Cyberloafing as a barrier to the successful integration of information and communication technologies into teaching and learning environments

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ABSTRACT

Along with the dissemination of mobile technologies and wireless networks in teaching and learning environments, research has shown that students tend to cyberloaf during the courses. As a result, their performance is impeded and they could be distracted from the course. In order to prevent cyberloafing behaviors, in some occasions, information and communication technologies (ICT) have been banned or their use is restricted in the schools causing to harm ICT integration in education. In this context, the aim of this study was to identify the level of cyberloafing situations observed in courses in computer laboratories and reveal likely variables effective on cyberloafing behaviors which in turn would be helpful for practitioners to prevent cyberloafing behaviors of students. This research was conducted by using survey method. Participants in the study were 288 first year undergraduate students who took Computing I course held in a computer laboratory at the Fall Semester of the academic year of 2013–2014. In order to identify cyberloafing behaviors of the students when they were fulfilling the learning activities assigned to them, cyberloafing activities scale as well as Demographic Information Form were used. As a result of the research, by demonstrating the cyberloafing levels of the students, findings related to the cyberloafing behaviors were interpreted with regard to the variables addressed in the study, considering the total score obtained from cyberloafing activities scale and the sub-dimensions of the scale, "individual", "search", "social" and "news".

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1. Introduction

Since the advent of computer and internet technologies, the continuous and rapid developments occurred in technology based applications have become an important part of the reality of the life for many people in the world. Especially, internet has had a crucial impact on people's life. As a result, today, computer and internet technologies have become basis for so called "e" phenomenon such as e-communication, e-education, e-trade, e-health and e-business.

From the educational perspective, today at the education institutions several implications are carried out in an effort to benefit from information and communication technologies; consequently, ICT is integrated into education. To this end, at the higher education institutions and schools affiliated to Ministries of Education, information and communication technologies (ICT) laboratories have been built, and computer and internet supported courses have been taught in these classes. Through the wired and wireless networks that these labs are equipped with, in their learning processes students can benefit from the information sources on the internet. Despite many benefits that these technologies contributed to the learning-teaching processes, the inadvisable, excessive and uncontrolled use of these technologies by learners herewith gives rise to several problems such as cyberloafing.

Especially in ICT related courses delivered in the computer labs, it has been often observed that during the courses learners use internet for not course content purposes but for sending/receiving e-mails, surfing in news and sports websites, downloading music, chatting, playing online games, reading blogs, visiting social networks and updating personal websites (Blanchard & Henle, 2008; Garrett & Danziger, 2008; Ugrin, Pearson, & Odom, 2008; Ugrin &

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Pearson, 2013; Whitty & Carr, 2006). It is observed that behaviors of use of internet for the purposes other than course content, named as Cyberloafing in the literature, has a variety of consequences to students' learning such as drawing students' attention to areas other than the course, and that these behaviors could be regarded as obstacles to successful integration of information and communication technologies into the learning-teaching environments and impede learners' performance (Ergün & Altun, 2012; Kalaycı, 2010; Kurt, 2011; Yaşar, 2013).

On taking a closer look at the concept of cyberloafing, it was originated in the studies dealing with workplace environments and issues around knowledge management. There has been considerable debate over cyberloafing as a counterproductive work behavior (CWB). In research studies focusing on work related issues, its relations to job satisfaction (Everton, Mastrangelo, & Jolton, 2005); negative, positive, neutral effects on performance or lower task performance (Askew, 2012); types of cyberloafing (Lim & Chen, 2012) and some other variables have been examined. It is noteworthy that in most of the CWB studies social networks and mobile technologies which lead to cyberloafing have been regarded as the tools impeding performance. However, in the field of education, these technologies have been rapidly taking place and have significantly been integrated into the education. For instance, educational potential of Facebook has widely been discussed (Pollara & Zhu, 2011; Roblyera, McDanielb, Webbc, Hermand, & Wittye, 2010) and Facebook has been adopted in education; podcasting applications which are available on mobile devises have been adopted in educational context to enhance student learning experience and to improve students' academic achievement (Foster & Havemann, 2008; Karaoğlan Yılmaz, 2014). However, along with the integration of aforementioned technologies and social networks into education, there have been instances where these technologies are banned or their use is restricted due to cyberloafing as well as some anti-social behaviors (Barkham & Moss, 2012) while this is a barrier to successful integration of ICT in schools. These instances show that ICT integration is not only about equipping the schools with technologies but also coping with its unexpected and undesired consequences such as cyberloafing.

It is observed that especially students in higher education institutions cyberloaf during courses by using their mobile phones which have access to the internet. There are several studies conducted to explore cyberloafing situations of students at higher education institutions. In his study, Kalaycı (2010) carried a descriptive analysis to discover cyberloafing situations of university students and examined what kind of actions student took on what kind of websites. As a result of the study, cyberloafing behaviors performed by university students were examined quantitatively. In a study by Kurt (2011), university students' cyberloafing behaviors in daily life and cyberloafing behaviors during computing courses in a computer laboratory were analysed comparatively. Also in a study by Ergün and Altun (2012), it was aimed to qualitatively reveal the reasons for cyberloafing behaviors of students by interviewing and observing them. In the same vein, Yaşar (2013) examined cyberloafing situations of university students by considering the variables of locus of control and attitude towards computer laboratory.

However, in terms of cyberloafing in education, a significant body of the studies has been carried out with teacher candidates while cyberloafing concerns all university students as they are likely to use mobile technologies (e.g. cell phones) for leisure than for school or work (Lepp, Li, Barkley, & Salehi-Esfahani, 2015). In this research, different from other studies, it was aimed to extend the scope of this research area by examining the cyberloafing situations of students from the departments of universities other than education faculties and to examine general profiles of the university

students who cyberloaf. Moreover, it was attempted to identify situations of cyberloafing behaviors of the students based on their daily internet use as well as to examine likely variables effective on cyberloafing. In terms of dealing with obstacles for ICT integration in education, in addition to examining who tend to cyberloaf as educational actors, context of teaching and learning practices in computer labs also takes an important place today since these labs are used as a digital library, help students do their assignments, print out, check their emails and so on. However, as mentioned earlier, since the degree of cyberloafing in labs is higher than in classrooms; cyber loafing behaviors in computer labs must be investigated. In particular, at the higher education institutions, some courses have been delivered either via online learning or blended learning approach and this requires students to frequently use computer labs. Blended and online courses are run in virtual classes with computer-based systems support relying on computer based communications (Zhang, Ordóñez de Pablos, & Xu, 2014). Computer based communication raises the question of social cyberloafing behaviors which are likely to impede productivity compared to other types of cyberloafing behaviors (Lim & Chen, 2012). In that sense, computer labs play an important role in emergence of cyberloafing.

To this end, the goal of the study is to investigate cyberloafing behaviors of the university students in computer labs based on some variables. The remainder of this article will explore the following research questions:

1. What is the cyberloafing situation of university students in computer labs?
2. Does level of cyberloafing of university students differ with regard to;
   (a) Gender.
   (b) The department in which they study.
   (c) The location where they connect to internet.
   (d) Daily duration of use of internet?

2. Method

In this section, the model of the research, study group, data collection tools and data analysis are presented.

2.1. Research method

In this study, survey method was used in order to reveal cyberloafing situations of university students. As is known, survey method helps researchers describe an event or circumstance in the form they exist. The event or circumstance is defined in the conditions they happen and in the form they exist (Fraenkel & Wallen, 2006).

2.1.1. Study group

The study group consisted of 288 students who took Computing I course run at a state university in 2013–2014 in Turkey. In the computer lab, there were projection, smartboard, wired network and wireless network through which the students could connect to the internet with their mobile devises. In assigning the student in the study group, convenience sampling method was used. The reason why convenience sampling method was used is that this method allows researcher to choose sampling among people in his/her neighborhood (Ergün & Altun, 2012). In sampling, in terms of easy accessibility, the students who took at least 2 h course scheduled weekly in the computer lab were selected on a voluntary basis with regard to convenience sampling approach. Among the students, the students in Management Information Systems department took 3 h Computing I course in the computer lab,