of research into maladaptive and adaptive aspects of cyberloafing and serves as a point of comparison for the findings that emerged as the researcher conducted in grounded theory analysis.

2.1 Overview of the antecedents of cyberloafing

The previous study investigates some of the factors that influence cyberloafing such as access to technology, addiction, habit, norm, boredom, and personality traits. One of the important in predicting cyberloafing behavior factors is technology access by the students, meaning if the technology is available for students, they can act the cyberloafing [36]. Students who do not have Internet access out of their school computer or smartphones will not be able to cyberloafing. However, according to [37], there are 4.38 billion one use the Internet around the world. Likewise, in [37], an estimated 2.71 billion people have smartphones. In addition, a study by [38] shows that 96% of university students reported that they use the Internet. Because of this fact, the majority of students have access to using technology at university. There is another factor that has been identified as contributing factors to cyberloafing which is the addiction on Internet has been shown to increase cyberloafing [38]–[40]. In [40] found the Internet addiction construct as one of the reasons that lead to cyberloafing activities when the sample was 215 higher education students. In another study by [38] found the male Internet addiction level was higher than females. A study by [41] shows that habits directly affect the behavior cyberloafing of individuals. If the habit is higher of individuals, it is associated positively with a higher level of cyberloafing [25]. In the same study found when cyberloafing is a habit formed, cyberloafing is routinely performed without conscious effort and consideration of its effects, when he collected the data from 238 university students. In the study by [25] investigated the relationship between the norm and cyberloafing in the education setting among 238 university students, and the result has shown higher levels of prescriptive norms will positively correlate with higher levels of students' intention to cyberloafing during class. Besides, higher levels of descriptive norms will positively correlate with higher levels of students' intention to cyberloafing in the class [25]. Another important factor that leads the students attracted to cyberloafing is boredom [42]. The cyberloafing will prevent students from being bored in the classroom and learning activities [13]. In fact, college students were reported they were bored about 50 % to 60% of the time while attending lectures [43]. Therefore, to combat boredom in the classroom, college students often resort to their mobile devices or will attraction to cyberloafing for stimulation [44]. One of the important factors that has been studied is the relationship between personality traits and cyberloafing behavior. Several studies found there is a

relationship between personality traits and cyberloafing [39], [45], [46]. Recent studies have shown that personality traits of agreeableness have negatively related to cyberloafing [45], [47], [48]. Likewise, some of the studies present there are negatively related between conscientiousness and cyberloafing [12], [47], [48]. On the other hand, some studies examine the relationship between openness and cyberloafing, and they found the openness has positively related to cyberloafing [45], [49]. Similarly, the traits extraversion and neuroticism have been positively related to cyberloafing [47], [48]. The need to be in socially stimulating environments may encourage them to search for social networking sites or other online entertainment resources by cyberloafing [47].

3 METHOD

3.1 Participants

Forty-eight IT undergraduates from four big Jordanian universities took part in partial completion of course prerequisites. Data were collected over a period of five months, between January 2019 and May 2019. In order to find the appropriate informants about cyberloafing that fit the criteria, snowball technique of collecting data were chosen because it usually continues after the start of the study and occurs when the researcher asks the informants to recommend other individuals to study [50]. Finally, disconfirming and confirmation of samples follow specific cases to test or explore more specific results [50]. This has been done in the fourth phase of data analysis. When the first informant in each university was chosen upon the recommendation of the lecturers. In this situation, the researcher has ensured that all informants have a certain level of experience in cyberloafing in their lives. The sample consisted of 20 females and 28 males (n=48). All informants were between the ages of 18 and 23 years. all the informants have Jordanian nationality. None of the students showed up in more than one period of the research. Table 1 shows the stages and number of participants in each stage.

TABLE 1
FOUR PHASES IN DATA COLLECTION

Phase	Coding	Purpose	Informants
1	Open	Categorize codes within categories for advanced analysis	12 Individuals and 7 in focus groups
2	Axial	Specify codes in detail; relay code to one another to themes	5 Individuals and 4 in focus groups
3	Selective	Create a paradigm model and discuss themes in relative to model; establish plot that integrates paradigm	11 in focus groups
4	Selective	Test, certify and explain the paradigm model until saturated recognize surfacing principles constant with paradigm model perform members' checks.	9 in focus groups

3.2 Procedure

Data were collected using grounded theory procedures according to [34], [35]. In [34] suggested that the standard grounded theory study involves 20 to 30 interviews that collectively saturate the categories that appear during analysis. Data have collected in four different stages depending on purpose and data collection strategies as shown in Table 1.

The goal of data collection in our study was to move systematically through the following sequence: (a) identify

codes within categories, (b) combine codes to identify emergent themes, (c) test the plausibility of themes, and (d) construct a paradigm model of antecedents of cyberloafing in education and identify principles associated with the phenomenon [51].

The first step of data collection is open coding. Open coding begins with the theoretical development series [52]. Open coding relies on the notion that the analyst remains "entirely open" to data [53]. In the first phase of data analysis, the researcher participated in an open-line coding to designate and assign meaningful units for incidents, events, and procedures in the transcribed data. open coding enabled the researcher to create codes list within five categories in the paradigm model (antecedents of cyberloafing, definitions of the cyberloafing, context and conditions that affect the cyberloafing, coping strategies, and consequences of cyberloafing phenomenon) resulted from questions that correspond to the main components of the paradigm model described by [35]. 90 codes were labelled as shown in Table 2.

TABLE 2
INITIAL CATEGORIES AND CODES IN PHASE 1

Category	Coding
Antecedents	ack of active learning
	computer laboratories
	length of lecture
	All the lectures times
	lecture's time
	lectures at evening
	lighting at classroom
	number of students at class
	friends
	Internet access
	leptism
	absence and attendance
	addiction on the Internet
	attract to cyberloafing
	boredom
	habit
	emergency situation
	online event
	online work
	wait for email
	ack of awareness
	ack of attention
	message & notification

	4.	Students cannot hear	3.	Chatting
	5.	Students cannot see the screen	4.	Email
	6.	Get away from the lecturer	5.	Everything
	7.	Sit in the back	6.	Game
	8.	Sit in the middle	7.	Leads
	9.	Students do not like the lecturer	8.	Online shopping
	0.	Tired	9.	Lead document
	1.	The lecture not important	0.	Social media site
	2.	Don't have book	1.	Watch video
	3.	Exam	2.	YouTube
	4.	Finish the study required early	3.	1 to 15 minutes
	5.	Have a lot of lectures during the day	4.	6 to 20 minutes
	6.	Background about the topic	5.	to 5 minutes
	7.	Mathematical subjects	6.	1 to 25 minutes
	8.	Memorize subjects	7.	6 to 30 minutes
	9.	Repeated topic or subject	8.	to 10 minutes
	0.	Specialization subjects	9.	More than 30 minutes
	1.	Study on another subject	0.	Special cases
	2.	Big amount of information	1.	Computer
Contexts and Prevaling conditions	3.	Views the subject as memorization	2.	Internet
	4.	Lecturer way in explanation	3.	Laptop
	5.	Door in the education	4.	Phone
	6.	Students do not understand the lecturer	5.	Tablet
	7.	Lecturer does not care	6.	Ability to focus
	8.	Lecturer is boring	7.	Ability to hide
	9.	Lecturer is rancid	8.	Cyberloafing does not affect me
	0.	Door observer	9.	Mental ability
	1.	Door personality	0.	Inblock
	2.	Psychologically ill		
	3.	Strong observer		
	4.	Strong personality		
	5.	The way of lecturer in handling with the students		
	6.	Activities need high focus		
	7.	Activities need less focus		
	8.	Activities take a long time		
	9.	Impact of cyberloafing activities		
	0.	Probability of being caught		
	1.	Browser		
	2.	Ball		

The second step of coding was the Axial coding that worked in conjunction with open coding. In [35] reported that open coding and axial coding work side by side. During axial coding, the data is continuously compared and then reassembled by linking concepts and making connections that link categories at the level of dimensions and properties. The axial coding is used to collect codes in patterns and themes related to a central phenomenon (cyberloafing). The collection of data in Phase 2 provided the researcher with a deep understanding of each of the two main elements of the paradigm model as shown in Table 3. After the inquiries have been questioned to, the researcher looked for definitive classifications that developed during the investigation in the first stage. The researcher identified a variety of primary themes based on the two categories, coding, and themes incorporated in a manner consistent with the interviews. It is important to note that the second stage has provided the researcher with a possibility to

arrange and name the themes that can be tested in Phase 3. Therefore, the macrothemes and themes identified in phase 2 were temporary in nature and were subject to review or deletion in phase 3 as shown in Table 3.

TABLE 3
MACROTHEMES AND THEMES IN PHASE 3

Category	Macrothemes	Coding	Contexts and Prevailing Conditions	Characteristic of lecturers	Issues specific to cyberloafing	
Antecedents	Class environment	1.	Lack of active learning			
		2.	Computer laboratories			
		3.	Length of lecture			
		4.	All the lectures times			
		5.	Lecture's time			
		6.	lectures at evening			
		7.	Lighting at classroom			
		8.	Number of students at class			
	Out of class environment	Student's factor	9.	Friends		
			1	Internet access		
			0.	Nepotism		
1			Absence and attendance			
2.			Internet addiction			
3.			Attract to cyberloafing			
4.			Boredom			
5.			Habit			
6.			Emergency situation			
7.			Online event			
8.			Online work			
9.	Wait for email					
0.	Lack of awareness					
1.	Lack of attention					
2.	Message & notification					
3.	Students cannot hear					
4.	Students cannot see the screen					
5.	Sit away from the lecturer					
6.	Sit in the back					
7.	Sit in the middle					
8.	Students do not like the lecturer					
9.	Tired					
0.	The lecture not important					
Study		1.	Don't have book			

- 2.
- 3
- 3 Exam
- 3 Finish the study required early
- 4.
- 3 Have a lot of lectures during the day
- 3 background about the topic
- 6.
- 3 Mathematical subjects
- 7.
- 3 Memorize subjects
- 8.
- 3 Repeated topic or subject
- 9.
- 4 Specialization subjects
- 0.
- 4 Study on another subject
- 1.
- 4 Big amount of information
- 2.
- 4 Gives the subject as memorization
- 3.
- 4 Lecturer way in explanation
- 4.
- 4 Poor in the education
- 5.
- 4 Students do not understand the lecturer
- 6.
- 4 Lecturer does not care
- 7.
- 4 lecturer is boring
- 8.
- 4 Lecturer is rancid
- 9.
- 5 poor observer
- 0.
- 5 Poor personality
- 1.
- 5 Psychologically ill
- 2.
- 5 Strong observer
- 3.
- 5 Strong personality
- 4.
- 5 The way of lecturer in handling with the students
- 5.
- 5 Activities need high focus
- 6.
- 5 Activities need less focus
- 7.
- 5 Activities take a long time
- 8.
- 5 Impact of cyberloafing activities
- 9.
- 6 Probability of being caught
- 0.
- 6 Browser
- 1.
- 6 Call
- 2.
- 6 Chatting
- 3.
- 6 Email
- 4.
- 6 Everything
- 5.
- 6 Game
- 6.
- 6 News
- 7.
- 6 Online shopping
- 8.
- 6 Read document

9.	
7	Social media site
0.	Watch video
1.	YouTube
2.	11 to 15 minutes
3.	16 to 20 minutes
4.	2 to 5 minutes
5.	21 to 25 minutes
6.	26 to 30 minutes
7.	6 to 10 minutes
8.	More than 30 minutes
9.	Special cases
0.	Computer
1.	Internet
2.	Laptop
3.	Phone
4.	Tablet
5.	Ability to focus
6.	Ability to hide
7.	Cyberloafing does not affect me
8.	Mental ability
9.	Unblock
0.	

study about the cyberloafing in the education environment. Tables 1, 2, and 3, alongside the chronology, give insights about the analytic choices that happened inside the present study. For instance, Table 2 shows the underlying classifications that emerged during Phase 1 of the study (Criterion 1), and Table 3 demonstrates connections between the macrothemes in each category (Criterion 5). The documentation of information gathering and investigation inside every one of the four phases show the rationale of the coding methodology. This point-by-point data about the research procedure likewise shows the dependability (Guba, 1981) of the study. For instance, directing member checks in Phase 4, setting up a review trail, gathering detailed illustrative information, and cross-checking classifications rising up out of interviews during various phases are procedures that address the reliability of a qualitative study.

5 RESULTS AND INTERPRETATION

The researcher presents the findings in two sections. The first section focuses on the paradigm model constructed in Phases 1–3 and validated in Phase 4. The main goal of the paradigm model is to discuss themes that emerged within each category and to relate these themes into an integrated storyline that describes the process of cyberloafing. The second section focuses on six principles that merged from the interviews and a critique of the paradigm model by interviewees in Phase 4.

5.1 A Paradigm Model of the antecedents of cyberloafing

The paradigm model is shown in Figure 1. This model includes antecedents of cyberloafing and contexts and conditions that influence the antecedents toward cyberloafing.

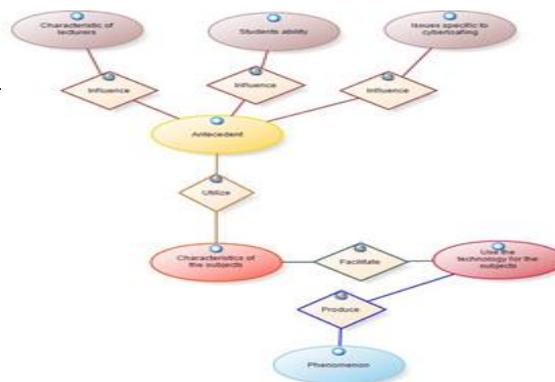


Fig. 1. A paradigm model of factors that affect cyberloafing

3 ADEQUACY OF THE RESEARCH PROCESS

According to [35] in term of delivering the outcomes of a grounded theory, detailed information about the research development needs to be included as it summarizes the criteria to determine the competence of the research itself. The seven criteria sketched out by [31] are crucial for assessing the explanatory rationale we utilized. On the off chance that the data is given, at that point "readers can follow the rationale of the researcher's intricate coding strategies" [31](p. 269). Criteria 1 through 7 moves through the means of directing a grounded theory analysis and incorporate sample determination. The first criterion is a selection of the original sample and justification of the use of the target samples. The second criterion is the main categories emerged. The third criterion is the incidents, events, actions. Those indicate some of these major categories. The fourth criterion is an explanation of how the theoretical constructs affect or guide the data collection. The fifth criterion is the clarification of justifications and hypotheses for the establishment of cross-category relationships and the validation approach. The sixth criterion is the accounting of discrepancies in the data and the resulting theoretical amendments. The last criterion is the rationale for choosing a core or central category. The researcher had followed these criteria to achieve the concept of credibility, conformability, and dependability of the current

5.2 Antecedents of Cyberloafing

Antecedents of cyberloafing. Participants attributed cyberloafing to four types of antecedents, including the out of the class environment, study, students' factors, and class environment (see Table 3).

5.2.1 Students' Factors

Students' factors were the most important cause of cyberloafing. Less interest translated into more cyberloafing. Students tended to use their phones for personal purposes if they feel bored. Another students' factors were habit and addiction to cyberloafing when the students cannot stop using their phones even during the lectures. However, the finding shows that some students sometimes they attract to

cyberloafing in the classroom. Around 30% of informants reported that they use the phone for education purposes during the lecture then after they finish the education purpose they get attract to some application or website and use it for personal purposes. Anyway, some students start to do cyberloafing when they get messages or notification by social media or any chat application. Many informants said during the interview that they do cyberloafing when they do not like the lecturer, or if they have a problem with the lecturer. When the students do not like the lecturer, they will not give attention to the lecturer during the lecture and they will try to get busy with anything such as cyberloafing. Besides, around 20% of informants mentioned that the students do cyberloafing because they have a lack of awareness and they do not know the negative consequent resulting from the cyberloafing. There is another factor that leads the students to do cyberloafing which is the lack of attention when the students lose his/her attention or cannot focus during the lectures, they do cyberloafing over because they think if they play on the phone or not the result will be same. In some cases, some students choose to attend the lecture just for the sake of "being present". They do not view the lecture to be as important as the attendance. In this situation, the students will not give attention to the lecturer and they will spend most of the lecture time on the cyberloafing. However, sometimes the students do cyberloafing when they have something important to do on the Internet. The informants have reported four cases of important things by the Internet include emergency situations, online events, online work, and if they wait for an important email. Around 30% of the informants do cyberloafing during the lecture because of the emergency such as call or chat from family for important things. Interestingly, the result shows that the place where the students site affected on the students to do cyberloafing. When there is around 40% of informants reported that they do cyberloafing more when they sit at the back of classroom, another 20% of informants reported that they do cyberloafing more when they sit away from the lecturer. In addition, when the students sit in the back or away from the lecturer in the classroom, they get some physical causes that lead them to do cyberloafing such as they do not hear the lecturer well and they cannot see the board or screen well. The final students' factors as the informants reported that lead the students do cyberloafing is when the student feels tired during the lecture.

5.2.2 Study Factors

The informants have reported many reasons related to the study that makes them do cyberloafing such as when the lecture not important. Besides, if the students have an exam or assignment for another subject, they will use the lecture time and study on the other subject by phone or laptop. However, 20% of the informants reported, they do cyberloafing when Already knew about certain topic. Also, many students mentioned that they do cyberloafing because the subject that required to memorize. The Informants have reported during the interview that they do cyberloafing when they repeat the subject or topic, they will do cyberloafing because they had taken the topic before. A lot of informants have reported that when the lecturer asks them to apply some codes or work in the computer that will lead them to do cyberloafing in case they finish the lecturer required early, so they will have extra time to do cyberloafing. Especially, when the students in the computer lab. Moreover, few informants also mentioned that

they did cyberloafing in the exam for cheating purposes. In addition, other informants reported that they do cyberloafing when they have a lot of subjects on the same day. Some of the informants mention if they get a lot of information during the day, they will get bored and their focus will reduce. Therefore, they will need to do something such as cyberloafing to help them take a rest from the study. There was only one informant who reported that he does cyberloafing when he does not bring the subject book with him to lecture. Several informants indicated that the nature of the subject may affect students towards cyberloafing. They have identified three nature of the subject that cause them to do cyberloafing, which is specialization subject, memorize subject, and mathematical subjects. The last factor that related to study is if the student has assignments or homework that has not done at home because of some reason and he/she will use another lectures time to study on other subject or to finish some assignments by technology tools.

5.2.3 Out of Class Environments

Interestingly, the researcher found some factors affected the students' behavior towards cyberloafing from out of class environments such as nepotism, friends, and Internet access for the students as shown in Table 3. Some informants disclosed that they do cyberloafing more when they have nepotism in the subjects. The informants have reported another factor that leads them to cyberloafing from out of the class environment which is their friends. Besides, some informants have reported about Internet situations, especially students who do not have always access to the Internet at home. Therefore, when they get free Internet at university, they will spend more time on the Internet during the lectures time.

5.2.4 Class Environment

Some factors related to the class environment that lead the students to do cyberloafing more such as when the number of students is big in the class, more than half of the informants reported that they do cyberloafing more when the number of students is big in the lecture. Besides, the place of the lecture plays an important factor that leads the students to cyberloafing. A lot of the informants reported that they do cyberloafing more when they take the lecture on a computer lab. The informants have reported also that they do cyberloafing more when the lecture prolongs for long. also, few informants have reported that they do cyberloafing more when the lighting in the lecture is light. Even the time of the lecture also affects the student toward cyberloafing. There was a difference between informants about the time of the lectures. 25% of the informants reported that they do cyberloafing whatever the lecture's time and other informants said that they do cyberloafing more when the lecture afternoon or in the evening classes. Finally, the last factor reported is lack of activity in the lecture, when there are not active in the lecture the students will get bored and it will lead them to do cyberloafing. Around 25% of the informants reported that they do cyberloafing when there is a lack of activity in the lecture.

5.3 Contexts and Prevailing Conditions

The informants have reported some contexts and prevailing conditions that affect the antecedents of cyberloafing that some of them increase the cyberloafing and other is reduce the cyberloafing behavior among the students. The researcher has identified three related macrothemes that influence cyberloafing

as shown in Table 3. Each of these macrothemes includes other sub-themes as the researcher will be explained each one of the macrothemes separately below.

5.3.1 Characteristics of Lecturers

The first macro theme is characteristics of lecturers when the informants revealed that both of personality and academic characteristics of lecturers. There are nine personality characteristics of lecturers affecting cyberloafing according to the informants. The first personality characteristic of lecturers is the lecturer does not care if the students do cyberloafing or not, in this case, the students will do cyberloafing more. A friendly lecturer makes the students less attracted to do cyberloafing. The informants have reported that when the lecturer is boring it will lead the students to get bored from the lecturer and increase the cyberloafing. One of the informants has reported that the poor observer from the lecturers leads the students to do cyberloafing easier during the lectures. On the other hand, the informants reported that when the lecturers who constantly observed his or her students, the students will do cyberloafing less, that because if the students do cyberloafing the lecturer will see them. The personality of the lecturer plays also an important role in the cyberloafing among the students. As many informants have reported that the strong personality of the lecturer leads to reduce cyberloafing among the students and vice versa. As some of the informants describe some of the lecturers as rancid because the lecturer cannot control the classroom and the students can do whatever they want. Therefore, when the lecturer is rancid the students will do cyberloafing over during the lecture. Another informant has described some of the lecturers have psychologically ill. Therefore, the students will do more cyberloafing. The informants have mentioned in this study that there are four academic characteristics of lecturers affecting cyberloafing. 50% of the informants have reported that the lecturer way in explanation in the lecture effecting on the students to do cyberloafing. some of the lecturers explain the subjects in a good way and make the lecture more activity and take the students' attention to the topic and it will reduce the cyberloafing among the students during the lectures and vice versa. Some informants have reported that when the lecturer gives the subject in memorize way, the students will not focus on the lecturer and they will do cyberloafing over. In some cases, the lecturer is not qualified for giving the subject or the department of IT give the subject to lectures not specialized in the field. Therefore, the students will not understand the lecture and they will spend most of the lecture time in the cyberloafing. However, the informants reported that sometime the lecturer has the knowledge, but the students do not understand the lecturer. Thus, the students will do cyberloafing.

5.3.2 Issues Specific to Cyberloafing

The second macro theme is issues specific to cyberloafing. The researcher proposed from the informants reported that there are three main issues specific to cyberloafing, and each of these issues has micro-themes include tools, cyberloafing activities, and time spends on cyberloafing. The informants have use five tools to do cyberloafing during the lectures include the phone, computer in the computer lab, laptop, tablet, and Internet. All the informants in both male and female students reported that they use the phone in usually to do cyberloafing. Around 40% of informants do cyberloafing sometime by a computer when they are in the computer lab. On another hand, 25% of informants do cyberloafing sometime by a laptop. Only a few informants

reported that they do cyberloafing by tablet. However, the Internet plays an important element for the students to do cyberloafing. The time spends on cyberloafing was different from an informant to another informant. 25% of informants reported that they spend from 6 to 10 minutes on the cyberloafing during the lecture. Around 21% spend from 2 to 5 minutes on the cyberloafing. And 19% of informants reported that they spend more than 30 minutes on cyberloafing. Around 14% of informants spend from 21 to 30 minutes on cyberloafing. Around 14% of informants spend from 11 to 15 minutes on cyberloafing. Only 7% spend from 17 to 20 minutes on the cyberloafing during the lecture.

5.3.3 Cyberloafing Activities

The third macro theme is cyberloafing activities. The researcher has identified two related macrothemes related to cyberloafing activities which are kind of cyberloafing activities and a difference in activities. The kind of activities includes the activities kind of cyberloafing that the students do during the lectures. The informants have reported twelve types of cyberloafing activities that do during the lectures. Which include browser, game, online shopping, watch video, news, YouTube, social media, call, chatting, email, read a document, and some students do everything. However. Some of these cyberloafing activities do only by male students and there are some of these cyberloafing activities done by female students and other cyberloafing activities done by both male and female students as shown in Figure 2.

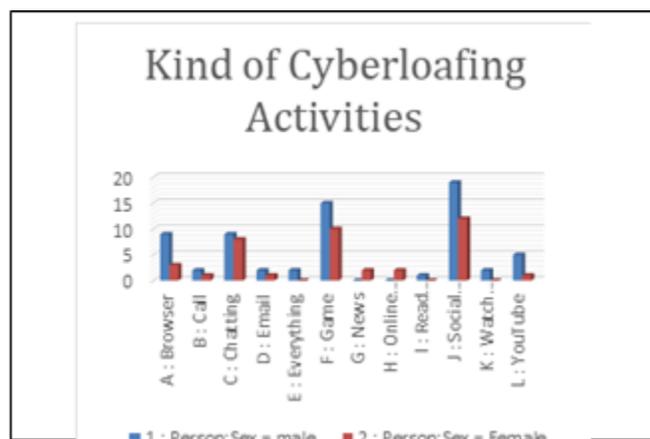


Fig. 2. Types of Cyberloafing Activities

However, the informants reported that there is a difference in cyberloafing activities in the effects on the students such as some cyberloafing activities need high focus and other needless focus, and some cyberloafing activities have a major impact and some have a minor impact, and some of the cyberloafing activities lead the students to spend more time, and some of the cyberloafing activities the probability of being caught by the lecturer is high when there are some have less probability of being caught by the lecturer. Many informants reported that there are some cyberloafing activities that require a high focus on the phone and that kind of cyberloafing activity does not lead the students to focus on the lecture, the examples of this kind of cyberloafing activity, the YouTube and games. On the other hand, many informants reported that there are some cyberloafing activities need to less focus on cyberloafing such as social media. Many informants described that different kind of cyberloafing activities have different time

spend on the cyberloafing. In other words, some cyberloafing activities require a long time such as online games, when other cyberloafing activities take less time such as Facebook. In addition, the informants described that different kind of cyberloafing activities have a different probability of the students being caught from the lecturers, some of the cyberloafing activities have a high probability of students to catch from the lecturers when there are some cyberloafing activities have less probability of students to catch from the lecturers. When the kind of cyberloafing activities take all the students to focus, it will lead the students to only focus on the phone without look to the lecturer or check if the lecturer close to them or no, in this case, the probability of students to catch from the lecturers is high. Different types of cyberloafing and different time spend on cyberloafing have a different level of effecting in the students. Some students have some ability that helps them to do cyberloafing more than others. The researcher has identified five of the students' abilities that help the students to do cyberloafing more. These five of the students' abilities include the ability to hide, the ability to focus, cyberloafing does not affect me, unblock, and mental ability. The informants described that the students can hide their behaviour easier while they are doing cyberloafing compared to other students. Some of the students can even unblock the website that is blocked by the university. The informants have reported also that some students have the special ability and ability to focus. The special ability means that the students can remember and understand the topic without giving full attention to the lecturer. Therefore, perhaps the lecturer will not be bothered by the students who have this special ability regardless of what they are doing. In addition, the ability to focus means that the students can do cyberloafing and focus in the lecture at the same time or they can read the subject alone at home. However, some of the informants have reported that cyberloafing indeed has some negative effect on the students but cyberloafing does not particularly affect them or on their study. Antecedents of cyberloafing utilize the characteristic of the subjects. In this study, the researcher targeted the information and technology students. Therefore, most of the subjects that take in this program are related to technology and depend on using technology during the class. Thus, sometimes it will be easier for the students to do cyberloafing when the subject depends on using the technology because the lecturers cannot know if the students do cyberloafing, when they just use the technology for personal purpose.

6 DISCUSSION

This research was aimed to analyse the cyberloafing phenomenon. For this reason, researcher conducted interviews with college students from IT major to study their cyberloafing characteristics. The study itself was exploratory and verbal based statement. The researcher wishes to underline that the justification for this study was to build a primer paradigm model of the elements that influence the cyberloafing that could be used in future research, instead of testing a current theory. The researcher additionally investigated in more noteworthy detail the potential versatile and maladaptive parts of cyberloafing among the students. the researcher presents our decisions as cases to be tried and expanded on by future qualitative and quantitative research. this study finding depends on sources' discernments and attributions in regard to their conduct. One of the key attributes of a qualitative study is that it centers around

participants' viewpoints and is not proposed to sum up to a more extensive population [34]. Moreover, the researcher had three explicit research objectives. The main objective was to build a paradigm model that empowered us to understand the antecedents of cyberloafing more deliberately. The researcher built a paradigm model of cyberloafing among the students that included antecedents and situational conditions that influence the antecedents of cyberloafing. This model expanded past research in two different ways. One was to inspect in more noteworthy detail an assortment of assumptions from past studies. A second objective was to see cyberloafing in an increasingly precise way that concentrated on the more extensive issues of why and how college students do cyberloafing. The researcher accepts that the paradigm model appeared in Figure 1 presents an efficient examination of the procedure of the variables that lead the students to do cyberloafing that will help future qualitative and quantitative research. Further, the researcher suggests that the primary discoveries of the model are align with both the versatile and maladaptive parts of cyberloafing discussed about in past research. The second goal of this study was to examine the adaptive and maladaptive aspects of cyberloafing in more detail. The previous studies have explored and investigated many factors effect on students to do cyberloafing. For example, these factors have a positive significant effect on cyberloafing such as computer laboratories [36], length of lecture [24], friends [54], Internet access [55], addiction on Internet [20], boredom and message and notification [13], habit [25], seating position and tiredness [14], and memorization subject [2]. In addition, the previous studies have found some of the factors that have a negative significant effect on cyberloafing such as important of lecture [56], an important level of class [25], [57], lack of attention [58], and active learning in the classroom [32]. On the other hand, there are many antecedents had reported by the students not have been in the previous study, when some of these factors have a positive significant effect on cyberloafing and another has a negative significant effect on cyberloafing as the informants have reported. The factors affect positive significant effect on cyberloafing include lecture's time, number of students in the classroom, nepotism, attract to cyberloafing, emergence situation, online event, online work, wait for an email, nature of students, the student does not like the lecturer, the student does not have a book, the student has an exam, finish the required early, number of lectures during the day, background about the topic, mathematical subject, repeated topic or subject, specialization subject, and study on another subject. However, the informants have reported some factors that affect negative significant effect on cyberloafing such as the lighting in the classroom, lack of awareness, absence and attendance, inability to listen to the lecture, and student cannot see the screen. As the antecedents have affected the students to cyberloafing, the contexts and prevailing conditions around the students is an effect on them to increase or reduce cyberloafing. However, the previous studies have not to focus in the contexts and prevailing conditions of cyberloafing, and have mentioned only some of them such as some characteristic of the lecturer as a lecturer is the lack in knowledge and boring that have a positive significant effect on cyberloafing [42], the lecturer does not care have a positive significant effect on cyberloafing [24]. On the other hand, the informants in this study have reported some characteristics of the lecturer that affect the students toward cyberloafing such as lecturer way in explain, a student does not understand the

lecturer, lecturer observer level, and personality of a lecturer. Additionally, the previous studies have mentioned about some issues that specific to cyberloafing such as type of activities activity [24], [54], [56], and some of them compare between the type of activity by the active have serious (major) and minor affect [21]. However, In [20] said about the game and some activities take less time when the informants in this study have reported that activity takes longer time than other activities. The informants have classified the difference between cyberloafing activities by actives take high focus and others need less focus by students, and they have classified the difference between cyberloafing activities by the ability to get caught by a lecturer. On top of that, the informants have reported some students' ability that helps them to increase or decrease the cyberloafing some of this ability have mentioned in the previous study such as the ability to hiding when it has a positive significant effect on the students to do cyberloafing [25], and ability to use the internet also it has a positive significant effect on the students to do cyberloafing [57]. However, the sample in this study was IT students in the universities, therefore all students can use the Internet. In [20] reported the ability to focus have a positive significant effect on the students to do cyberloafing. Further, the informants in the current study add the ability to unblock and the ability of the mind that has been not reported in the previous literature review of cyberloafing among the students and both of this ability positively significant effect on the students to do cyberloafing. However, some students have not been affected by cyberloafing. The third goal of this study was to recognize developing rules that may control students' cyberloafing. The researcher identified five overarching principles affecting cyberloafing, which were confirmed by participants in Phases 3 and 4 of the data collection process. The essence of these principles was that students attempt to do cyberloafing for entertainment and reduce the stress that they may get from the study. In addition, they do cyberloafing when they feel that lecture is not important, or they will not get any benefit of focus in the lecture. In some case, there are other aspects outside of the class that affects the students to do cyberloafing as the researcher explained before. Also, the students tend to do cyberloafing when they have something important to do, and they think that event or action is more important than the lecturer. However, the place, the time, light, and length of lecture effect on the students to increase or reduce their cyberloafing behavior. It is crucial to know that the five principles speak to comprehensive developments that we made in accordance to the interviews. We accept that most students' remarks were reliable with these principles. The current discoveries ought to be seen as exploratory for a few reasons. One is that the researcher utilized qualitative techniques planned to create as opposed to approve an information based theory. Besides, the researcher sees the flow grounded theory as a method for advancing developmental questions about cyberloafing, as opposed to a summative model of the phenomenon. Second, students were chosen deliberately in light of the fact that they have understanding of cyberloafing. Third, the current discoveries relate to IT college students in Jordanian colleges. It is not evident whether the current discoveries look somewhat like cyberloafing at home or with less-experienced students. The researcher looked for three restrictions of the current research. One is that the information comprised of the decisions of sources who conceded they did cyberloafing. Notwithstanding,

it is conceivable that these students gave mistaken statements or that the bystanders, supporters, and instigators revealed various convictions and conduct. A subsequent inadequacy is that the paradigm model is planned to uncover relationship among the assorted parts of cyberloafing as opposed to propose a fundamental association among the five components. The third deficiency is that just a single ethnic gathering has been implicated. The Jordanian is perhaps limited with beliefs and attitudes that may be not similar as other primary ethnicities in Jordan and this could bring about different responses in regards to cyberloafing experience.

7 CONCLUSION

Most of the current and previous study exploring and investigated the cyberloafing as behavior. However, there are many activates kind come under cyberloafing behavior, and these activities have different antecedents and different effects on the students and universities. Therefore, future research could investigate and explore the cyberloafing actives kind in a separate way.

REFERENCES

- [1] E. E. Chukwuemeka, I. N. Collins, E. Iloke, Stephen, and A. Elizabeth, "Organizational Identification and Proactive Work Behaviour as Predictors of Cyber-loafing among Anambra State Civil Servants," *Asian J. Adv. Res. Reports*, vol. 8, no. 2, pp. 10–19, 2020, doi: 10.9734/ajarr/2020/v8i230194.
- [2] 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, Behav. Soc. Netw.*, vol. 21, no. 3, pp. 199–204, 2018, doi: 10.1089/cyber.2017.0397.
- [3] G. Jandaghi, S. M. Alvani, H. Z. Matin, and S. F. Kozekanan, "Cyberloafing Management in Organizations," *Iran. J. Manag. Stud.*, vol. 8, no. 3, pp. 335–349, 2015.
- [4] Kalaycı, "Üniversite öğrencilerinin siber aylıklık davranışları ile öz düzenleme stratejileri arasındaki ilişkinin incelenmesi," *Hacettepe Üniversitesi Fen Bilim. Enstitüsü*, 2010, Accessed: Jun. 20, 2018. [Online]. Available: https://www.google.com/search?rlz=1C1CHZL_enJO751JO751&ei=fkMpW7q1C8_39QPUw5nYDg&q=Üniversite+öğrencilerini+n+siber+aylıklık+davranışları+ile+öz+düzenleme+stratejileri+ar+asındaki+ilişkinin+incelenmesi.
- [5] A. Kamins, "Cyber-loafing: Does employee time online add up to net losses," *New York Daily News*, New York, 1995.
- [6] V. K. G. Lim, "The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice," *J. Organ. Behav.*, vol. 23, no. 5, pp. 675–694, 2002, doi: 10.1002/job.161.
- [7] A. Al-Shuaibi, C. Subramaniam, and F. Mohd-Shamsudin, "The Mediating Influence of Job Satisfaction on the Relationship between HR Practices and Cyberdeviance," *J. Mark. Manag.*, vol. 5, no. 1, pp. 105–119, 2014, [Online]. Available: http://wv9lq5ld3p.search.serialssolutions.com.library.capella.edu/?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rft_id=info:sid/ProQ%253Aabiglobal&rft_val_fmt=info:ofi/fmt:k ev:mtx:journal&rft.genre=article&rft.jtitle=Journal+of+Marketing+and+Management&.
- [8] N. P. Rana, E. Slade, S. Kitching, and Y. K. Dwivedi, "The IT way of loafing in class: Extending the theory of planned behavior (TPB) to understand students' cyberslacking intentions," *Comput. Human Behav.*, vol. 101, pp. 114–123, 2019, doi: 10.1016/j.chb.2019.07.022.
- [9] A. Urbaczewski and L. M. Jessup, "Does electronic monitoring of employee internet usage work?," *Commun. ACM*, vol. 45, no.

- 1, pp. 80–83, 2002, doi: 10.1145/502269.502303.
- [10] A. Alshuaibi, M. F. Shamsudin, and M. Alshuaibi, "Internet Misuse at Work in Jordan: Challenges and Implications," in *Proceedings of the 3rd convention of the world association of business schools (WAIBS)*, 2015, pp. 68–78.
- [11] M. M. Dmour, H. S. Bakar, and M. R. Hamzah, "An antecedent, consequences, and policies view of cyber loafing among students," *Int. J. Innov. Creat. Chang.*, vol. 11, no. 2, pp. 325–338, 2020.
- [12] K. Kim, M. D. C. Triana, K. Chung, and N. Oh, "WHEN DO EMPLOYEES CYBERLOAF? AN INTERACTIONIST PERSPECTIVE EXAMINING PERSONALITY, JUSTICE, AND EMPOWERMENT," *Hum. Resour. Manage.*, vol. 55, no. 6, pp. 1041–1058, 2016, doi: 10.1002/hrm.
- [13] R. Yılmaz and H. Yurdugül, "Cyberloafing in IT classrooms: exploring the role of the psycho-social environment in the classroom, attitude to computers and computing courses, motivation and learning strategies," *J. Comput. High. Educ.*, vol. 30, no. 3, pp. 530–552, 2018, doi: 10.1007/s12528-018-9184-2.
- [14] F. Varol and E. Yıldırım, "Cyberloafing in Higher Education: Reasons and Suggestions from Students' Perspectives," *Technol. Knowl. Learn.*, vol. 24, no. 1, pp. 129–142, 2019, doi: 10.1007/s10758-017-9340-1.
- [15] Y. Akbulut, Ö. Ö. Dursun, O. Dönmez, and Y. L. Şahin, "In search of a measure to investigate cyberloafing in educational settings," *Comput. Human Behav.*, vol. 55, pp. 616–625, 2016, doi: 10.1016/j.chb.2015.11.002.
- [16] Hu.edu.jo, "E-Learning Department," 2020, Apr. 07, 2020. <https://hu.edu.jo/icet/index.aspx?typ=168> (accessed Apr. 07, 2020).
- [17] Ju.edu.jo, "King Abdullah University of Science and Technology: Jordanian university," Jordanian university website, 2020. <http://computer.ju.edu.jo/ar/arabic/Pages/EducationResearch.aspx> (accessed Apr. 07, 2020).
- [18] Zuj.edu.jo, "Computer Labs | Al-Zaytoonah University," Al-Zaytoonah University website, 2020. <https://www.zuj.edu.jo/faculty-of-business/economic-laboratories-and-workshops/?lang=ar> (accessed Apr. 07, 2020).
- [19] Internetsociety.org, "Internet-Access-Education_2017120," 2017. [Online]. Available: https://www.internetsociety.org/wp-content/uploads/2017/11/Internet-Access-Education_2017120.pdf.
- [20] X. Carbonell, A. Chamarro, U. Oberst, B. Rodrigo, and M. Prades, "Problematic use of the internet and smartphones in university students: 2006–2017," *Int. J. Environ. Res. Public Health*, vol. 15, no. 3, p. 475, 2018, doi: 10.3390/ijerph15030475.
- [21] M. H. Baturay and S. Toker, "An investigation of the impact of demographics on cyberloafing from an educational setting angle," *Comput. Human Behav.*, vol. 50, pp. 358–366, 2015, doi: 10.1016/j.chb.2015.03.081.
- [22] Ş. Gökçeşlan, F. K. Mumcu, T. Haşlamam, and Y. D. Çevik, "Modelling smartphone addiction: The role of smartphone usage, self-regulation, general self-efficacy and cyberloafing in university students," *Comput. Human Behav.*, vol. 63, pp. 639–649, 2016, doi: 10.1016/j.chb.2016.05.091.
- [23] S. M. Ravizza, M. G. Uitvlugt, and K. M. Fenn, "Logged In and Zoned Out: How Laptop Internet Use Relates to Classroom Learning," *Psychol. Sci.*, vol. 28, no. 2, pp. 171–180, 2017, doi: 10.1177/0956797616677314.
- [24] Z. Kornhauser, A. Paul, and K. Siedlecki, "An Examination of Students' Use of Technology for Non-Academic Purposes in the College Classroom," *J. Teach. Learn. with Technol.*, vol. 5, no. 1, pp. 1–15, 2016, doi: 10.14434/jotl.v5n1.13781.
- [25] P. Soh and K. Yeik, "Understanding cyberloafing by students through the lens of an extended theory of planned behavior," *First Monday*, vol. 23, no. 6, pp. 1–18, 2018, doi: 10.5210/fm.v23i6.7837.
- [26] H. Heflin, J. Shewmaker, and J. Nguyen, "Impact of mobile technology on student attitudes, engagement, and learning," *Comput. Educ.*, vol. 107, pp. 91–99, 2017, doi: 10.1016/j.compedu.2017.01.006.
- [27] S. Courtney, W. Babchuck, and J. LaDeane, "Evolving the method: Grounded theory in the context of post-hoc analysis," 1994, Accessed: Aug. 27, 2018. [Online]. Available: <http://newprairiepress.org/aerc/1994/papers/18/>.
- [28] F. Moretti, L. Vliet, J. Bensing, and G. Deledda, "A standardized approach to qualitative content analysis of focus group discussions from different countries," *Patient Educ. Couns.*, vol. 82, no. 3, pp. 420–428, 2011, Accessed: Aug. 02, 2018. [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S0738399111000176>.
- [29] M. Schreier, *Qualitative content analysis in practice*. Sage Publications, 2012.
- [30] P. E. Mazmanian, "A Decision-Making Approach to Needs Assessment and Objective Setting in Continuing Medical Education," *Adult Educ.*, vol. 31, no. 1, pp. 3–17, Sep. 1980, doi: 10.1177/074171368003100101.
- [31] Strauss and J. Corbin, *Basics of qualitative research: techniques and procedures for developing grounded theory*, 2nd ed. Sage Publications, 1998.
- [32] A. E. Flanigan and K. A. Kiewra, "What College Instructors Can Do About Student Cyber-slacking," *Educ. Psychol. Rev.*, vol. 30, no. 2, pp. 585–597, 2018, doi: 10.1007/s10648-017-9418-2.
- [33] B. R. McCoy, "Digital Distractions in the Classroom Phase II: Student Classroom Use of Digital Devices for Non-Class Related Purposes," *J. Media Educ.*, vol. 7, no. 1, pp. 5–32, 2016.
- [34] J. W. Creswell, *Qualitative inquiry and research design: Choosing among five approaches*, 3th editi. Sage Publications, 2015.
- [35] Corbin and Strauss, "Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory," 2015, 4th ed., doi: 10.1016/j.soctra.2016.09.006.
- [36] B. Arabaci, "Investigation Faculty of Education Students' Cyberloafing Behaviors," *Turkish Online J. Educ. Technol.*, vol. 16, no. 1, pp. 72–82, 2017, [Online]. Available: <https://files.eric.ed.gov/fulltext/EJ1124916.pdf>.
- [37] Statista.com, "Number of internet users in the United States 2019," *statista*, 2019. <https://www.statista.com/statistics/276445/number-of-internet-users-in-the-united-states/> (accessed May 19, 2020).
- [38] H. Keser, M. Kavuk, and G. Numanoglu, "The relationship between Cyber-Loafing and internet addiction," *cyriot J. Educ. Sci.*, vol. 11, no. 1, pp. 37–42, 2016.
- [39] J. Yan and J. Yang, "Trait procrastination and compulsive Internet use as predictors of cyberloafing," in *11th International Conference on Service Systems and Service Management (ICSSSM)*, 2014, pp. 1–4, doi: 10.1109/ICSSSM.2014.6874119.
- [40] S. Yaşar and H. Yurdugül, "The Investigation of Relation Between Cyberloafing Activities and Cyberloafing Behaviors in Higher Education," *Procedia - Soc. Behav. Sci.*, vol. 83, pp. 600–604, 2013, doi: 10.1016/j.sbspro.2013.06.114.
- [41] Z. Huma, S. Hussain, R. Thurasamy, and M. I. Malik,

- "Determinants of cyberloafing: a comparative study of a public and private sector organization," *Emerald Insight*, vol. 27, no. 1, pp. 97–117, 2017, doi: <http://dx.doi.org/10.1108/VINE-10-2013-0063>.
- [42] F. Varol and E. Yıldırım, "An Examination of Cyberloafing Behaviors in Classrooms from Students' Perspectives," *Turkish Online J. Qual. Inq.*, vol. 9, no. 1, pp. 26–46, 2018, doi: [10.17569/tojqi.349800](https://doi.org/10.17569/tojqi.349800).
- [43] R. Pekrun and L. Garcia, *International Handbook of Emotions in Education*, 1st Editio. Routledge, 2014.
- [44] M. Pielot, T. Dingler, J. S. Pedro, and N. Oliver, "When attention is not scarce - detecting boredom from mobile phone usage," in *Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing - UbiComp '15*, 2015, pp. 825–836, doi: [10.1145/2750858.2804252](https://doi.org/10.1145/2750858.2804252).
- [45] H. Jia, R. Jia, and S. Karau, "Cyberloafing and personality: The impact of the Big Five traits and workplace situational factors," *J. Leadersh. Organ. Stud.*, vol. 20, no. 3, pp. 358–365, 2013, doi: [10.1177/1548051813488208](https://doi.org/10.1177/1548051813488208).
- [46] A. Lepp, J. Li, J. Barkley, and S. Salehi-Esfahani, "Exploring the relationships between college students' cell phone use, personality and leisure," *Comput. Human Behav.*, vol. 43, pp. 210–219, 2015, doi: [10.1016/j.chb.2014.11.006](https://doi.org/10.1016/j.chb.2014.11.006).
- [47] C. S. Andreassen, T. Torsheim, and S. Pallesen, "Predictors of use of social network sites at work - a specific type of cyberloafing," *J. Comput. Commun.*, vol. 19, no. 4, pp. 906–921, 2014, doi: [10.1111/jcc4.12085](https://doi.org/10.1111/jcc4.12085).
- [48] L. Varghese and L. K. Barber, "A preliminary study exploring moderating effects of role stressors on the relationship between Big Five personality traits and workplace cyberloafing," *Cyberpsychology J. Psychosoc. Res. Cybersp.*, vol. 11, no. 4, Dec. 2017, doi: [10.5817/CP2017-4-4](https://doi.org/10.5817/CP2017-4-4).
- [49] R. Jia and H. Jia, "An individual trait-based investigation of employee cyberloafing," *J. Inf. Technol. Manag.*, vol. XXVI, no. 1, pp. 58–71, 2015.
- [50] J. W. Creswell, *Educational research : planning, conducting, and evaluating quantitative and qualitative research*, 2nd Editio. Merrill, 2005.
- [51] B. Harry, K. M. Sturges, and J. K. Klingner, "Mapping the Process: An Exemplar of Process and Challenge in Grounded Theory Analysis," *Educ. Res.*, vol. 34, no. 2, pp. 3–13, 2005, doi: [10.3102/0013189X034002003](https://doi.org/10.3102/0013189X034002003).
- [52] K. Charmaz, "Constructionism and the Grounded Theory Method," in *Handbook of constructionist research*, J. Holstein and J. F. Gubrium, Eds. NewYork: The Guilford Press, 2008, pp. 397–412.
- [53] B. Glaser, *Basics of grounded theory analysis: Emergence vs forcing*. Sociology Press, 1992.
- [54] J. K. Nayak, "Relationship among smartphone usage, addiction, academic performance and the moderating role of gender: A study of higher education students in India," *Comput. Educ.*, vol. 123, pp. 164–173, 2018, doi: [10.1016/j.compedu.2018.05.007](https://doi.org/10.1016/j.compedu.2018.05.007).
- [55] H. Pontes, M. Griffiths, and I. Patrão, "Internet Addiction and Loneliness Among Children and Adolescents in the Education Setting: An Empirical Pilot Study," *Aloma*, vol. 32, no. 1, pp. 91–98, 2014.
- [56] L. Yuwanto, "Academic Flow and Cyberloafing," *J. Psychol. Res.*, vol. 8, no. 4, pp. 173–177, 2018, doi: [10.17265/2159-5542/2018.04.006](https://doi.org/10.17265/2159-5542/2018.04.006).
- [57] S. Özcan, Ş. Gökçearslan, and A. Yüksel, "An investigation of the relationship between cyberloafing and academic motivation among university students," *Küreselleşen dünyada eğitim*, vol. 52, pp. 733–742, 2017, doi: [10.14527/9786053188407.52](https://doi.org/10.14527/9786053188407.52).
- [58] A. Taneja, V. Fiore, and B. Fischer, "Cyber-slacking in the classroom: Potential for digital distraction in the new age," *Comput. Educ.*, vol. 82, pp. 141–151, 2015, doi: [10.1016/j.compedu.2014.11.009](https://doi.org/10.1016/j.compedu.2014.11.009).