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To Slack or Not to Slack: Internet Usage in the Classroom

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Abstract:

This paper investigates cyber-slacking with Internet technologies in the classroom. Rooted in Lewin's Field Theory, we develop a model linking external forces (i.e., social norms, distraction by other students' cyber-slacking, and awareness of instructor monitoring) and internal forces (i.e., cognitive absorption with Internet technologies and multitasking) to an individual's behavior (i.e., intent to cyber-slack). Using data collected from 451 students, we found social norms, multitasking, and cognitive absorption contributed to the intent to cyber-slack. Further, we found cognitive absorption with Internet technologies mediated the relationship between multitasking and intent to cyber-slack. The paper concludes with a discussion of implications for teaching, course design, and research.

Keywords: cyber-slacking, internet procrastination, Lewin's Field Theory, PLS

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INTRODUCTION

Internet access has been touted as a means to supplement instruction by providing easy access to course material, resources such as multimedia, and information on current events (Anonymous 2007). For example, Internet-enabled tools are used to frequently update course materials and grades and to communicate with students (McComb 1994). To support learning in the classroom, educational institutions have integrated Internet applications into their infrastructures by offering in-class access to wireless networks (Henderson, Kotz, and Abyzov 2004) and out-of-class access to wireless hotspots to download class slides or to take on-line exams (Shotsberger and Vatter 2001). Through the use of Internet technologies, students are thought to have access to more timely, relevant, and updated material.

Contrary to realizing positive outcomes from Internet access, practitioner reports suggest Internet access distracts students from paying attention to lectures or participating in classroom activities, thereby diminishing their learning (Young 2006). In fact, one study reported that 43 percent of freshmen at a New York university experienced attrition due to greater Internet access and had an inability to curtail excessive personal computer use (Lavoie and Pychyl 2001). Some instructors have experimented with banning laptops in the classroom to control off-task Internet usage. For example, one faculty member found that directly following a classroom ban of laptop usage, her students paid more attention during class time and had higher performance in regard to their grades (Bugeja 2007). While technologies have delivered learning materials at faster speeds, evidence from practice suggests that when students have access to Internet-enabled applications, they also “Internet procrastinate” or “cyber-slack” at higher rates (Lavoie et al. 2001).

To glean a deeper understanding into why Internet technologies may hinder, rather than facilitate, learning in the classroom, this study investigates what influences students’ Internet use in the classroom. Specifically, we focus on the following question:

What causes students to “cyber-slack” in the classroom?

This paper unfolds as follows: we begin by introducing our research model using a focused review of Lewin’s Field Theory to inform our understanding of cyber-slacking and Internet use. Specifically, we propose social norms, distraction by other students’ cyber-slacking, awareness of instructor monitoring, cognitive absorption with Internet technologies, and multitasking influence a student’s intent to cyber-slack. Then we empirically test and present the results of our research model. We test for mediation of cognitive absorption between multitasking and intent to cyber-slack. The paper concludes with implications for teaching, course design, and research.

LITERATURE REVIEW

Our model predicting intent to cyber-slack draws on Kurt Lewin’s Field Theory, which suggests individuals are embedded in complex social fields comprised of multiple, interdependent psychological and social factors (Lewin 1946). In this theory, the combination of social fields makes up an individual’s “life-space,” which refers to the subjective world that is differentiated by two perspectives (general life situation and momentary situation) and is influenced by social facts and relationships (Lewin 1939). The first perspective, general life situation, is the state of the individual person (e.g., disposition and past experiences) internal to the individual. The second perspective, momentary situation, involves the actions currently taking place external to the individual. In other words, the context and/or the environment in which the individual is interacting within are the main influences of present events (Chak

CONTRIBUTION

This paper contributes to MIS research and teaching. While many papers have focused on positive uses of the Internet for learning, this paper is among the first papers to examine drivers of maladaptive use of Internet technologies in the classroom. Specifically, this paper ties together features of the context, the individual, and the technology to see what drives cyber-slacking in the classroom. By empirically testing our model, we provide evidence that informs future research examining unproductive behaviors with IT in the classroom and beyond.

For MIS educators, our research informs the understanding of student behavior in the classroom. Our study suggests that when students have the ability to multitask, they are more likely to grow cognitively absorbed with the technology and slack during class times. Based on this insight, we identify specific remedies that may help students focus their attention during class times.

2002; Lewin 1936). While the individual's past experiences are embedded within the context of the present situation, individuals may disregard their past experiences and choose to conform with particular behaviors aligned with the new societal rules relevant to the moment or situation in which they are currently involved (Lewin 1946). Hence, individuals choose specific behaviors by considering both their general life situation (i.e., internal) or their momentary situation (i.e., external); yet, they often alter their perceptions and feel compelled to change their behaviors in order to adapt to the norms of the social group or actors most relevant to their present situation (i.e., they conform) (Burnes 2004; Lewin 1951).

Based on the existence of these internal and external forces, Field Theory posits an individual's behavior (B) is a function of the person (P, an internal force) and the social environment (E, an external force), which can be expressed as the equation $B=f\ [P,E]$ (Lewin 1946). On the one hand, *internal forces* are the subjective, psychological characteristics of the individual. They alter the way a context is experienced and perceived. Additionally, they modify the attention and judgment of the individual (e.g., preferences and expectations). On the other hand, *external forces* are comprised of the contextual factors in which an individual's behavior takes place (e.g., social norms and influences) (Moskowitz 2004). Therefore, the combination of these internal and external forces (also known as the *resultant force*) determines the individual's perceptions of the situation and how that person will behave in and respond to a given social field (Lewin 1946; Moskowitz 2004).

Framed by Lewin's Field Theory, Figure 1 presents the research model. In terms of the context, we examine a specific social environment—the classroom. We define an individual's behavior (B) as the intent to cyber-slack, which focuses on maladaptive behavior in the classroom. Then, we propose two internal factors (P) and three external factors (E) that address the determinants of the intent to cyber-slack. Social norms (peer and friends), awareness of instructor monitoring, and distraction by other students' cyber-slacking are external factors influencing an individual's intent to cyber-slack, while cognitive absorption with Internet technologies (heightened enjoyment, focused immersion, curiosity, temporal dissociation, and control) and multitasking are internal factors influencing intent to cyber-slack. In the next section, we define each of these constructs and present hypotheses.

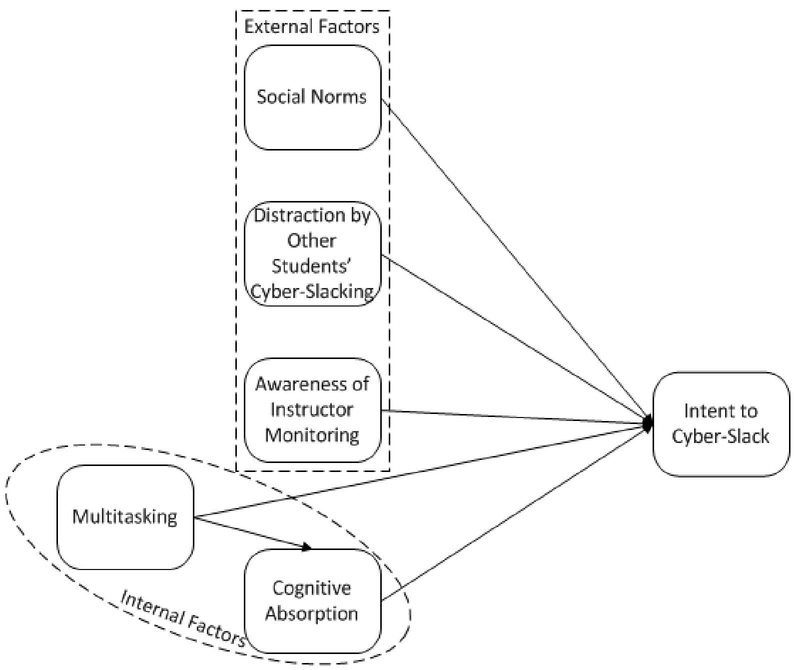

Figure 1: Research model of user acceptance in university classrooms.

Intent to Cyber-Slack

Using the Internet during class for something other than course-related activities is referred to as *cyber-slacking* in the classroom. Specifically, cyber-slacking pulls the student's attention away from the lecture, while refocusing it on a "distractor" or procrastination object (Lavie 1995; Lavie and Fox 2000; Lavoie et al. 2001). Once cyber-slacking, students re-evaluate how they prioritize their attention from potentially less engrossing course materials to more engaging off-task activities. For the purposes of this study, we restrict these off-task activities during class to those that diminish the student's overall learning (i.e., other off-task activities, such as working on homework or doing research for another class, are outside the boundary conditions of this study). Therefore, the focus of this construct is on the negative aspects of cyber-slacking that diminish learning and negatively affect the student's overall grade

(Bugeja 2007; Young 2006). In situations where students report cyber-slacking with Internet technologies, it is more likely they will feel lost in the crowd, engage in off-task behaviors, exercise less mental stamina, and direct less attention to on-task activities (i.e., learning) (Latane et al. 1979). Therefore, intent to cyber-slack refers to *the student's intention to use Internet technologies (e.g., instant messaging, e-mailing, surfing the Web, online banking, and Internet gaming) during scheduled class time for non-classroom related activities* (Lavoie et al. 2001).

Predicting Intent to Cyber-Slack

Although the classroom provides opportunities to cyber-slack, we found scant explanation for why individuals cyber-slack using Internet technologies in our review of the literature. For example, only one empirical study discussed cyber-slacking in a classroom or school context. In their research examining the amount of time respondents spent online at home, work, and school, Lavoie and Pychyl (2001) found respondents chose to cyber-slack for entertainment and stress relief in addition to using it as an important tool to improve their wisdom. To address this gap in the literature, we will use field theory as a means to understand how internal and external forces will drive decisions to cyber-slack (Lewin 1946). External forces are particularly important in new social situations (e.g., children who leave their parents to go to college) because the individual is faced with a change in "group-belongingness" (Lewin 1939, p. 874). Since the individual has the liberty to behave as an adult and wants to consider himself (and be considered) as such, he looks to his new environment to provide guidelines for appropriate behaviors (Lewin 1939). Because students desire to conform to their "social group" (Lewin 1939, p. 888) so they can achieve "group membership" (Lippitt 1939, p. 27), our model primarily focuses on external forces found in traditional, face-to-face, classrooms as drivers of cyber-slacking, even though we acknowledge the relevance of internal forces. As such, we first present three external forces (i.e., social norms, distractions, and awareness of instructor monitoring) that shape an individual's decisions to cyber-slack. Then we explain how cognitive absorption and multitasking (i.e., internal forces) predict an individual's intent to cyber-slack.

External Forces Predicting Intent to Cyber-Slack

Social Norms

Social norms are an external force that refer to the degree to which individuals believe that people who are important to them think that they should perform the behavior in question (Fishbein and Ajzen 1975). Social norms are considered external to the individual because they reflect one's beliefs about rules or codes of conduct that reside in the broader social environment. Consistent with Field Theory, we suggest social norms will influence intent to cyber-slack due to an individual's susceptibility to conform to observed or felt social pressures to perform a behavior (Ajzen 1991; Lewin 1951). Research suggests that perceptions of what other people think influences whether, when, and how individuals intend to perform a behavior (Venkatesh, Morris, Davis, and Davis 2003). In this context, we define social norms as *the degree to which individuals feel that peers and friends hold strong beliefs about specific behaviors such as cyber-slacking*.

Within the domain of Management Information Systems (MIS), research suggests the beliefs of peers and friends affect behavioral choices with information technology (Venkatesh 2000). For example, Venkatesh and Davis (2000) conducted four longitudinal field studies extending the Technology Acceptance Model focusing on the antecedents of intention. They found social influences of system usage were important predictors of technology adoption. In this study, we focus on the influence of peers (i.e., classmates) and friends on the intent to cyber-slack. Consistent with prior research (Venkatesh et al. 2003), we posit that when peers and friends think a behavior with a technology is acceptable (i.e., they condone cyber-slacking during class), they will be more likely to report the intention to cyber-slack rather than complying with instructor rules. Hence:

> *Hypothesis 1: Social Norms positively influence the Intent to Cyber-Slack.*

Distraction by Other Students' Cyber-Slacking

Distraction occurs when individuals pursue any off-topic statements or activities such that attention is removed from the instructor and classroom activities (Felmlee, Eder, and Tsui 1985). Cyber-slacking is one manifestation of distraction since it pulls students' attention away from the lecture and refocuses it on a non-classroom related activity. However, distractions may arise from more areas in the classroom than just the Internet. Another distraction to a student in the classroom occurs when they view other students goofing off, loafing, or cyber-slacking (Jassawalla et al. 2009; North et al. 2000). For example, take a student who is genuinely paying attention in class. This student is watching the instructor and taking notes as necessary. Then, the student notices another student, who is sitting directly in front of him, surfing the Internet. The student becomes fixated on this activity rather than on the actions of the instructor because it is directly interfering with the student's view of the instructor. In other words, the cyber-slacking activity of the other student directly competes with the instructor in such a way that ignoring the situation becomes very difficult (see Beck and Lavie 2005 for an empirical test of fixation distractors).

While social norms encompass the social pressure to slack, distraction by other students' cyber-slacking comprises the observational aspects of social influences. In other words, instead of being influenced by what another person thinks about others (i.e., social norms), this construct incorporates the individual's propensity to be influenced by what other people do. Therefore, we define distraction by other students' cyber-slacking as *the student's inattention to classroom activities due to another student's use of non-classroom related Internet technologies during scheduled class time*.

We posit that once the student is distracted by another student's behaviors, the student's propensity to pay attention to the instructor deteriorates; therefore, the student will more likely pursue additional distractions. Based on this logic, we hypothesize that being distracted by other students' cyber-slacking will increase the likelihood the individual will cyber-slack. When another student is observed using Internet technologies for inappropriate purposes in the classroom, this behavior will negatively influence the student in such a way that he will be less likely to pay attention to the instructor and will be more likely to use Internet technologies for non-class related purposes. Hence:

Hypothesis 2: Distraction by Other Students' Cyber-Slacking positively influences Intent to Cyber-Slack.

Awareness of Instructor Monitoring

To ensure students use Internet technologies in a manner consistent with their wishes, instructors may monitor how students use computers during class. In other words, monitoring may be necessary to ensure compliance (e.g., "good citizenship behaviors" (Clarke 1999)). Compliance occurs when individuals adopt a set of behaviors because they expect to be observed and for their behavior to result in rewards or punishments (Malhotra and Galletta 1999). In the classroom context, student compliance is the act of abiding with the rules set out by the instructor. We argue compliance occurs, and cyber-slacking is diminished, when instructors monitor students. In particular, when students adhere to rules and procedures, instructors are able to influence the classroom's culture (i.e., encourage participation in activities and limit maladaptive behaviors). For example, many professors have rules in their syllabus that limit cell phone use during class. If an instructor pro-actively monitors whether students text message or place phone calls, students will be more likely to comply with the professor's wishes (i.e., abide by the rule and not use their cell phones during class). Therefore, we define awareness of instructor monitoring as *a student's awareness that the instructor is monitoring whether Internet technologies are used for class-related purposes*.

When a student is aware that the instructor will monitor whether Internet technologies are being used appropriately, that student will be less likely to divert attention from the lecture and to report the intent to use Internet technologies for non-class related purposes. Therefore, we hypothesize that awareness of instructor monitoring will be a negative correlate of intent to cyber-slack. Hence:

Hypothesis 3: Awareness of Instructor Monitoring negatively influences Intent to Cyber-Slack.

Internal Forces Predicting Intent to Cyber-Slack

While external forces refer to non-psychological factors (e.g., social norms, outside distractions, and awareness of instructor monitoring) that exist in the environment, internal forces include the factors that pertain to a specific person's experience, predispositions, or abilities (Lewin 1946). For this study, we examined two internal factors: cognitive absorption with Internet technologies and multitasking.

Cognitive Absorption with Internet Technologies

Cognitive absorption refers to a state of deep involvement with an individual task. Drawing on Field Theory, we suggest cognitive absorption is an internal force that represents an individual's current absorption propensities as derived from their past experience from using Internet technologies. Specifically, individuals are predisposed to experience different levels of cognitive absorption with Internet technologies, which in turn influences intent to cyber-slack. Cognitive absorption is a second-order construct (see Agarwal and Karahanna (2000) for an in-depth explanation of how the construct is defined and operationalized), which reflects one's feelings of flow (Ghani and Deshpande 1993; Trevino and Webster 1992) and cognitive engagement (Webster and Hackley 1997), while also capturing a broader range of feelings including control, curiosity, heightened enjoyment, focused immersion, and temporal dissociation (Agarwal et al. 2000). Table 1 defines the dimensions that form cognitive absorption. In this context, we define cognitive absorption with Internet technologies as *a state of deep involvement with Internet technology in the classroom*.

Table 1: Dimensions of Cognitive Absorption	
Temporal Dissociation	The inability to acknowledge the passage of time while absorbed in an interaction
Focused Immersion	The experience of total engagement where other demands are ignored
Heightened Enjoyment	Capturing the pleasurable aspects of the interaction
Control	A representation of the user's perception of being in charge of the interaction
Curiosity	Tapping into the extent the experience arouses an individual's sensory and cognitive curiosity
Source: Agarwal and Karahanna (2000)	

Many Internet applications are designed to be absorbing as a means to capture an individual's attention and encourage future use of the system. For example, not unlike "couch potatoes" watching TV, Internet gamers occasionally display signs of maladaptive use of Internet technologies in the classroom because they have become cognitively absorbed and can, therefore, play games for hours (Kubey and Csikszentmihalyi 2002). Similarly, when engrossed in instant messenger conversations, individuals may experience states of pleasure, report intense focus, and lose track of time. Whether or not frequent users of online games or instant messenger acknowledge their activities result in a lack of productive and socially-valued outcomes, we posit that prior experiences of cognitive absorption with Internet technologies predispose students to grow cognitively engaged with these technologies in the classroom, so they are more likely to cyber-slack than use technology for the appropriate reasons. Hence:

Hypothesis 4: Cognitive Absorption with Internet Technologies positively influences Intent to Cyber-Slack.

Multitasking

Multitasking refers to the ability for people to perform multiple tasks simultaneously (McFarlane 1997). Multitasking is an internal force in that it taps into individuals' beliefs about their ability to use multiple Internet applications at the same time. Specifically, multitasking refers to *the simultaneous use of applications on the Internet for class- and non-class-related activities*. Consistent with Field Theory, multitasking is another dimension of an individual's experience that can influence an individual's intent to cyber-slack.

Modern operating systems (i.e., "intelligent software") are designed to allow users to more easily multitask (McFarlane 1997). For example, individuals can have multiple Internet applications open on their computer, such as Blackboard, e-mail, and multiple instances of Instant Messenger. These individuals can then rapidly switch across these applications by using tabs, which allows them to manage both classroom activities (e.g., Blackboard) and non-class activities (e.g., chatting with a friend) (Spink, Park, and Jansen 2006). Frequent multitasking individuals may or may not recognize that these activities propagate unproductive behavior in the classroom. In essence, because students may routinely multitask, they may continue to do so even in the presence of external factors such as monitoring or social norms. Hence, we propose prior experiences with multitasking in the classroom predispose students to cyber-slack as opposed to use technology for class-related purposes. Hence:

Hypothesis 5: Multitasking positively influences the Intent to Cyber-Slack.

Multitasking may increase a student's predisposition to become cognitively absorbed by Internet technologies. Instead of focusing on the target activity (i.e., classroom activities), the student's concentration is diverted to other activities (e.g., e-mailing or instant messaging) (Lavie 1995; Lavie et al. 2000). The degree of this distraction the student experiences is a function of the amount of attention the distractor requires (Bowman, Levine, Waite, and Gendron 2010; Pashler, Johnston, and Ruthruff 2001). For example, individuals will experience the greatest distraction from "abrupt onset" distractors since they require the immediate attention of the individual (Pashler et al. 2001, p. 632). In other words, they cannot ignore the distractor (e.g., instant messaging or e-mail notifications) because it "pops up" and interferes with the assigned class activity (Bowman et al. 2010). Even when competing activities share features with the target activity (e.g., such as surfing the Web for information), the individuals' attention is absorbed when they switch back and forth between on- and off-task activities (e.g., playing Internet games versus looking for information on the Internet). Specifically, the individual will become more absorbed in the competing activity and have less attention to devote to the target activity; in turn, performance for the target activity will suffer (Bowman et al. 2010; Bugeja 2007; Rogers and Monsell 1995). In summary, students who expose themselves to competing activities will become absorbed by those activities by allowing "pop ups" or other distractions to divert their attention to the detriment of the classroom activities, thereby leading them to report greater intention to cyber-slack. Hence:

Hypothesis 6: Multitasking positively influences Intent to Cyber-Slack through Cognitive Absorption with Internet Technologies.

METHOD

Sample Characteristics

Data were collected from students enrolled in a business school at a large university in the southeastern United States. Respondents were enrolled in a sophomore-level, online management class and various traditional classes (i.e., taking place in the classroom rather than on-line) in the College of Business. We felt this was an appropriate population to sample for two reasons. First, at the research site, Internet technologies are readily available to students in the classroom. Like many colleges and universities, students are required to bring a laptop to class to access Internet applications such as Blackboard. Second, although offered access to Internet applications during class, the network is not set-up to monitor how Internet applications are used in the classroom. In our research context, students had the means and the opportunity to "slack" with Internet applications. We pilot-tested this population first with students enrolled in (1) a senior level business statistics class, (2) a junior level overview of Management Information Systems class, (3) a senior level Strategy class, or (4) a senior level Organizational Behavior class in the College of Business. This sample included 311 respondents. The results of this pilot test led to further refinement of our survey items and sample population.

In all, 654 students voluntarily participated in the study. Respondents were instructed to think about a specific face-to-face class and answer as candidly as possible. They were assured their responses would remain confidential (see the cover letter in Appendix 1). The first item on the survey asked the respondent to identify the class in question. The respondents referenced a wide variety of classes including classes from other majors. These classes spanned from freshmen- to senior-level classes.

In the instrument, Internet technologies were defined as including Blackboard, instant messaging, e-mailing, surfing the Web, online banking, online shopping, and Internet gaming. To ensure respondents' privacy, the instructor for the class was provided only the list of names of participants and never had access to the individual responses. The students were provided a two-week window to complete the survey. As a control, we asked students if they had access to the Internet during the class they were thinking about; 157 students (24 percent) responded that they did not. This could be due to the fact that despite the university requirement that students own a laptop, the instructor did not require or allow students to use them during class meetings. In addition, forty-two students (6.4 percent) indicated on their surveys that they thought about an online class while completing the survey; since access to the Internet during a traditional class is a critical component to this study, we also removed these students. Finally, we conducted an outlier analysis (i.e., Cook's and Mahalanobis Distance), which resulted in the deletion of four additional cases. This resulted in 451 usable observations.

Construct Measures

All constructs were measured using multi-item scales. For a detailed list of our measures, see Appendix 2. Social norms was measured using items adapted from Venkatesh and Morris (2000). Cognitive absorption with Internet technologies was measured using Agarwal and Karahanna's (2000) scale.[1] Scales were modified to reflect the context of each construct within Internet technologies.

Scales to measure intent to cyber-slack, awareness of instructor monitoring, multitasking, and distraction were developed through a multi-step process. First, a search of the literature for measures was conducted. After failing to identify appropriate measures, items were developed for each construct based on their theoretical definition. Items directed respondents' attention to the specific context of Internet technology use. Items for the intent to cyber-slack captured future intentions to partake in non-course related use of Internet technologies in the classroom. Items for awareness of instructor monitoring asked respondents to report use of Internet technologies in the classroom. Multitasking was formed by asking whether the students used the Internet for both course- and non-course-related activities at the same time during class. Finally, the "distraction by other students' cyber-slacking" items were developed to capture the impact of Internet technology use by other students in the classroom. After developing the items, measures of intent to cyber-slack, awareness of instructor monitoring, multitasking, and distraction were peer-reviewed by two other academics and a group of students taught by the lead author. Based on their feedback, items were added, deleted, or the phrasing was changed. Appendix 2 reports the constructs' final items. Each item was answered on a five-point Likert scale. Most were on a scale of strongly agree (1) to strongly disagree (5) except Social5-7, CATD, and Distract which were on a scale of very accurate (1) to very inaccurate (5) and InstMon which was on a scale of always (1) to never (5).

[1] We included all the items from Agarwal and Karahanna's (2000) original research in our survey. However, a number of the items did not work (i.e., they did not have an AVE of 0.5 or greater), so we dropped them from the final analysis.

Results

We used Smart Partial Least Squares (PLS) to test our model. PLS is a latent structural equation modeling technique. PLS is a useful tool because it handles modeling formative constructs (Chin 1998a, b; Petter, Straub, and Rai 2007; Ringle, Wende, and Will 2005).

Our presentation of results unfolds as follows. First, we report descriptive statistics of the constructs. Next, we report results of tests for reliability and construct validity (both convergent and discriminant). Then, we provide the results of testing the structural model.

Measurement Model

Descriptive statistics are presented in Table 2. The table reports the mean and standard deviation of each construct.

Table 2: Descriptive Statistics

	Mean	Standard Deviation
Intent to Cyber-Slack (IntCybSlack)	3.20	1.00
Social Norms (Social)	3.45	0.76
Awareness of instructor monitoring (InstMon)	4.23	0.90
CA: Heightened Enjoyment (CAHE)	2.88	0.93
CA: Focused Immersion (CAFI)	2.92	0.74
CA: Curiosity (CACur)	3.16	1.00
CA: Control (CAControl)	2.94	0.79
CA: Temporal Dissociation (CATD)	3.05	0.87
Multitasking (Multi)	2.93	1.06
Distraction by Other Student's Cyber-Slacking (Distract)	3.23	1.02

When evaluating psychometric properties of the measures, reflective and formative measures must be treated differently (Petter et al. 2007). Reflective measures represent the *effect* of the construct under study, thereby reflecting the construct of interest (Bollen 1984). Formative measures are *causal* measures for the construct under evaluation, implying that different dimensions are not inclined to correlate (Bollen 1984). Internal consistencies along with convergent and discriminant validity, which is highly appropriate for reflective measures, are inappropriate for formative measures (Wixom and Watson 2001). Instead, the weights can be examined to measure the relevance the items have to the research model.

Intent to cyber-slack, social norms, awareness of instructor monitoring, multitasking, and distraction were measured as reflective constructs. Properties of the constructs are assessed in terms of item loadings, discriminant validity, and internal consistency. For reflective constructs, item loadings and inter-construct reliabilities greater than 0.71 are considered *excellent*, while greater than 0.63 is considered *very good* (Comrey and Lee 1992). Convergent validity suggests that items load highest on the construct of interest (Campbell and Fiske 1959). Our results indicated that each item loaded highest on the appropriate construct (see Appendix 3). Next, discriminant validity was assessed by evaluating whether item loadings were higher on the construct of interest than the remaining constructs. Our results suggest that items loaded highest on the constructs of interest, thus providing evidence of convergent and discriminant validity.

Next, the average variance extracted (AVE) of each construct was examined. Convergent validity exists when a construct's AVE is at least .5, which each construct exceeded (Fornell and Larcker 1981). To be discriminant, the square root of the AVE should be greater than inter-construct correlations (Agarwal et al. 2000; Chin 1998b). As illustrated in Table 3, each construct shares more variance with their respective indicators than with other constructs. Thus, our results suggest convergent and discriminant validity in the measurement model as well as provide evidence of the reliability, convergent, and discriminant validity of our new measures of awareness of instructor monitoring, intent to cyber-slack and multitasking.

Table 3: Inter-Construct Correlation Matrix													
	AVE	Cron. Alpha	ICR [a]	Correlation of Constructs and Average Variance Extracted [b]									
				1	2	3	4	5	6	7	8	9	10
(1) Intent to Cyber-Slack	.77	.85	0.91	**0.877**									
(2) Social Norms	.64	.90	0.92	0.569	**0.797**								
(3) Awareness of instructor monitoring	.55	.49	0.77	0.129	0.339	**0.745**							
(4) Heightened Enjoyment	.85	.82	0.92	0.690	0.551	0.167	**0.920**						
(5) Temporal Dissociation	.61	.69	0.83	0.692	0.546	0.139	0.655	**0.784**					
(6) Curiosity	1.0	1.0	1.00	0.601	0.611	0.169	0.697	0.598	**1.000**				
(7) Focused Immersion	.51	.09	0.57	0.398	0.425	0.098	0.483	0.508	0.446	**0.711**			
(8) Control	.73	.63	0.84	0.428	0.499	0.201	0.543	0.511	0.551	0.462	**0.854**		
(9) Multitasking	.55	.49	0.73	0.742	0.523	0.140	0.686	0.698	0.583	0.328	0.427	**0.742**	
(10) Distraction	.80	.76	0.89	0.130	0.345	0.097	0.177	0.238	0.213	0.162	0.164	0.105	**0.893**

[a] Composite Reliability = ∑ (λi)2 / [∑ (λi)2 + ∑ (var(εi)] where λi = component loading to an indicator and var(εi)=1 -λi2.

[b] The bold numbers on the leading diagonal are the square root of the variance shared between the constructs and their measures. Off diagonal elements are the correlations among constructs. For Discriminant validity, diagonal elements should be larger than off-diagonal elements.

Structural Model

Figure 2 presents the structural model results. Table 4 summarizes the results of the hypotheses. Social norms positively affect the intent to cyber-slack with a path coefficient of 0.167 (H1: t-statistic: 3.875; p-value < .01). Distraction by other students' cyber-slacking was not significantly related to the intent to cyber-slack (H2: path coefficient: –0.056; t-statistic: 1.678; p-value = ns). Similarly, awareness of instructor monitoring negatively affected intent to cyber-slack with a path coefficient of -0.041, but it was also not significant (H3: t-statistic: 1.450; p-value: ns).

Cognitive absorption with Internet technologies was measured as a formative, second-order construct (similar to the representations in Agarwal et al. 2000). Heightened enjoyment, focused immersion, curiosity, and temporal dissociation were significant (p-value < .01). Control was not significant. When evaluating formative constructs, the general approach is to evaluate the relative contribution of each indicator to a factor, rather than a factor analysis approach which evaluates how close each measure is to one (Chwelos, Benbasat, and Dexter 2001). Therefore, it is reasonable to expect to see lower values than factor scores or item loadings. The weights displayed in the figure for formative measures can be interpreted as beta coefficients in a standard regression (Chwelos et al. 2001). While one dimension of cognitive absorption with Internet technologies was non-significant, overall the construct was confirmed to positively affect the intent to cyber-slack with a path coefficient of 0.415 (H4: t-statistic: 7.888; p-value < .01).

Multitasking had a direct influence on the intent to cyber-slack (H5: path coefficient: 0.347; t-statistic: 6.956; p-value < .01). However, we also wanted to test the mediation through cognitive absorption. Specifically, while multitasking is an antecedent to cognitive absorption, we were more interested in the mediated effect it has through this variable. The direct path coefficients displayed in Figure 2 from multitasking to cognitive absorption help calculate the significance of the hypothesis.

First, before testing mediation, the direct affects from the independent variable (multitasking) to the dependent variables (cognitive absorption with Internet technologies) must be significant. This initial condition was met with a path coefficient of 0.770 (p < .01). Second, to test for the mediation of cognitive absorption (H6), we calculated Sobel's (1982) test for mediation using the following equation:

$$\text{z-value} = (a*b) / \sqrt{(b^{2}* s_a^{2} + a^{2}* s_b^{2})} \text{ where,}$$

a = beta coefficient of the independent variable to the mediator variable
b = beta coefficient of the mediator variable to the dependent variable
s = standard error of the beta coefficient

Therefore, to test for mediation of cognitive absorption, a = the link between multitasking and cognitive absorption (0.770) and b = the link between cognitive absorption and intent to cyber-slack (0.415). Then s_a is the standard error of a (0.019), and s_b is the standard error of b (0.059).

The test of mediation of multitasking's influence by cognitive absorption resulted in a test statistic of 6.907, which is significant at the .01 level. Since multitasking does have a mediation effect through cognitive absorption, we conclude multitasking has an indirect effect on intent to cyber-slack through cognitive absorption.

Table 4: Summary of Hypotheses and Results

Hypothesis	Path	T- statistic	Supported (Yes/No)
H1: Social norms → Intent to cyber-slack	0.167	3.875	Yes ($p < .01$)
H2: Distraction → Intent to cyber-slack	–0.056	1.825	No
H3: Awareness of instructor monitoring → Intent to cyber-slack	–0.041	1.450	No
H4: Cognitive absorption → Intent to cyber-slack	0.415	7.888	Yes ($p < .01$)
H5: Multitasking → Intent to cyber-slack	0.347	6.956	Yes ($p < .01$)
H6: Multitasking → Cognitive absorption → Intent to cyber-slack	0.770	42.942	Yes ($p < .01$)

Overall, social norms, awareness of instructor monitoring, cognitive absorption, multitasking, and distraction explain 65.7 percent of the variance of intent to cyber-slack.

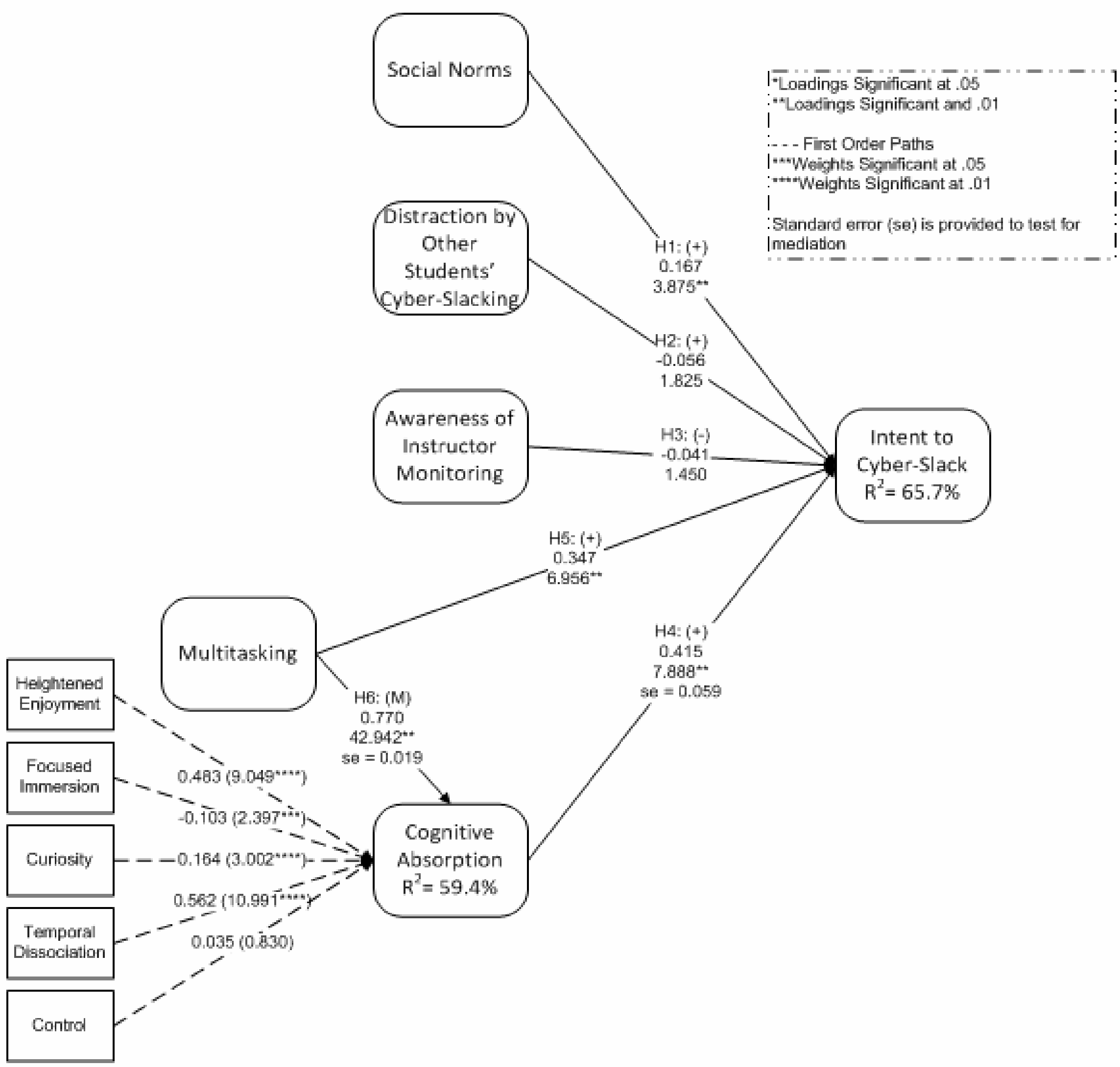

Figure 2: Results model.

DISCUSSION AND FUTURE DIRECTIONS

While many papers have focused on positive uses of the Internet for learning, this paper is among the first to examine drivers of maladaptive use of IT in the classroom. Specifically, our research model ties together the context (external forces) and individual characteristics (internal forces) to model drivers of a student's intent to cyber-slack. In doing so, we examined the influence of cognitive absorption with Internet technologies and multitasking (the internal forces) and social norms, distractions by other students' cyber-slacking, and awareness of instructor monitoring (the external forces). Our results provide evidence that behavior is a factor of both internal and external forces, which is consistent with Field Theory. However, Field Theory suggests external forces should have a greater influence on an individual's behavior; yet, we found internal forces actually had a greater influence since both cognitive absorption with Internet technologies and multitasking influenced an individual's intent to cyber-slack while the only external factor that influenced intent was social norms.

Contrary to our expectations, our analysis suggests a students' intent to cyber-slack is influenced heavily by the individuals themselves and then slightly by the environment in which they are involved. Specifically, students who expose themselves to non-class-related Internet activities via multitasking are more likely to cyber-slack than individuals who don't multitask (both directly and indirectly through cognitive absorption). Furthermore, our results suggest students' propensity to get cognitively absorbed by Internet technologies also influences their intent to cyber-slack. We found students who are cognitively absorbed by Internet technologies report more positive perceptions of the Internet and are more likely to cyber-slack. Additionally, we found multitasking significantly impacted the intention to slack through cognitive absorption. Because the direct link from multitasking to intent to cyber-slack was also significant, the significance of the mediators suggests there is partial mediation among multitasking, cognitive absorption with Internet technologies, and intent to cyber-slack. Therefore, multitasking causes slacking directly and also by increasing absorption in off-task activities.

To a lesser extent, the environment also increases students' intent to cyber-slack. Specifically, when peers and friends approve of cyber-slacking, students are more likely to report a higher intent to cyber-slack. Field Theory predicts these external forces should be more predominant since individuals seek to conform to the group so they can establish "belongingness" (Lewin 1939, p. 874). However, in contradiction to Field Theory, our results show the student's behavior (i.e., intent to cyber-slack) is a factor of internal forces (i.e., multitasking and cognitive absorption with Internet technologies) to the greatest extent and of external forces (i.e., social norms) to a lesser extent.

This paper has implications for MIS research and teaching. For research, our results provide a robust foundation for examining cyber-slacking in the classroom. An important direction for research is expanding the nomological network of factors leading to intent to cyber-slack and awareness of instructor monitoring. For example, it may be relevant to see how achievement motivation plays into the model (an internal force). Will a highly conscientious, high GPA student be as apt to cyber-slack as his less motivated peer will? Another internal force that could influence intent to cyber-slack is self-efficacy. Academic self-efficacy could influence whether one feels it is necessary to pay attention to a lecture. Computer self-efficacy could positively influence slacking (i.e., I have the ability to slack, so I will) as well as positively influence whether one uses technology effectively (i.e., I have the ability to use the technology appropriately). Due to practical constraints (i.e., time to complete and length of the survey), we did not collect information on efficacy. Hence, we regard examining the influence of efficacy as a rich avenue for future research. A third construct that may be useful in future research is the quality of the instructor (an external force). For example, will students in a classroom with a less competent instructor be more likely to cyber-slack? In our study, we included trust as another antecedent to intent to cyber-slack. Specifically, we conceptualized trust as a second order factor with "Trust in Instructor Competence," "Trust in Instructor Benevolence," and "Trust in Instructor Integrity" as dimensions of trust. We found these factors did not significantly influence a student's intent to cyber-slack, so we did not add them to the model. However, we believe future research is necessary to determine when trust may be an important factor in a student's intent to cyber-slack. Finally, future research should consider the major of the student. While we did not include this construct in our model, it may be possible that accounting or engineering majors may be more focused than other majors (i.e., marketing or general management).

For faculty in the classroom, our research has two practical implications. First, our results demonstrate multitasking is detrimental to classroom learning in the long-run because a student who is initially paying attention in class (even if they are engaged in some non-class activities) will ultimately choose to focus strictly on cyber-slacking. This is further demonstrated by the relationship between multitasking and cognitive absorption with Internet technologies; specifically, students will, over time, prefer to use Internet technologies for more engaging and less mentally taxing activities (like chatting with their friends) than for "less fun" tasks such as downloading class materials or searching for class-related information. Kirwan-Taylor (2006) refers to this phenomenon as "semi-tasking," where people are more likely to check a text message or e-mail rather than concentrating on what an important person is saying. She indicates technology is the source of this problem and the only cure is to limit access or, more humorously, to adopt a counter-addiction such as drinking caffeine or chewing gum.

Second, our research shows instructors will have difficulty competing with other people in a student's social network. Specifically, our results indicate peers and friends have much more influence over the student's intent to cyber-slack than instructors. We strongly contend this does not lessen the burden on instructors for teaching students how to properly use Internet technologies or for creating policies and procedures that ensure Internet technologies are used in the appropriate ways. Since college faculty are responsible for preparing the next generation of workers, they must just work harder and experiment with different techniques that will instill appropriate practices into the students' lives that will stay with them and benefit them their entire careers. More precisely, Internet addiction is of interest to modern corporations because maladaptive Internet usage leads to workplace reprimands, decreased productivity, and thus a loss in earnings (Warden, Phillips, and Ogloff 2004). While college Internet use is largely unmonitored, more and more companies are monitoring their employees' activities (Douthitt and Aiello 2001).

Colleges can respond to the lack of monitoring in two ways. One option college faculty could consider is to block the websites and applications students can access in the classroom. This means the faculty would have greater control over the network in their classrooms since they would decide which applications were permissible and which ones needed to be blocked. This capability exists as network managers have the ability to block access to popular non-course-related websites (such as online games) or applications (such as Instant Messenger). However, such decisions must be made in consultation with other faculty because blocking access to different websites may limit the other instructors' ability to dynamically modify their course content or teaching strategies. Therefore, effectively managing Internet technologies in the classroom will require faculty to extend beyond their traditional "lecture roles" to interact more extensively with the people who support the enabling technologies as well as understanding how their peers use the technologies. Another option colleges can consider is to take a more passive role by simply educating and preparing students to handle the additional monitoring and controls they will face during their careers. This will ensure students will choose to use Internet technologies in appropriate ways in college and in the future, rather than being forced to do so.

Limitations

This research is not without limitations. First, we used cross-sectional data to evaluate our research model. To conduct rigorous tests of causality, future research should use longitudinal research designs to evaluate the causes and consequences of intent to cyber-slack. An additional concern may be common method variance where self-reported measures might inflate the observed relationships between constructs. To diagnose the extent to which common method bias may be a problem, we conducted a Harman one-factor test (Malhotra, Kim, and Patil 2006). Our results extracted six factors from the data, which corresponded to the latent variables in our study. The factors accounted for 57.5 percent of the variance with the first factor accounting for 34.6 percent. Since no single factor accounted for a majority of the covariance, this suggests common method bias might not pose a severe threat to the validity of our study (Harman 1976).

Second, while our research examined prior feelings of cognitive absorption when using Internet technologies, we did not investigate the frequency, or ease with which one falls into a cognitively absorbed state. In future research, it may be useful for scholars to examine how the nature and frequency with which individuals experience cognitive absorption relates to intent to cyber-slack. We also limited our examination of cognitive absorption to Internet technologies. It is important to note students may also be cognitively absorbed in the course. Future researchers should see if cognitive absorption with Internet technologies detracts from cognitive absorption with the lecture or vice versa.

Third, we surveyed students in an online management class. These students were asked to respond based on their traditional classes. Additionally, we removed those students who indicated they were answering on behalf of an online class. However, we acknowledge these students may be biased toward online interaction as opposed to traditional, classroom-based lectures. This suggests they may have a higher propensity to cyber-slack. Nonetheless, the results from our full survey were similar to our pilot survey administered in traditional classrooms; hence, we believe this setting did not unduly bias our results.

Fourth, our definition of multitasking addresses Internet use for both class- and non-class-related activities. Since this inherently includes cyber-slacking as a part of the construct, the items for multitasking overlap those for the intent to cyber-slack. As a result, the relationship between these two constructs is very strong. Future research should use a more general measure of multitasking that does not include cyber-slacking as a task. For example, researchers could include items that reference doing homework or research for another class as a component of multitasking.

Fifth, the average response for “Awareness of instructor monitoring” was 4.23 on a 5 point scale. On the one hand, this high score could indicate our scale did not capture and distribute the high effects very well (i.e., there is very little variance in the items). On the other hand, instructors may not be monitoring students universally; if instructor monitoring is not practiced, then there would be no variance in the construct. Additionally, because the mean was not mean-centered at the median and the standard deviation was greater than the highest Likert value of 5, our data could potentially be positively skewed. While we checked for skewness through an outlier analysis, we must note that skewness may still be an issue. Future research needs to examine the intensity of instructor monitoring in addition to the student’s awareness of this monitoring. Additionally, researchers may need to create a wider scale (i.e., a 7 or 9 point scale) to find variance at the higher levels of awareness of instructor monitoring.

Finally, it is important to note we examined our model in a student setting, which could operate differently than a workplace setting (Taylor and Todd 1995). As noted in the discussion, many colleges do not monitor or restrict their network environments as strictly as some work environments (Douthitt et al. 2001). In particular, this could impact the relationship between awareness of instructor monitoring and intent to cyber-slack. Additionally, the generational gap between students and workers could be a factor in an individual’s propensity to cyber-slack. Specifically, the latest generation (Generation Z, born in the 1990s and 2000s) is highly connected since they have had lifelong exposure to Internet technologies (Twenge 2006) and grew up with modern operating systems designed to facilitate multitasking (McFarlane 1997). As a result, these individuals may or may not recognize these activities propagate unproductive behavior and hinder their ability to learn. Given the classroom is the context of this study, we feel the use of students is appropriate.

CONCLUSION

This paper was motivated by a desire to understand why access to the Internet does not necessarily lead to students learning more in the classroom. To understand this phenomenon, we focused on intent to cyber-slack and its antecedents. We found social norms, multitasking, and cognitive absorption directly and positively influence intent to cyber-slack. Also, we found cognitive absorption partially mediates the relationship between multitasking and intent to cyber-slack. If current trends persist, the Internet will grow more infused in classrooms. To control the negative influences of cyber-slacking, this study provides a foundation for faculty on how internal and external factors influence a student's intent to cyber-slack.

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APPENDIX 1: COVER LETTER TO RESPONDENTS

Brief Description of the Research Project

Internet access has been touted as a means to supplement instruction by providing easy access to course material, resources such as multimedia, and information on current events. Therefore, many instructors have integrated the Internet into their classes in order to frequently update course materials and grades in addition to communicating with students. Consequently, many universities have offered students in-class access to wireless networks and out-of-class access to wireless hotspots to download class slides or to take on-line exams. Through the use of the Internet, students are thought to have access to more timely, relevant, and updated material. To glean a deeper understanding into how Internet technologies may affect learning in the classroom, this study investigates what influences students' Internet use in the classroom.

Benefits to the Participating Individual

For your participation in this study, you will receive extra credit as determined by your professors. In addition, the research team will be happy to provide the results to any interested student. The comprehensive report will provide an interpretation of data collected, visual presentation, and classroom recommendations. This report will include an analysis of student perceptions of cyber-slacking in the classroom.

Research Method

Data will be collected through a survey posted on Blackboard. This survey has 85 questions and should take about 10–15 minutes to complete.

Confidentiality

All data will be collected and maintained under strict standards to ensure the confidentiality of individual identities. No individual can be linked to his/her responses by anyone at any time. As soon as you submit the survey, you will get a response check in the Gradebook; however, all identifying information will be erased.

APPENDIX 2: ITEMS BY CONSTRUCT

These items are on a scale of strongly agree (1) to strongly disagree (5) except Social5-7, CATD, and Distract which were on a scale of very accurate (1) to very inaccurate (5) and InstMon which was on a scale of always (1) to never (5).

IntCybSlack: Intent to Cyber-Slack	
IntCybSlack1	I plan on using the Internet for non-class related purposes during class in the future.
IntCybSlack2	I intend to use the Internet for entertainment during class in the future.
IntCybSlack3	I think I will likely use the Internet to do something other than class-related activities during class in the future.
Social: Social Norms	
Social1	My classmates ask me to perform non-class related activities on the Internet during class.
Social2	People sitting next to me in class think I should use the Internet to do non-class related things during class.
Social3	My classmates like when I do non-class related activities on the Internet during class.
Social4	My classmates think I should use the Internet for non-class related purposes.
Social5	My friends, who are not in this class, think I should use the Internet for non-class related purposes.
Social6	My friends, who aren’t in this class, think I should use the Internet to do non-class related things during class.
Social7	My friends, who aren't in this class, like when I do non-class related activities on the Internet during class.
InstMon: Awareness of instructor monitoring	
InstMon1	How often does the instructor check to make sure you are using the Internet for class-related activities?
InstMon2	How often does the instructor walk around the room to see what students are doing on their computers?
CAHE: Factor 1 for Cognitive Absorption—Heightened Enjoyment	
CAHE1	I have fun interacting with the Internet while I’m in class.
CAHE2	Using the Internet while I’m in class gives me pleasure.
CACur: Factor 2 for Cognitive Absorption—Curiosity	
CACur1	During this class, using the Internet excites my curiosity.
CATD: Factor 3 for Cognitive Absorption—Temporal Dissociation	
CATD1	Sometimes I lose track of time during class when I am using the Internet.
CATD2	The class flies by when I am using the Internet.
CATD3	I often spend more time using the Internet during class than I had intended.
CAFI: Factor 4 for Cognitive Absorption—Focused Immersion	
CAFI1	While using the Internet when I’m in class, I am able to block out most other distractions.
CAFI2	While using the Internet when I’m in class, I am immersed in the task I am performing.
CAControl: Factor 5 for Cognitive Absorption—Control	
CAControl1	When using the Internet in class, I feel in control.
CAControl2	The Internet allows me to control my computer interaction in class.
Multi: Multitasking	
Multi1	During class, I will often use the Internet for both class and non-class related purposes.
Multi2	I will typically have many Internet windows open during class where some are for class related purposes and some are for non-class related purposes.
Multi3	It is common for me to use the Internet during class for both class related and non-class related activities.
Distract: Distraction by Other Students’ Cyber-Slacking	
Distract1	I am frequently distracted when people around me are using the Internet for non-class related purposes.
Distract2	My attention is easily diverted from the instructor if other people are using the Internet to slack off.

APPENDIX 3: FACTOR LOADINGS AND CROSS LOADINGS

	CA: Control	CA: Curiosity	CA:FI	CA:HE	CA:TD	Distraction	IntCybSlack	Multi	Social Norms	InstMon
CAControl1	**0.8377**	0.4659	0.4051	0.4367	0.4245	0.1049	0.3395	0.341	0.4551	0.2729
CAControl2	**0.8697**	0.4765	0.3858	0.4891	0.4477	0.172	0.3892	0.3869	0.3998	0.0962
CACur1	0.5512	**1.0000**	0.4459	0.6971	0.598	0.2134	0.6009	0.583	0.6106	0.1968
CAFI1	0.4611	0.4447	**0.9943**	0.4835	0.509	0.1672	0.3959	0.3271	0.4227	0.0781
CAFI2	0.0559	0.0551	**0.1512**	0.0449	0.0401	-0.035	0.0567	0.038	0.0649	-0.0383
CAHE1	0.484	0.5903	0.4392	**0.9166**	0.6232	0.172	0.6001	0.6663	0.5073	0.1685
CAHE2	0.5147	0.6907	0.4494	**0.9227**	0.5815	0.1533	0.6671	0.5973	0.5067	0.1866
CATD1	0.4687	0.5388	0.5252	0.5648	**0.7747**	0.26	0.4911	0.4845	0.4743	0.1155
CATD2	0.3529	0.3747	0.3663	0.4389	**0.7808**	0.205	0.4539	0.4773	0.3632	0.0769
CATD3	0.379	0.4836	0.3111	0.5278	**0.7959**	0.1056	0.6608	0.6604	0.4394	0.1315
Distract1	0.1723	0.1837	0.1494	0.1366	0.1874	**0.8353**	0.0809	0.0634	0.3489	0.129
Distract2	0.1349	0.1986	0.1449	0.1738	0.2317	**0.9477**	0.1393	0.1134	0.2913	0.0296
IntCybSlack1	0.3682	0.5551	0.3823	0.6581	0.6122	0.1156	**0.9117**	0.662	0.5387	0.1659
IntCybSlack2	0.3715	0.5038	0.3046	0.5553	0.644	0.1455	**0.8332**	0.6476	0.4745	0.1116
IntCybSlack3	0.3865	0.5213	0.3582	0.5982	0.5625	0.0799	**0.8845**	0.6418	0.4804	0.1401
Multi1	0.3693	0.53	0.2795	0.5806	0.6564	0.0699	0.6904	**0.9078**	0.4396	0.1149
Multi2	0.404	0.5307	0.3221	0.6654	0.6103	0.1189	0.6538	**0.9051**	0.5061	0.1795
Multi3	0.0565	0.0088	-0.0531	0.0462	0.0382	0.0277	0.0737	**0.087**	0.0823	0.0087
Social1	0.3613	0.4158	0.3467	0.3936	0.4142	0.2668	0.4662	0.3695	**0.7386**	0.2679
Social2	0.4311	0.5238	0.3553	0.4704	0.4708	0.3146	0.4826	0.456	**0.8627**	0.3386
Social3	0.4029	0.5238	0.3571	0.444	0.4748	0.317	0.4542	0.4249	**0.8619**	0.3311
Social4	0.4329	0.4947	0.3573	0.4892	0.412	0.2206	0.4375	0.402	**0.7139**	0.2366
Social5	0.4126	0.4986	0.3576	0.4411	0.4541	0.2778	0.4598	0.445	**0.8586**	0.2566
Social6	0.4357	0.5551	0.3461	0.4686	0.4528	0.2767	0.4814	0.4503	**0.8302**	0.2588
Social7	0.2877	0.3773	0.2364	0.3586	0.3523	0.2422	0.3774	0.3611	**0.6952**	0.2096
InstMon1	0.199	0.1763	0.0885	0.1732	0.1409	0.1232	0.1119	0.1270	0.3283	**0.9385**
InstMon2	0.1833	0.1455	0.0966	0.1458	0.1245	0.0644	0.1304	0.1377	0.3151	**0.9551**

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