A Study on Pre-service English Teachers' Cyberloafing Behaviours During Online Courses

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ABSTRACT

Student cyberloafing is a concept that has been mainly investigated in face-to-face educational settings and there are only a few studies that concentrate on this issue in online settings. Therefore, to contribute to the existing line of literature in this respect, the current study sought to explore the types of cyberloafing activities students engage with during online classes, their reasons behind these behaviours, and their views on the possible solutions to prevent these. The sample of the study consisted of 68 preservice English teachers from a foundation university in Central Anatolia, Turkey. A qualitative survey research design was adopted in this study and to that end, data were collected using an online survey instrument that included a demographic information form and three open-ended questions related to the aims of the research. To seek answers to the research questions, data were analysed using thematic analysis. The results showed that preservice English teachers engaged with a wide variety of cyberloafing activities. Moreover, emerging themes with respect to reasons for cyberloafing were instructor, student, course-content, learning environment, and technology-related reasons for cyberloafing whereas themes regarding possible solutions to prevent it were instructor, student, and institution-based solutions.

Keywords: cyberloafing, preservice English teachers, higher education, online education.

İngilizce Öğretmen Adaylarının Çevrimiçi Dersler Sırasında Siberaylaklık Davranışları Üzerine Bir Araştırma

Öz

Öğrenci siberaylaklığı daha çok yüz yüze eğitim ortamlarında araştırılan bir kavramdır ve çevrimiçi ortamlarda bu konuya odaklanan yalnızca birkaç çalışma mevcuttur. Bu nedenle, mevcut alan yazına bu açıdan katkıda bulunmak amacıyla, bu çalışma, öğrencilerin çevrimiçi derslerde gerçekleştirdikleri siberaylaklık etkinliklerinin türlerini, bu davranışların arkasındaki yatan nedenleri ve bunları önlemek için olası çözümlere ilişkin öğrenci görüşlerini araştırmaya çalışmıştır. Araştırmanın örneklemini Orta Anadolu'da bir vakıf üniversitesinden 68 İngilizce öğretmeni adayı oluşturmuştur. Bu çalışmada nitel bir anket araştırma tasarımı benimsenmiş ve bu amaçla veriler demografik bilgiler ve araştırma sorularına ilişkin üç sorudan oluşan çevrimiçi bir anket aracı kullanılarak toplanmıştır. Araştırma sorularına cevap aramak için, veriler tematik analiz kullanılarak analiz edilmiştir. Sonuçlar, İngilizce öğretmen adaylarının çok çeşitli siberaylaklık faaliyetleriyle meşgul olduklarını gösterdi. Ayrıca siberaylaklık nedenleri ile ilgili olarak ortaya çıkan temalar siberaylaklık için eğitmen, öğrenci, ders içeriği, öğrenme ortamı ve teknoloji ile ilgili nedenler iken, bunun önlenmesine yönelik olası çözümlere ilişkin temalar ise eğitmen, öğrenci ve kurum bazlı çözümlerdir.

Anahtar kelimeler: siberaylaklık, İngilizce öğretmen adayları, yükseköğretim, çevrimiçi eğitim.

1 | INTRODUCTION

Availability and affordability of internet has brought about many opportunities in the field of education whether it be the wealth of resources or learning opportunities that can be utilized in and beyond the classroom. As many would agree the utilization of the internet for educational purposes can be facilitative and enhance the quality of both learning and teaching. Having said that, its use for non-academic purposes during class hours may be problematic. Such usage of the internet is termed as cyberloafing (Polito, 1997) or cyberslacking (Greengard, 2000) and is classified as a cyberdeviant act (Charlier, Giumetti, Reeves, & Greco, 2017). The concept first became popular in business environments and was defined by Lim (2002) as employees' voluntary use of their institutions' internet during working hours to surf web sites for personal affair and check personal e-mails. On the other hand, in educational contexts, whereas some researchers considered this concept as a tendency (Kalaycı, 2010; Varol & Yildirim, 2018) others treated it as an act (Akbulut, Dursun, Dönmez, & Şahin, 2016; Arabaci, 2017; Gerow, Galluch, Thatcher, 2010; Taneja, Fiore, & Fischer, 2015; Yilmaz, Yılmaz, Öztürk, Sezer, & Karademir , 2015). Kalaycı (2010), on the other hand, defined cyberloafing as the tendency and/or the act of using the internet during class hours for affairs that are not related to the course content. In general terms, it can be defined as the non-academic utilization of the internet during any mode of education.

Owing to the advancements in technology, internet access is no longer limited to desktop computers. It can be accessed via mobile phones, tablets, or even wristwatches all or some of which are owned by students and brought into learning environments. This in turn makes access to internet in educational settings a double-edged sword. As Adams (2006) asserts, it can either be a splendid teaching tool or a barrier to learning. Indeed, engagement in non-academic uses of the internet during class hours whether it be face to face education or online is a cause for concern (Akbulut et al., 2016; Baturay & Toker, 2015). At the end of the day, it is a form of multitasking and involves, as Ophir, Nass, and Wagner (2009) put it, "a person's consumption of more than one item or stream of content at the same time" (p. 15583). Past research has revealed that concurrent engagement with several tasks results in more unproductive performance compared to engagement with several tasks individually (Pashler, 2000). This is due to finite human cognitive capacity (Lepp, Barkley, Karpinski, & Singh, 2019), that is further divided when one attends more than one task at a time (May & Elder, 2018). This idea is also in keeping with the cognitive bottleneck theory (Welford, 1967), cognitive load theory (Sweller, van Merriënboer, & Paas, 1998), and cognitive theory of multimedia learning (Mayer, 2005), which prescribe that multitasking in learning environments will lead to reductions in performance.

According to Sarıtepeci (2019) cyberloafing hampers the effectiveness of learning and teaching activities carried out in educational environments. In fact, studies have shown some adverse educational effects and consequences of cyberloafing. Non-academic use of the internet in face-to-face educational settings was found to result in distraction, lower participation (Brubaker, 2006), lower engagement, academic dishonesty (Skolnik & Puzo, 2008), and lower academic achievement (Alghamdi, Karpinski, Lepp, & Barkley, 2020; Dursun, Dönmez, & Akbulut, 2018; Lepp et al., 2019; Ravizza, Hambrick, & Fenn, 2014, Wu, Mei, & Ugrin, 2018). Most media devices with which online education is carried out allow for multitasking; besides, nowadays most college students own multiple multimedia internet devices whether they be mobile or not. Indeed, studies that have concentrated on online education settings have also yielded similar results with respect to the negative link between cyberloafing and academic achievement in online education settings (Alghamdi et al., 2020; Lepp et al., 2019).

Insights into the kinds of cyberloafing behaviours that students engage during lectures are evident in past literature. Studies that concentrate on types of cyberloafing mainly rely on scales or checklists and report either descriptive statistics regards individual items or predetermined sub-dimensions. Some of these studies used Kalaycı's (2010) checklist and cyberloafing scale. Those that utilized or expanded on her checklist formed for daily internet-based activities identified in-class behaviours like shopping online, visiting holiday/travel sites, visiting interesting sites, collecting information about notions irrelevant to

lesson, searching biographic information of persons on search engines, pursuing interesting subjects in search engines, visiting web sites about banking or finance, visiting online shopping sites, visiting auction sites, visiting chat rooms, booking accommodation for travel/holiday, visiting sites about finding job or career, playing online games, developing personal web pages, checking e-mails, visiting discussion groups, visiting virtual communities, downloading files, reading blogs, visiting news groups and notice boards, sending and receiving instant messages, visiting news sites, visiting websites about sports, checking weather forecast, and visiting social networks (e.g. Kurt, 2011; Varol & Yıldırım, 2017, 2019; Yaşar & Yurdugül, 2013). On the other hand, whereas some studies (e.g., Arabacı, 2017; Baturay & Toker, 2015) used Kalaycı's (2010) cyberloafing scale that classified cyberloafing activities as personal, socializing, and news follow-up, other studies (e.g., Bağrıaçık-Yılmaz, 2017; Keser, Kavuk, & Numanoglu, 2016; Yılmaz et al., 2015) used a scale by Yaşar (2013), which is an updated version of Kalaycı's (2010) scale and reported sub-dimensions of cyberloafing as individual, search, social, and news. Moreover, Tanriverdi and Karaca (2018) identified Facebook, music/TV series/movie sites, and game sites as students preferred ways to cyberloaf using Yaşar's (2013) scale. Furthermore, using a scale developed by Bozanoğlu (2004), Çok and Kutlu (2018) also reported cyberloafing behaviours under the categories personal, search, social, and news.

Some other researchers (e.g. Knight, 2017; Koay, 2018; Şenel, Günaydın, Sarıtaş, & Çiğdem, 2019), on the other hand, used Akbulut et al.'s (2016) scale and reported checking posts, checking social networking profiles, sharing content on social networks, liking posts, commenting on shared photos, posting status updates on social networks, tagging friends on photos, chatting, watching shared videos, shopping online, visiting deal-of-the-day websites, visiting online shopping sites, visiting auction sites, using online banking services, visiting online shops for used products, checking job advertisements, downloading music, watching videos online, listening to music online, downloading videos, downloading applications, visiting betting/gambling sites, betting and gambling online, checking online sport sites, playing online games, commenting on trending topics, posting tweets, reading tweets, favouriting a tweet, and retweeting a tweet as types of cyberloafing behaviours students engage with during class hours. In addition to this, there are also studies (e.g., Akgün, 2020; Çok, 2018; Dursun et al., 2018; Sarıtepecı, 2019) that used the same scale and reported its sub-dimensions sharing, shopping, real-time updating, accessing online content, gambling as types of cyberloafing behaviours students carry out. Otherwise, Seçkin & Kerse (2017) identified visiting virtual communities, watching videos, reading blogs, social media, downloading music, video, and documents, playing online games, surfing on the internet, checking e-mails, online chatting, and internet search as cyberloafing behaviours realized by students using a scale developed by Kaplan and Çetinkaya (2014). Distinct from the aforementioned studies, a study undertaken by Lepp et al., (2019) that compared multitasking behaviours of college students in both online and face-to-face settings, used the focus group method and identified texting, e-mailing, social networking, watching videos, off-task Internet surfing, listening to music, video gaming, talking with friends, and scribbling absentmindedly as types of cyberloafing activities students engaged with.

Moreover, studies examining the reasons behind students' engagement with cyberloafing activities in classroom settings are also evident in literature. In a study carried out by Ergün and Altun (2012) student-stated reasons for cyberloafing were categorized under five themes that were motivation, environment, teacher, goal setting, and time. On the other hand, the study carried out by Bağrıaçık-Yılmaz (2017) showed that students' reasons for cyberloafing were categorized under three themes. These were personal factors, work-related factors, and external factors. In a study conducted by Dursun et al. (2018), the rationales behind students' cyberloafing behaviours were grouped under two themes that were student and instructor related. In another study that investigated students' perspectives on in-class cyberloafing behaviours, Varol and Yıldırım (2018) categorized student motives to undertake such behaviours under two themes that were instructor and learner related. In the study undertaken by Şenel et al. (2019), unwillingness to learn, notices and communication, curiosity, and spending the time in an enjoyable way were the themes that aroused from the data. In a more recent study carried out by Varol and Yıldırım

(2019) students' reasons for cyberloafing was grouped under four themes and were named as instructor-related, course-content-related, student-related, and learner environment-related reasons. In a study that elicited teachers' views about the reasons behind students' cyberloafing behaviours, Akgün's (2020) study revealed the education process and socio-psychological factors as main themes.

In addition, some studies explored student and instructor views on the possible solutions to prevent or minimize student cyberloafing during face-to face education. In one of those studies, Bağrıaçık-Yılmaz (2017) grouped the student-stated precautions taken by students for cyberloafing under the themes termed avoidance and self-control. In another study carried out with students, Varol and Yıldırım (2018), categorized students' views on possible solutions for cyberloafing under two categories which were solutions for instructor-based and learner-based reasons for cyberloafing. In another study carried out by Varol and Yıldırım (2019), views of students regard possible solutions to decrease cyberloafing were grouped under four themes named solutions to instructor-related reasons for cyberloafing, solutions to student-related reasons for cyberloafing, solutions to content-related reasons for cyberloafing, and solutions to environment-related reasons for cyberloafing. On the other hand, the study carried out by Akgün (2020) concentrated on teacher suggestions regard ways to prevent student cyberloafing and the emerging themes were labelled as giving seminars, course/course topic, warning /making public service announcement, and family effect.

The number of studies concentrating on cyberloafing behaviours in educational settings are on the rise. However, as it can be seen from the discussion above, most of these studies are quantitative in nature and there has been an ongoing call for undertaking more qualitative studies (Gökçearslan, Mumcu, Haşlaman, & Çevik, 2016; Rodriguez-Gomez, Castro, & Meneses, 2018; Şumuer, Gezgin, & Yıldırım, 2018; Tanrıverdi & Karaca, 2018; Sarıtepeci, 2019) to gain a deeper understanding of the phenomenon. There are studies (e.g., Varol & Yıldırım, 2019) that are based on qualitative inquiry concentrating on the reasons and views on possible ways to reduce or prevent cyberloafing behaviours in face-to-face educational settings. What is more, there is also a study carried out by Lepp et al., (2019) that concentrated on the types of behaviours in an online educational setting. However, to the best of my knowledge there is no study undertaken to date regard students' reasons for and possible ways to prevent cyberloafing in either online or emergency remote instruction settings as some scholars (e.g. Lepp et al., 2019) called for the necessity of such studies to promote student learning. Considering the debilitative effects of cyberloafing in educational contexts whether it be face-to-face or online, the current study aimed to explore cyberloafing during emergency remote instruction implemented due to the compulsory shift to online instruction because of the COVID-19 pandemic in an English teacher training program at a foundation university in Ankara, Turkey with a focus on the types of cyberloafing activities carried out by teacher trainees, their reasons for engaging with these, and possible solutions offered by them to prevent cyberloafing.

Research questions

The current study sought to explore preservice English teachers' cyberloafing activities during online instruction, their reasons, and possible solutions with respect to cyberloafing. To that end the following three research questions were formed and investigated:

1. What are the types of cyberloafing activities participants engage with during online instruction?

2. What are the reasons behind participants' engagement with cyberloafing during online instruction?

3. What are the participants' views about the possible solutions to prevent cyberloafing during online instruction?

2 | METHOD

RESEARCH DESIGN

A qualitative survey research design was adopted. To that end, a survey was utilised as a research tool to collect purely qualitative data (Terry & Braun, 2017). According to Braun, Clarke, Boulton, Davey, & McEvoy (2020), qualitative surveys include several open-ended questions designed by the researcher on a specific topic that are self-administered in a fixed and standard order to all participants. Rather than making selections from pre-determined options, participants type their responses in their own words (Braun & Clarke, 2013).

STUDY GROUP & CONTEXT

The study group of this research was composed of a purposeful sample of 68 pre-service instructors studying at the English Language Teaching Department of Ufuk University in Ankara, Turkey, who volunteered for the study and stated that they did cyberloaf during the emergency remote instruction period. Their department offers a 4-year teacher training program to students enrolled via a centrally administered university entrance exam. For that reason, it can be plausible to assume that they had homogeneous university entry levels. Normally, the classes were carried out in a face-to-face mode, however, due to the COVID-19 pandemic, a compulsory shift to emergency remote instruction was made and the last 8-week education was carried out in this way.

Initially, out of a possible 188 students 78 voluntarily responded to the online survey, which meant a 41.49% return rate. Moreover, 10 cases were excluded from the final data since they declared that they did not cyberloaf during emergency remote learning. Therefore, the final data set included 68 responses. When the data was collected, 22 of them were in their freshman year, 13 of them were sophomores, 14 of them were juniors, and 19 of them were seniors. Moreover, 53 of them were females whereas 15 of them were males. 54 out of 69 participants were aged between 18 and 24, 11 of them were 25 to 34 years old, and the ages of the remaining 3 students were between 35 and 44.

DATA COLLECTION TOOLS

To collect data an online survey was designed by the researcher and administered to the students. The survey contained two types of questions. These were demographic and topic related questions. The demographic questions had a multiple-choice response format and asked respondents to select an age category (i.e. 18-24, 25-34, 35-44, or 45-54), gender (i.e. female or female), and year of study (1, 2, 3, or 4). On the other hand, topic related questions were comprised of 3 open-ended questions. The questions were designed by the researcher considering the relevant line of literature. After that expert opinion was taken from two scholars who had expertise in English Language Teaching and in Computer Education and Instructional Technologies. As a next step, a small focus group of 7 students that did not take part in the study were invited to review the questions and comment on ambiguities. After discussion and consensus, the final versions of the questions that were administered to the study group were as follows:

1.   What were the online activities you engaged with that were not related to the course content using your mobile device, personal computer, or laptop during online classes? Please specify.

2.   What were your reasons behind engaging with online activities that were not related to the course content using your mobile device, personal computer, or laptop during online classes? Please specify.

3.   What can be done to prevent students from engaging with online activities that are not related to the course content using their mobile device, personal computer, or laptop during online classes? Please specify.

Data Collection

Upon receiving ethical clearance, data were collected using an online survey creation and administration software (i.e., survey monkey). The classes were finished and since the education was carried out via online means, students were invited to take part in the study via announcements made on WhatsApp group chats. To that end, the web link to the survey was shared with the students and they were asked to participate in the study if they volunteered to do so and answer the questions in a week starting from the 6th of July 2020 till the 12th of July 2020. An analysis of logs showed that it took students approximately two minutes to answer all the questions on the online survey.

Data Analysis

Thematic analysis as set forth by Braun and Clarke (2019) was used to analyse the responses to the open-ended questions. To that end, the steps of the analysis included familiarization with the data, coding, searching for themes, reviewing themes, defining and naming themes, and reporting the results. As there was a limited number of studies (e.g. Lepp et al., 2019) exploring the types of cyberloafing and no studies with respect to the reasons and solutions for cyberloafing in online education settings coding was carried out using a conventional approach (Hsieh & Shannon, 2005), where the coding was based on emergent data. Even though preconceived themes were not imposed, some emerging codes with respect to the reasons for cyberloafing in the online education context matched the themes (i.e. instructor, content, learner, and environment-related) of Varol & Yıldırım (2019). Therefore, they were thematized as such; whereas the codes that did not fit these themes were grouped under unique themes. Additionally, the identities of the participants were kept anonymous throughout the analyses and reporting phases to ensure anonymity. To that end, each respondent was assigned a number and referred to as PX where P means participant and X stands for the number they were assigned.

Trustworthiness

After the analysis of the data, in line with the suggestions of Creswell and Creswell (2018), an expert in foreign language education and another expert in educational sciences were invited to examine the processes, meanings, and interpretations related to the data analyses to ensure its validity and reliability. The differences were discussed till consensus was reached.

Research Ethics

Prior to data collection ethical clearance was sought from the Social Sciences and Humanities Research and Publication Ethics Committee of the higher education institution the study was carried out. The committee granted ethical clearance for the study with its decree dated 30.06.2020 and numbered 2020/45. Ethical principles and guidelines were followed during all phases of this study.

3 | Findings

The findings are presented in four sections. First, the types of cyberloafing activities participants engaged with will be revealed. Next, their reasons for undertaking such behaviours will be unearthed. Lastly, their suggestions to prevent such behaviours will be presented.

Types of cyberloafing activities students engaged with during online classes

A quantitative content analysis of the responses provided by the 68 students who cyberloafed during online classes regard the types of cyberloafing they engaged with revealed many ways in which they multitasked. The frequencies related to student responses are shown in Table 1.

Table 1. Frequencies related to types of cyberloafing behaviours

Category	f	%
Online chatting	39	57.35
Online gaming	16	23.53
Online shopping	15	22.06
Social networking	11	16.18
Doing off-topic online research	5	7.35
Reading off-topic online content	4	5.88
Listening to music online	4	5.88
Watching online content	4	5.88
Surfing on the internet	2	2.94
Online drawing	1	1..47

An examination of Table 1 shows that most 39 (57.35%) students who cyberloafed during online courses engaged with online chatting. In this regard, whereas one female freshman (P44) stated "I chat on the chat section with my friends" another student who is a female sophomore (P43) wrote "I am chatting with my best classmate". Others simply typed "chat" (e.g., P5) or "chatting" (e.g., P9) as a response. On the other, hand, 23.53% of the students stated that they played online games during online class sessions. These students explicitly stated that they played online games by typing either "online games" (e.g., P68) or "playing online games" (e.g., P25). Moreover, 15 of the participants (22.06%) stated that they shopped online during online classes. On that note, one male freshman stated "...besides I check out online shopping sites for special offers from time to time" (P33). On the other hand, the rest of the participants openly wrote "shopping" (e.g., P3) as a response. Social networking was another type of cyberloafing behaviour that was mentioned by 11 participants (16.18%). In this respect whereas some typed "surfing the social media" (P64), some wrote "hanging out on social media" (P2), whereas the rest simply stated, "social media" (e.g., P22).

Some less commonly engaged types of cyberloafing were doing off-topic online research (7.5%), reading off-topic online content (5.88%), listening to music online (5.88%), watching online content (5.88%), surfing on the internet (2.94%), and online drawing (1.47%). The off-topic online research variety was formed in accordance with the five responses typed as "research" by the participants (e.g., P50). With respect to reading online content that is not related to the course content one male sophomore participant stated, "reading stories, reading news" (P6). Another just typed "reading news" (P34) whereas the rest just wrote news (P23 and P34). Moreover, four participants stated that they listened to music during online courses. The typed responses in this regard were "music" (e.g., P7) and "listening to music" (P56). On the other hand, 4 participants stated that they watched online content during online classes. The responses typed in this regard were "watching films" (e.g., P27), "TV series" (P28), and "video" (P62). Moreover, the frequency of responses to the surfing on the internet was 2 and was created based on participant responses typed as "surfing". Lastly, one student (P43) stated "Besides, I make drawings in some classes" which resulted in the forming of the online drawing variety.

Reasons for cyberloafing during online classes

The analysis of participant responses revealed 6 distinct themes with respect to their motivations to carry out cyberloafing. These themes were instructor, student, course content, learning environment, peer, and technology related reasons. The themes instructor, learner/student, content, and environment related reasons for cyberloafing were previously established themes by Varol and Yıldırım (2019) in face-to-face

instructional contexts. On the other hand, emergent themes in the current study were peer and technology related reasons.

THEME 1: INSTRUCTOR-RELATED REASONS FOR CYBERLOAFING

This theme addressed reasons for cyberloafing resulting from the instructors. The codes included "teacher-centred instruction", "lack of student monitoring", "monotonous lecturing", "lack of breaks", "inefficiency in online lecturing", "reading from slides", "technological incompetence", and "lack of eye-contact". The frequencies and percentages related to each code are tabulated in Table 2.

Table 2. **Instructor-related reasons for cyberloafing**

Codes	f	%
Teacher-centered instruction	24	35.29
Lack of student monitoring	12	17.65
Monotonous lecturing	8	11.76
Lack of breaks	5	7.35
Inefficiency in online lecturing	4	5.88
Reading from slides	2	2.94
Technological incompetence	2	2.94
Lack of eye-contact	1	1.47

The code "teacher-centred instruction" was the most frequently reported teacher-related reason for cyberloafing by the participants attracting 24 (35.29%) mentions. On that note one female sophomore (P41) mentioned that the instructors did not encourage student participation, a female senior (P59) touched on the non-interactive nature of the online classes, and another female sophomore (P43) strikingly responded as "...because some classes were like a radio program". "Lack of student monitoring" was the second most frequent teacher-related code with 12 connotations (17.65%). One female junior (P5) wrote "the teacher does not see us" whereas a senior female (P17) mentioned that it was not compulsory to open the cameras during online courses. The third most frequent code that appeared in the data was "monotonous lecturing" with 8 representations (11.76%). In this context a senior male (P66) wrote "...the instructor might be lecturing in a monotonous way...". The fourth most frequent theme was "lack of breaks" with 5 enunciations (7.35%). With regards to this code a female junior (P55) stated "I think that long online classes distract the attention of students...", whereas a female sophomore (P56) wrote "...students don't like long class hours...". Another code that emerged from participant responses was "inefficiency in online teaching" with 4 responses (5.88%) to that end. In this regard, whereas a female junior (P1) stated "teachers...and should teach in a more efficient way", a male freshman (P43) stated "we are in a difficult period and I think the teachers are uncertain about how to conduct classes". "Reading from slides" was another category unearthed from the data with 2 mentions (2.94%). A female sophomore (P42) explicitly wrote "...the teacher reading from slides" as a reason for her cyberloafing behaviour. "Technological incompetence" was another code with 2 connotations (2.94%). To exemplify, a female junior (P61) wrote "I kill time when I wait for the teacher to figure out the system". Lastly, "lack of eye contact" was the least frequent code (1.47%) that emerged from participant responses with only a female freshman (P19) stating "lack of eye contact" as a reason for undertaking cyberloafing during online classes.

THEME 2: STUDENT-RELATED REASONS FOR CYBERLOAFING

The second theme referred to reasons for cyberloafing that were related to the students themselves. The relevant codes were "personal affairs", "boredom", "lack of concentration", "personal problems", "improving focus", and "not understanding the teacher". The frequencies and percentages related to each code are presented in Table 3.

Table 3. Student-related reasons for cyberloafing

Codes	f	%
Personal affairs	15	22.06
Boredom	9	13.24
Lack of concentration	4	5.88
Personal problems	1	1.47
Improving focus	1	1.47
Nonattendance of peers	1	1.47
Peer pressure	1	1.47

The most frequently reported code with respect to student-related reasons for cyberloafing was "personal affairs" with 15 mentions (22.06%). In this respect, a female freshman (P11) mentioned messaging regards personal affairs and a female senior (P63) responded as "completion of other work to be done". The second most frequent code was "boredom" with 9 mentions (13.24%). On that note, a female freshman (P21) stated "it is totally about me I get bored". Other sample replies in this respect were "I get bored after a while" (P37) and "I sometimes get bored" (P61). The third most frequent code was "lack of concentration" with 4 mentions (5.88%). Whereas a female senior (P36) explicitly responded as "lack of concentration", a female freshman (P65) wrote "inability to concentrate on the lesson". The least frequent codes with single mentions (1.47% each) that emerged from the data were "personal problems" with a freshman female (P45) explicitly writing "personal problems" as a response; "improving focus" with a female junior (P46) responding as "To focus better. I can focus better when I am busy with something", "not understanding the teacher" with a female sophomore (P42) producing a response with the same wording, and nonattendance of peers and peer pressure with a female sophomore (P30) stating "nonattendance during the class. No matter how much I would like to participate in the lesson, there is silence. When I talk, 'the lesson got longer' issue comes up".

THEME 3: COURSE CONTENT-RELATED REASONS FOR CYBERLOAFING

The third theme with respect to reasons behind cyberloafing that emerged from the data was related to the course content. In respect thereof, "dullness", "repetitiveness", and "videos" were the codes. The frequencies and percentages related to these codes are presented in Table 4.

Table 4. Course content-related reasons for cyberloafing

Codes	f	%
Dullness	15	22.06
Repetitiveness	1	1.47

"Dullness" on the course content was the most frequently mentioned code with 15 mentions (22.06%). For example, when asked about participants' reasons for cyberloafing during online classes, a male senior (P47) wrote "there is nothing interesting in some courses", whereas another male senior (P66) responded as "the course content can be boring". Moreover, "repetitiveness" was another code that emerged from the data with a single mention (1.47% each) with a male freshman (P33) stating "re-teaching of content that was covered before".

THEME 4: LEARNING ENVIRONMENT-RELATED REASONS FOR CYBERLOAFING

This theme addressed participants' reasons for cyberloafing that were related to the learning environment. The codes for this theme were the "virtual environment" and the "home environment" as presented in Table 5.

Table 5. Learning environment-related reasons for cyberloafing

Codes	f	%
Virtual Environment	15	22.06
Home environment	7	10.29

With respect to learning environment-related reasons for cyberloafing, "virtual environment" was the most frequently cited code with 15 connotations (22.06%). In this regard, a male senior (P4) wrote "the freeness of the virtual environment", whereas a junior male (P52) and a female sophomore (P24) responded directly as "the virtual environment" when asked about the reasons for engagement with cyberloafing. On the other hand, the code "home environment" had 7 mentions (10.45%). To exemplify, when asked about the reasons behind cyberloafing a female freshman (P22) wrote "the comfort of the home environment", while another female freshman (P44) responded as "the unsuitability of the home environment to listen to the lecture".

THEME 5: TECHNOLOGY-RELATED REASONS FOR CYBERLOAFING

The last theme that emerged from the data was technology-related reasons for cyberloafing. It includes the codes "online class recordings", "notifications", "devices", "bad internet connection", and "internet disconnection" as presented in Table 6.

Table 6. Technology-related reasons for cyberloafing

Codes	f	%
Online class recordings	3	4.41
Bad internet connection	2	2.94
Notifications	1	1.47

The most frequently connotated code on technology-related reasons for cyberloafing was "online class recording" with 4 mentions (4.41%). In this connection, whereas a female sophomore (P60) wrote "feature that enables us to watch it later", a female senior (P28) responded as "...because online classes can be re-watched". "Bad internet connection" was another code that emerged from the data, which also had 2 mentions (2.94%). On that note, whereas a male sophomore (P6) explicitly wrote "bad connection" as a reason for his cyberloafing, a male freshman (P33) wrote "disconnections related to the internet during classes and voice interruptions". Lastly, notifications was another code related to technology-driven reasons for cyberloafing with a single mention (1.47%). To exemplify, a female freshman (P16) typed "notifications distract my attention".

STUDENT VIEWS ON POSSIBLE SOLUTIONS TO PREVENT CYBERLOAFING DURING ONLINE CLASSES

Lastly, analysis of student responses revealed three distinct themes on the possible solutions to prevent cyberloafing during online classes. These were named as instructor, student, and institution-based solutions. The frequency distribution of the themes show that participants mainly offered solutions centred around the instructors, followed by themselves, and the institution.

THEME 1: INSTRUCTOR-BASED SOLUTIONS

This theme addressed solutions that can be undertaken by instructors to prevent cyberloafing during online classes. It was comprised of 12 codes that were "conducting a more interactive lesson", "making student open their cameras", "taking attendance", "giving breaks", "making course content more

interesting", "non-monotonous lecturing", "avoiding presentation of long videos", "avoiding repetition", "enriching course-content", "establishing eye-contact with students", "improving online teaching skills", and "using music, videos, and visuals". The frequencies and percentages related to these codes are presented in Table 8.

Table 8. Instructor-based solutions to prevent cyberloafing

Codes	F	%
Conducting a more interactive lesson	25	36.76
Making student open their cameras	10	14.71
Taking attendance	8	11.76
Giving breaks	6	8.82
Making course content more interesting	4	5.88
Non-monotonous lecturing	2	2.94
Avoiding presentation of long videos	1	1.47
Avoiding repetition	1	1.47
Enriching course-content	1	1.47
Establishing eye-contact with students	1	1.47
Improving online teaching skills	1	1.47
Using music, videos, and visuals	1	1.47

Among instructor-based solutions 25 responses (36.76%) (e.g., P33) centred around "conducting a more interactive lesson". For instance, whereas a female sophomore (P40) stated "...student engagement with extracurricular activities can be prevented by asking questions to them", a female freshman (P44) stated that "instructors should ask questions or do activities that will ensure greater participation". Moreover, in ten responses (14.71%), participants (e.g., P15 and P40) explicitly stated that instructors should make students open their cameras during classes. The code "taking attendance" was also a high-frequency response with 8 mentions (11.76%). For example, a female freshman (P22) stated that "attendance taken during online classes... will focus students only on the lesson", whereas a female freshman wrote "counting students for attendance" (P43) as a possible solution to prevent cyberloafing during online classes. The next most frequent solution offered by the participants with 6 mentions (8.82%) was "giving breaks". To exemplify, whereas a female senior (P47) stated that "classes should be shorter with breaks just like in face-to-face education", a female sophomore (P55) wrote "students don't like long classes, there should be breaks". Another code related to teacher-based solutions to cyberloafing that emerged from the data was "making course content more interesting" with four mentions (5.88%). To illustrate, a female freshman (P2) stated "making the course-content more interesting than social media" as her solution to prevent cyberloafing during online classes whereas a female junior (P3) wrote "it cannot be prevented if the course is not interesting". The code "non-monotonous lecturing" was enunciated by two participants (2.94%). A female junior (P31), for example stated that "...not reading monotonously from slides... can make a difference". Moreover, "avoiding presentation of long videos" (P6), "avoiding repetition" (P28), "enriching course-content" (P26), "establishing eye-contact with students" (P19), "improving online teaching skills" (P1), and "using music, videos, and visuals" (P61) were other teacher-based solutions stated by the participants.

THEME 2: STUDENT-BASED SOLUTIONS

This theme dealt with solutions to cyberloafing during online classes that centred around the students. The codes of this theme were "assuming responsibility for learning", "prioritizing the lesson", "creating a

silent/non-distracting learning environment", "assuring stable internet connection at home", "keeping away from devices", and "sparing time for classes". The frequencies and percentages with respect to participant responses were given in Table 9.

Table 9. Student-based solutions to prevent cyberloafing

Codes	F	%
Assuming responsibility for learning	3	4.41
Prioritizing the lesson	1	2.94
Creating a silent/non-distracting learning environment	1	1.47
Assuring stable internet connection at home	1	1.47
Keeping away from devices	1	1.47
Sparing time for classes	1	1.47

As it can be seen in Table 8, "assuming responsibility for learning" was the response with the highest frequency with 3 mentions (4.41%) and was explicitly stated by three participants (e.g., P7). On the other hand, "prioritizing the lesson" was another code that emerged from the data. In this respect, a female junior (P51) stated "giving priority to the lesson" as a possible solution to cyberloafing during online courses. Moreover, a female sophomore (P20) stated that "a silent and non-disruptive environment like a classroom should be created" which was coded as "creating a silent/non-distracting learning environment". A male sophomore (P6) on the other hand wrote "better connection" and this response was coded as "assuring stable internet connection at home". The codes "keeping away from devices" (P8), and "sparing time for classes" (P51) were also among codes that were formed in line with explicit responses given by the participants.

THEME 3: INSTITUTION-BASED SOLUTIONS

The last theme with respect to solutions to prevent cyberloafing during online classes was related to the actions the higher education institution can take. The codes related to this theme were "finding an audit program", "assuring stable internet connection at the institution", and "using a program that does not run in the background" as presented in Table 10.

Table 10. Institution-based solutions to prevent cyberloafing

Codes	F	%
Finding an audit program	1	1.47
Assuring stable internet connection at the institution	1	1.47
Using an online lecturing tool that does not run in the background	1	1.47

With respect to institution-based solutions, a female freshman (P43) stated that "if education is to continue online, a configuration can be found to check everyone's computers, extracurricular activities and etc". On the other hand, a male freshman (P32) wrote "the instructor should have a stable internet connection…" whereas a female senior (P53) stated "discovering a program that does not run in the background" as possible solutions to prevent students from cyberloafing during online classes. These responses were coded as "finding an audit program", "assuring stable internet connection at the institution", and "using a program that does not run in the background" respectively.

4 | DISCUSSION & CONCLUSION

Cyberloafing is a concept that has been gaining popularity in educational research in the past decade. Even though there was a sufficient effort in trying to identify the types of cyberloafing behaviours learners

engaged with, the reasons of engagement with this type of behaviours and possible solutions to minimize or prevent these was under-researched. Moreover, no study was identified that sought to explore the reasons for and possible solutions to cyberloafing in online contexts. To that end, this qualitative study was conducted to fill this gap in the literature.

The results indicate that the participants engaged with various non-curricular online activities during course hours. These were online chatting, gaming, shopping social networking, off-topic research, off-topic reading, listening, watching, surfing, and drawing. These results are to a great extent in line with previous research in both face to face (e.g. Akbulut et al., 2016; Akgün, 2020; Dursun et al., 2018; Yılmaz et al., 2015) and online instructional settings (Lepp et al., 2019). Only online drawing appeared as a distinct type of cyberloafing behaviour. The results are supportive of Ainley, Hidi, & Berndorff's (2002) conclusion that students can have individual interest in specific types of activities, which according to Palmer, Dixon, and Archer (2017) leads to engagement in those specific types of behaviour.

This study also reports why the participants cyberloaf during class hours during online instruction. In this respect, the emerging themes underlined instructors, students, course-content, the learning environment, peers, and technology as drives to cyberloaf. Thematic results are to some extent consistent with that of Varol and Yıldırım (2019) except for technology-related reasons which emerged as a unique theme. With respect to teacher-related reasons, the codes suggest instructors' lack of Technological Pedagogical Content Knowledge (TPCK), which is defined as the synthesis of pedagogical, content, and technological knowledge (Mishra & Koehler, 2006), as the reason for their cyberloafing behaviours. According to Koehler and Mishra (2009), TPCK is the cornerstone of effective instructional practices with technology and can help to compensate for problems faced in this respect. Therefore, a well-developed TPCK for instructors can be considered as a must in online instructional settings to hinder deviant student behaviors like cyberloafing.

On the other hand, the results with respect to student-based reasons for cyberloafing are to a great extent in line with previous studies (e.g., Bağrıaçık-Yılmaz, 2017; Ergün & Altun, 2012; Şenel et al., 2019; Varol & Yıldırım, 2018; 2019). The results show that respondents attached greater importance to their personal problems and affairs, got or felt bored and could not or did not concentrate during online classes. Taken together these motives indicate a lack of situational interest (Hidi & Harackiewicz, 2000) towards online classes. As situational interest is central to self-regulation, task engagement, and persistence (Arnone, Small, Chauncey, & McKenna, 2011; Harackiewicz & Hulleman, 2010; Thoman, Smith, & Silvia, 2011) in educational contexts, the lack of it can promote cyberloafing behaviours. A seemingly unusual finding of the study was that cyberloafing was thought to improve focus during online classes. In this respect Lim and Chen (2012) offer that cyberloafing can indeed offer a break and allow for refocus of attention when one is bored and stressed. On the other hand, nonattendance of peers and peer pressure appeared as distinct student-related reasons for cyberloafing. With respect to these, negative social norms (Venkatesh, Morris, Davis, & Davis, 2003) regards contributing to the class discussion during online class sessions seem to have prompted students to cyberloaf.

Results with respect to course content related reasons were also in line with the study of Varol and Yıldırım (2019). The perception of content as beneficial and meaningful is significant in developing interest towards it (Linnenbrink-Garcia et al., 2010), which in turn is linked with engagement (Flowerday, Schraw, & Stevens, 2004) and task involvement (Durik & Harackiewicz, 2007), and self-regulation (Harackiewicz, Durik, Barron, Linnenbrink-Garcia, & Tauer, 2008). The results with respect to course-content related reasons indicate that the perceived dullness and repetitiveness of course-content by the participants may have resulted in a lack of interest towards the online lessons and promoted cyberloafing behaviours.

The learning environment as a promoter of cyberloafing behaviour was evident in previous studies as well (e.g., Ergün & Altun, 2012, Varol & Yıldırım, 2019). However, as this study took place during online

education during the Covid-19 pandemic with lockdowns in place, the environment-related reasons were the virtual and home environment as the participants had to pursue their education from their homes via online means. As argued by Dabbagh and Kitsantas (2004), online education environments pose a challenge to the self-regulation capacities of students and lead to engagement problems. Moreover, establishment of a quiet environment is a crucial aspect of online learning (Buck, 2016; Çakıroğlu, 2014) and because of the lockdown the home environment in which the participants pursued their education might have been overcrowded and distractive.

Technology-related reasons were also evident as reasons for participants' cyberloafing behaviours. Re-watching online recordings was found to have a positive effect on student performance (Palmer, Chu, & Persky, 2019), however, this study showed that the opportunity to re-watch online lectures from recordings acted as a promoter of cyberloafing behaviour. On the other hand, it is well-recognized that technical difficulties in online instruction can lead to reduced commitment (Jaggars, 2014). In this study, bad internet connection was another technology-related reason that emerged from the data. As Baytiyeh (2018) points out, a reliable internet connection is essential to ensure success in technology supported instruction. In the absence of a stable internet connection, students can get bored or distracted and engage with deviant behaviours like cyberloafing. Another source of cyberloafing in connection to technology was notifications, which was also evident as a reason for cyberloafing in Şenel et al.'s (2019) study. As Kushlev, Proulx, and Dunn (2016) report, notifications is a cause of inattentiveness, and as this study revealed, they can lead to cyberloafing.

Another aim of this study was to reveal participants' views on the possible ways to prevent cyberloafing during online instruction. To that end, the results showed that student responses centred around three stakeholders, which were instructors, students, and the institution. Among the teacher-based solutions unearthed in this study, conducting more interactive classes where students are not passive stakeholders in the learning process, giving breaks and non-monotonous lecturing were also revealed as possible student-stated solutions to cyberloafing in studies of Varol and Yıldırım (2018; 2019). On the other hand, making students open their cameras, taking attendance, and establishing eye-contact as instructor-based solutions relate to online classroom management strategies which was a theme evident in Varol and Yıldırım's studies (2018; 2019). Making course content more interesting, avoiding presentation of long videos and repetition, enriching course content, and using music, videos, and visuals, on the other hand, relate to more effective online content development, which according to (Mccombs 2015) is necessary to increase student engagement in online instruction.

On the other hand, the results with respect to student-based solutions indicate a need for self-regulation on part of the students to prevent cyberloafing. This is in line with Pellas's (2014) finding that student self-regulation and engagement in online learning environments are significantly correlated. Moreover, another student-based solution was ensuring a learning friendly environment at home. This is in line with Roddy et al.'s (2017) argument that user-friendly environments are crucial in online instruction to increase learner engagement. Ensuring a steady internet connection at home was another student-based solution to cyberloafing uttered by the participants, which is in line with Fabito, Trillanes, and Sarmiento's (2021) argument that continuous internet connectivity is a must for students to ensure complete student engagement during online instruction.

Last but not least, finding an audit program, assuring stable internet connection at the institution, and using an online lecturing tool that does not run in the background were the institution-based solutions to prevent cyberloafing mentioned by the participants. All these solutions relate to technological choices and investments made by the institution to conduct online instruction. This result is in line with the argument that establishing an efficient online learning experience that is positive and rewarding is the responsibility of the institution offering it (Pullan, 2011).

Practical Implications

By extending the literature on types of cyberloafing behaviors students engage with and by unearthing the reasons and possible solutions to cyberloafing during online instruction, this study makes an important contribution to the available literature on cyberloafing in educational settings which can still be considered as an under researched area. When and where students fail to self-regulate and engage with non-scholastic behaviors like cyberloafing during online classes adverse educational outcomes may become a reality. In such circumstances steps should be taken to ensure that educational goals are realized. Institutional competence in providing online synchronous and/or asynchronous education is vital in this respect. Higher education institutions that provide online modes of education should ensure that they have the necessary infrastructure to undertake it. Moreover, due to the swift advancement and changes in educational technologies they should provide continuous in-service training on online content development, teaching, and classroom management. Instructors should also be supported and encouraged to attend conferences to broaden their horizons on latest educational technologies. Furthermore, all teacher training programs should be revised to include more on technology integrated and supported modes of instruction to ensure technological competence in future instructors. Lastly, guidance regards self-management or elective courses on this issue can be offered to students in higher education institutions to ensure that that make most out of their educational experience.

Limitations and recommendations for future research

The data were collected from teacher trainees of the English language of a single higher education institution. Therefore, there is a need to conduct more studies in different educational settings with more participants to have a better understanding of cyberloafing behaviors, their causes, and possible solutions to these in online settings. Moreover, the inclusion of more or multiple stakeholders (i.e., instructors or administrators) in studies can also unearth valuable insights.

Statements of publication ethics

I declare that this research has no unethical problems that will limit the publication of the article.

Researcher' contribution rate

The study was conducted and reported by the corresponding author.

Conflict of interest

The author of this article declares that there is no conflict of interest in this study.

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