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A Developmental Research of a Taxonomy for Employees' Mobile Device Cyberslacking and Commitment to the Organization in the Context of Productivity

Saleh Alharthi
Nova Southeastern University, sa1497@mynsu.nova.edu

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By

Saleh Alharthi

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While the introduction of the Internet facilitated the communication channels at the workplace to improve employees' productivity, it also raised new challenges, such as Internet use for personal activities. Organizations face productivity losses due to employees' involvement in counterproductive behaviors, such as cyberslacking. The frequency of mobile device cyberslacking is anticipated to increase due to continuous developments in online connectivity, applications, and the significant growth of mobile device usage worldwide. In addition, research has shown that employees' commitment to their organization can encourage behaviors that positively influence productivity. Employee's commitment is a crucial factor because it can benefit an organization in different ways, such as enhancing performance, decreasing absenteeism, and reducing turnover, thus, resulting in sustained productivity. Hence, limited studies have been conducted on the impact of employee cyberslacking using mobile devices and employee's commitment to the organization on productivity.

The research problem that this research study addressed is mobile device cyberslacking at the workplace as it relates to productivity. The main goal of this research study was to develop and validate, using Subject Matter Experts (SMEs), a Mobile Cyberslacking-Commitment Taxonomy using the measures of mobile device cyberslacking based on the self-reported frequency of cyberslacking (FCyS) and employee's commitment to the organization (EC2O) to provide indirect indication for employee productivity.

This research study implemented three phases. Phase One of this study, using the Delphi method, collected data via anonymous online surveys from 19 SMEs to evaluate and validate a set of items relevant to the measures of mobile device FCyS and EC2O, the survey scale, instructions to participants, and the Mobile Cyberslacking-Commitment Taxonomy. In Phase two, using a pilot study, a group of 35 participants were recruited to verify the validity of the survey instrument that was revised by SMEs. In Phase three, the validated survey was sent via email to assess six research questions. The final survey was sent to 1,063 employees who work at organizations in Saudi Arabia and use mobile device on a daily basis. The response rate was 24.93% with 265 usable records.

The results of the study showed that employees were dispersed across the Mobile Cyberslacking-Commitment Taxonomy with 4.5% of the employees were positioned in the more problematic quadrant indicating that this portion of employees will not use their

mobile devices at the workplace to improve their productivity. The overall results showed that the population had a low frequency of mobile cyberslacking and a high commitment to the organization, thus, have a better potential for productivity. Significant differences in the two constructs were also found across several demographics including age, gender, education level, industry type. Recommendations for practice and research are provided. Moreover, several areas for future research are also presented. The results of this research study contributed to information systems' body of knowledge by providing researchers and practitioners a novel benchmarking tool of Mobile Cyberslacking-Commitment Taxonomy to enable the measure of employees' FCyS and EC2O to classify employees' potential for productivity in the context of the workplace.

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Chapter 1

Introduction

Background

The Internet and technology tools have become common technologies at the workplace (Contreras, Oliveria, & Muller, 2012; Sage, 2015) that offer instant communication, improve productivity, and reduce cost for organizations (Betts, Setterstrom, Pearson, & Totty, 2018; Li, Xu, & Zhao, 2015; Najarzadeh, Rahimzadeh, & Reed, 2014). However, with the increased availability of the Internet at the workplace, opportunities to use the Internet for personal reasons have increased as well (Askew, Buckner, Taing, Ilie, Bauer, & Coovert, 2014; Moody & Siponen, 2013). Employees can access the Internet to accomplish their assignments more effectively, but access to the Internet also raises the chance that they will perform unrelated activities at the workplace, such as cyberslacking (Glassman, Prosch, & Shao, 2015). It is stated in the literature that personal Internet use involves organizational issues such as reduced productivity, increased risk of viruses and spyware attacks, as well as a waste of organizational resources (Betts et al., 2018; Cheng, Li, Zhai, & Smyth, 2014; Gramberg, Teicher, & O'Rourke, 2014; Rosli, Lokman, Aziz, & Hamidi, 2015). This mixture of personal and business Internet usage at the workplace has grown considerably in the past two decades (Glassman et al., 2015).

Organizations are confronting productivity losses due to employees' involvement in counterproductive behaviors, such as cyberslacking (Gözü, Anandarajan, & Simmers, 2015). The introduction of Internet-enabled mobile devices facilitated Internet access for everyone, anytime, and anywhere. Therefore, the mobile device is considered as a useful tool at the workplace or a distractive tool that should be controlled (Mashal, 2017; Yueh, Lu, & Lin, 2016). The prevalence of mobile devices motivates employees to cyberslack away from the organization's monitoring practices at the workplace (Mashal, 2017). Employees send and/or receive instant messages through their mobile devices that may cause repetitive distractions and lower employee productivity (Lebbon & Sigurjunsson, 2016). The losses caused by cyberslacking exceed poor productivity and include reduced network security, along with performance that is estimated cost in the United States around $130,000 per organization (Metin, Taris, & Peeters, 2016). Thus, it appears that cyberslacking reduces productivity at the workplace (Hernández, Levy, & Ramim, 2016).

Further, this study developed and validated, using Subject Matter Experts (SMEs), a Mobile Cyberslacking-Commitment Taxonomy using the measures of mobile device cyberslacking based on the self-reported frequency of cyberslacking (FCyS) and employee's commitment to the organization (EC2O) to provide indirect indication for employee productivity. The results of this study contributed to information systems' body of knowledge by providing researchers and practitioners a novel benchmarking tool of Mobile Cyberslacking-Commitment Taxonomy to enable the measure of productivity in the context of the workplace and to provide quantitative indicators as well as a means of comparison when evaluating the significance of different organizational productivity issues.

Problem Statement

The research problem that this research study addressed was cyberslacking at the workplace (Betts et al., 2018; Glassman et al., 2015; Hernández et al., 2016). O'Neill, Hambley, and Chatellier (2014) defined cyberslacking as "a phenomenon in which employees are distracted by non-work Internet browsing when they should be accomplishing work tasks" (p. 152). While the introduction of the Internet facilitated the communication channels at the workplace to improve the employees' productivity, it also raised new challenges such as Internet use for personal activities (Askew et al., 2014; Glassman et al., 2015). Employees, in many occasions, misuse the Internet and engage in activities that are unrelated to work (Moody & Siponen, 2013; Shepherd & Mejias, 2016). Organizations are confronting productivity losses due to employees' involvement in counterproductive activities such as cyberslacking (Betts et al., 2018; Gözü et al., 2015).

While technology had been owned and afforded by organizations, in recent years more and more employees own and use regularly personal mobile devices at workplace (Caldwell, Zeltman, & Griffin, 2012). Employees can send and/or receive instant messages through their mobile devices that may cause repetitive distractions and lower employee productivity (Lebbon & Sigurjunsson, 2016). Between 60% and 80% of employees are cyberslacking at the workplace, leading to approximately 30% to 40% decline in productivity (Jandaghi, Alvani, Matin, & Kozekanan, 2015; Nazareth, & Choi, 2015). Son and Park (2016) suggested that cyberslacking in the United States costs about $85 billion each year. As the number of employees who bring their personal devices increase rapidly, limited number of research studies have conducted on the impact of

mobile devices on cyberslacking activities (Cook, 2017; Jamaluddin, Ahmad, Alias, & Simun, 2015). Hernández et al. (2016) stated that future research related to cyberslacking activities of using personal mobile devices is warranted.

The losses caused by cyberslacking exceed poor productivity, while wasting organizational resources by reduced network security and performance (Leuprecht, Skillicorn, & Tait, 2016; Metin et al., 2016). The literature stated that personal Internet usage via mobile devices causes organizational challenges, such as: reduced productivity, increased risk of viruses and spyware attacks, as well as wasted of organizational resources (Betts et al., 2018; Cheng et al., 2014; Gramberg et al., 2014; Rosli et al., 2015). Therefore, the use of mobile devices presents risks to organizational data and intellectual property (Fulton, 2017). Organizations adopt several policies and countermeasures to address cyberslacking, such as mobile compartments (Kulkarni & Bojewar, 2016), blocking Websites, offering reminders to decrease Internet misuse (Glassman et al., 2015), implementing security tools, and imposing sanctions (Ugrin & Pearson, 2013). However, countermeasures fail to reduce the cyberslacking activities (Baturay & Toker, 2015), especially with mobile devices that give employees the ability to hide the cyberslacking activities (Askew et al., 2014). Thus, future research related to cyberslacking using mobile devices is warranted (Jamaluddin et al., 2015).

Organizations implement various policies and countermeasures believing that these actions can minimize the loos of productivity and decrease cyberslacking activities by employees at the workplace. However, these countermeasures reduce the employee's level of trust towards the organization and affect their morale (Lee, Warkentin, Crossler, & Otondo, 2017; Quoquab, Mahadi, & Hamid, 2015). Webber, Ser, and Goussak (2015)

stated that the most significant construct on employees' productivity is workplace attribute. Research has shown that employees' commitment to their organization can induce behaviors that positively influence organizational productivity (Phipps et al., 2013). Akintayo (2010) defined employee's commitment as the degree to which employees feels dedicated to their organizations. Employees with low levels of commitment to the organization will do only enough work to get by (Irefin & Mechanic 2014). Employee's commitment is a crucial factor because it can benefit an organization in different ways, such as enhancing performance; decreasing absenteeism, and reducing turnover, thus, resulting in sustained productivity (Dixit & Bhati, 2012). The discussion regarding employee productivity and factors that contribute to it continues to this day (Irefin & Mechanic 2014). Unfortunately, very few studies have investigated the direct and indirect role of employee's commitment to the organization, along with the interaction effect of mobile device cyberslacking on productivity (Fu & Deshpande, 2014). Thus, it appears that additional research regarding employee's commitment and mobile device cyberslacking in the context of their productivity is warranted.

Demographic indicators including age, gender, education level, years of experience using the Internet have also been critical when using mobile devices to cyberslack (Hartijasti & Fathonah, 2014; Hernández et al., 2016; Rahimnia & Mazidi, 2015; Sheikh, Atashgah, & Adibzadegan, 2015). Rahimnia and Mazidi (2015), who examined the functionality of control mechanisms regarding workplace cyberslacking in Iran, indicated that females' administrative employees engaged in cyberslacking more than males. However, Ferreira and Esteves (2016), who investigated gender differences and motivations behind personal activities at work, found that females engaged in

cyberslacking less than males. Ugrin and Pearson (2013), who examined the effects of sanctions and stigmas on cyberslacking, found that younger employees cyberslack more than older employees. In addition, Khansa, Barkhi, Ray, and Davis (2017) as well as Hernández et al. (2016) found that there are no significant differences in government employees' cyberslacking activities based on age and gender. It appears that the literature has contradictory findings regarding age and gender in employees' cyberslacking, thus, additional research is warranted in assessing if there are any significant differences in employees' cyberslacking activities based on age and gender.

It appears that research on the role of education level and experience using the Internet on cyberslacking has contradictory findings in literature (Chang, McAllister, & McCaslin, 2015; Hartijasti & Fathonah, 2014; Hernández et al, 2016; Sheikh et al., 2015; Vitak, Crouse, and LaRose, 2011). Hartijasti and Fathonah (2014) and Sheikh et al. (2015) found that cyberslacking activities declined when employees' education level increased. However, Vitak, Crouse, and LaRose (2011), who examined employees' engagement in personal use of technology while at work, found that young males who are highly educated are more likely to engage in cyberslacking. Furthermore, Hernández et al. (2016) found that there are no significant differences in government employees' cyberslacking based on level of education. In addition, while Ugrin and Pearson (2013) indicated that experience using the Internet has a negative association with cyberslacking, Chang, McAllister, and McCaslin (2015) found that employees with more Internet experience cyberslack more than employees less experienced. Thus, it appears that further empirical research into the role of employee educational level and experience of using the Internet on employees' cyberslacking is also warranted.

Dissertation Goals

The main goal of this research study was to develop and validate using Subject Matter Experts (SMEs) a Mobile Cyberslacking-Commitment Taxonomy using the measures of mobile devices cyberslacking based on the self-reported frequency of cyberslacking (FCyS) and employee's commitment to the organization (EC2O) to provide indirect indication for employee productivity. The need for this work is demonstrated by (Fu & Deshpande, 2014; Glassman et al., 2015; Hernández et al., 2016; Jamaluddin et al., 2015). While the use of the Internet at the workplace is rapidly increasing to enhance the employees' productivity, it also brought new challenges such as Internet use for personal activities (Glassman et al., 2015). Organizations are facing productivity losses due to employees' involvement in cyberslacking activities (Betts et al., 2018). However, limited number of research studies have been conducted on the impact of mobile devices on cyberslacking activities (Jamaluddin et al., 2015). Thus, Hernández et al. (2016) stated that future research related to cyberslacking activities using mobile devices at workplace is warranted. Furthermore, Phipps et al. (2013) indicated that employees' commitment to their organization can motivate behaviors that enhance organizational productivity. However, limited studies have been conducted on the role of employee cyberslacking using mobile devices and employee's commitment to the organization on productivity (Fu & Deshpande, 2014). This research study built on the aforementioned prior research by developing a taxonomy that assists in understanding employee productivity associated with mobile device usage based on self-reported FCyS and EC2O.

This research study had six specific goals. The first goal of this research study was to use Delphi methodology with a group of SMEs to identify a set of items relevant to the measures of mobile device FCyS and EC2O. The second specific goal of this research study was to develop and validate the Mobile Cyberslacking-Commitment Taxonomy using SMEs to classify employees' potential for productivity based on mobile device FCyS and EC2O. Figure 1 illustrates the developed taxonomy of a 2x2 matrix that assess the classification of employees' mobile device cyberslacking based on self-reported FCyS and EC2O. The Mobile Cyberslacking-Commitment Taxonomy is comprised of four quadrants, Q1, Q2, Q3, and Q4, as depicted in Figure 1. Each quadrant reflects the possibility that a given mobile device user may contribute toward employee productivity. The first quadrant, Q1, consists of high EC2O and low FCyS and is named "Highly-Productive." Employees positioned in this quadrant are expected to be the most likely to use mobile devices to improve their productivity because of their lower FCyS scores and higher EC2O scores. The second quadrant, Q2, consists of low EC2O and low FCyS and is named "Moderated Productivity." Employees positioned in this quadrant may use mobile devices less intensively to improve their productivity because of their lower FCyS scores and lower EC2O scores. The third quadrant, Q3, consists of high EC2O and high FCyS and is named "Limited Productivity." Employees positioned in this quadrant are expected to be the least likely to use mobile devices to improve their productivity because of their higher FCyS scores and higher EC2O scores. The fourth quadrant, Q4, consists of low EC2O and high FCyS and is named "Non-Productive." Employees positioned in this quadrant will not use mobile devices to improve their productivity because of their higher FCyS scores and lower EC2O scores.

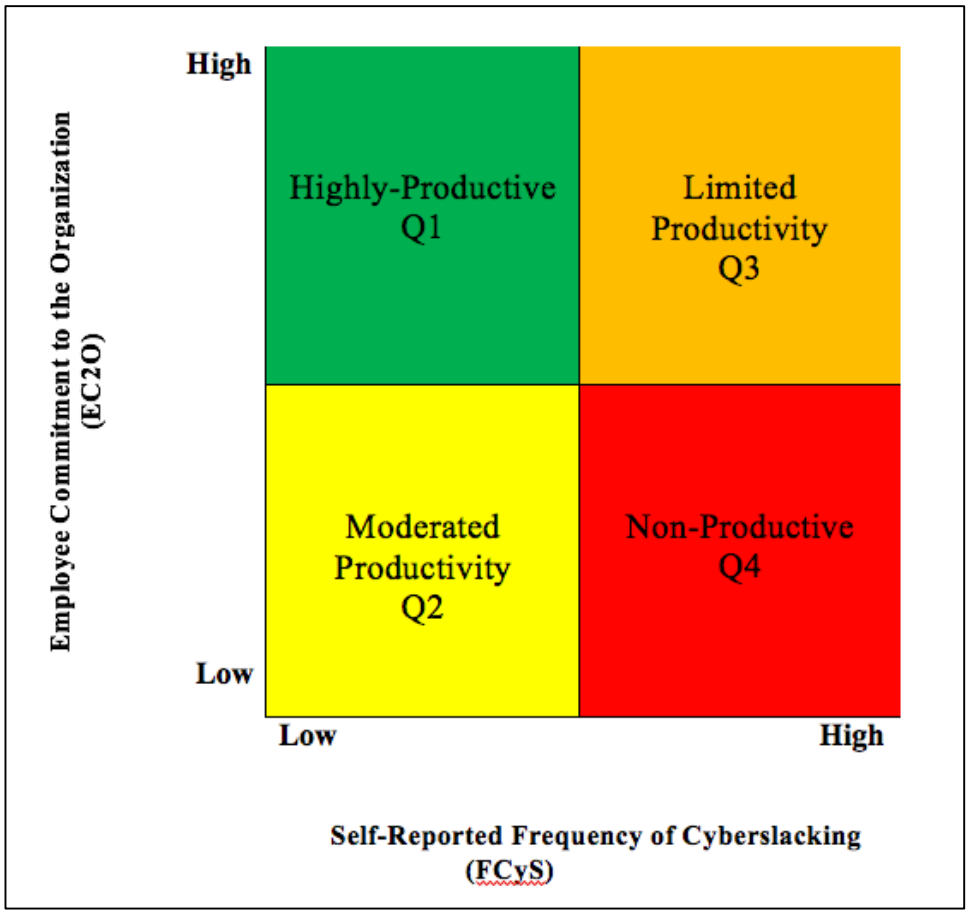


Figure 1: The Proposed Mobile Cyberslacking-Commitment Taxonomy in the Context of Employee Productivity

The third goal of this study was to measure the self-reported FCyS to which employees engage in mobile device cyberslacking activities at the workplace, and to determine if there are any significant differences on these measures based on their age, gender, level of education, industry Type, level at the organization, years of experience using the Internet, and organization type. The fourth goal of this study was to measure EC2O and to determine if there are any significant differences on these measures based on their age, gender, level of education, industry Type, level at the organization, years of experience using the Internet, and organization type. The fifth goal of this research study was to uncover how the aggregated scores of employees for the measures of self-reported

mobile device FCyS and EC2O are positioned on the Mobile Cyberslacking-Commitment Taxonomy. The sixth goal of this study was to determine if there are any differences on employees' positioning on the Mobile Cyberslacking-Commitment Taxonomy based on their gender, age, level of education, industry Type, level at the organization, years of experience using the Internet, and organization type.

Research Questions

The main research question (RQ) that this research study addressed was: How are employees at the workplace classified in terms of their potential for productivity based on self-reported frequency of mobile device cyberslacking and employee's commitment to the organization. There are five specific research questions that this research study addressed.

RQ1: What are the specific subject matter experts (SMEs) identified set of items, using Delphi methodology, relevant to the measures of self-reported mobile device FCyS and EC2O at the workplace?

RQ2: What is the validity, using subject matter experts (SMEs) via the Delphi methodology, of the proposed Mobile Cyberslacking-Commitment Taxonomy to classify employees' potential for productivity based on self-reported mobile device FCyS and EC2O?

RQ3: Are there any significant differences in employees' self-reported frequency of engagement in mobile device cyberslacking activities based on: (1) age, (2) gender, (3) education level, (4) industry Type, (5) level at the

organization, (6) years of experience using the Internet, and (7) organization type?

RQ4: Are there any significant differences in employees' commitment to the organization based on: (1) age, (2) gender, (3) education level, (4) industry Type, (5) level at the organization, (6) years of experience using the Internet, and (7) organization type?

RQ5a: How are the aggregated scores of 200 employees for the measures of self-reported mobile device FCyS and EC2O for employee positioned on the Mobile Cyberslacking-Commitment Taxonomy?

RQ5b: Are there any differences in employees' position on the Mobile Cyberslacking-Commitment Taxonomy based on: (1) age, (2) gender, (3) education level, (4) industry Type, (5) level at the organization, (6) years of experience using the Internet, and (7) organization type?

Relevance and Significance

The significance of this research study is evidenced by the magnitude of the negative consequences resulting from cyberslacking that include reduced productivity, increased risk of viruses and spyware attack, as well as the waste of organizational resources (Betts et al., 2018; Lebbon & Sigurjunsson, 2016; Leuprecht et al., 2016). The risk goes beyond the physical workplace as the Internet and mobile devices enable employees to stretch the boundaries between workplace tasks and personal activities (Elwell, 2014). With mobile devices connected to the Internet, most cyberslacking activities are no longer performed using the organizational information systems or

devices (Klotz & Buckley, 2013). Now employees have the ability to cyberslack anywhere at any time due to the use of their personal mobile devices (Elwell, 2014). Therefore, it has become more problematic to detect and regulate employees' cyberslacking activities as virtually any employee nowadays in most organizations, have a personal mobile device (Klotz & Buckley, 2013). Cook (2017) stated that there is a limited attention in research to the investigation of the mobile devices usage by employees during work hours (Cook, 2017). Thus, there is a significant need for additional research regarding cyberslacking activities using mobile devices at the workplace.

Baturay and Toker (2015) indicated that countermeasures fail to diminish the cyberslacking, especially when using mobile devices that help employees to hide their cyberslacking activities (Askew et al., 2014). As performing tasks using technological tools at the workplace changed with the emergence of mobile devices, a lack of knowledge in the literature exist about the impact of mobile devices on cyberslacking activities (Cook, 2017). Thus, this research study is relevant since it appears that the problem of cyberslacking at the workplace exists today and will likely persist. Additionally, this research study is relevant because the results of developed taxonomy will contribute to the information systems body of knowledge. Organizations can use the developed taxonomy as a benchmarking tool to provide quantitative indicators and as a means of comparison when evaluating the significance of different organizational productivity issues. Thus, researchers and practitioners will be able to use the results of this research study to shape future research. Furthermore, the results of this research

study can be used to establish organizational practices to mitigate cyberslacking issues and reduce the negative consequences associated with cyberslacking activities.

Barriers and Issues

It is necessary to address the barriers and issues that were met in this study. Developing the survey instrument to measure the study constructs was a challenging issue. To mitigate this issue, the research study used the Delphi methodology with SMEs to evaluate and validate the instructions to participants, survey instrument, and survey scale. Delphi methodology included: (1) an expert panel as recommended by Straub (1989) to evaluate the measurement instrument and provide feedback to contribute to the improvement of the instrument validity and (2) a pilot study as recommended by (Dillman, Smyth, & Christian, 2009) to assist in improving the questions, their format, and the scales of a measurement instrument (Creswell, 2014). Another barrier was that participants may not have revealed the accurate frequency of their cyberslacking activities because they considered that information to be personal, or may not have characterized some of their activities as cyberslacking. To mitigate this barrier, specific lists of activities were provided under the term "Internet activities," without the use of the term "cyberslacking," along with ensuring anonymity of the submissions.

Limitations and Delimitations

Limitation

Research limitations can be defined as the potential weaknesses of the study (Leedy & Ormrod, 2013). One limitation of this research study was whether or not

participants provided truthful and accurate responses to the survey questions, especially when their responses were related to an unethical activity at the workplace environment. According to Houston and Tran (2001), "The problem facing researchers is how to encourage participants to respond, and then to provide a truthful response in surveys" (p. 70). This research study overcame this limitation by generalizing the survey items to the extent deemed feasible. Participants were told that the survey instrument of this research study would assess their self-reported mobile usage activities instead of using the term "cyberslacking" which could have caused bias.

Delimitations

The delimitations are the boundaries of the study (Leedy & Ormrod, 2013). Delimitations may limit the scope of a research study according to factors including variables, participants, sites, and research methodology (Creswell, 2014). A delimitation of this research study was that the participants were recruited from different types of organizations in Saudi Arabia, including public, private, and nonprofit organizations. Another delimitation of this research study was that there were employees who did not frequently use mobile devices. These participants were excluded from the survey population and did not receive an invitation to participate in the survey.

Definition of Terms

Productivity – Productivity denotes to the average productivity of each employee in the organization (Carter, Armenakis, Feild, & Mossholder, 2013).

Employee Productivity – Defined as a correlation between work hours and task accomplished (Moselhi & Khan, 2012).

Cyberslacking – Defined as a phenomenon in which employees are distracted by non-work Internet browsing when they should be accomplishing work tasks (O'Neill, Hambley, & Chatellier, 2014).

Commitment – Defined as a force that binds an individual to a course of action of relevance to one or more targets (Meyer & Herscovitch, 2001).

Employee's commitment – Defined as the degree to which employees feels dedicated to their organizations (Akintayo, 2010).

Affective Commitment –Defined as a positive attachment between employees and an organization (Meyer, Srinivas, Lal, & Topolnytsky, 2007).

Continuance Commitment – Defined as the perceived costs associated with leaving the organization (Allen & Meyer, 1990).

Normative Commitment – Defined as a perceived obligation to remain in the organization (Allen & Meyer, 1990).

Mobile Device – A mobile device is a technological object that allows an individual to access information anywhere and anytime (Irby & Strong, 2013). This category of mobile devices includes laptop computers, smartphones, tablets, e-reader personal digital assistants (PDA), digital cameras, and music players.

List of Acronyms

FCyS – Frequency of cyberslacking

SME – Subject matter experts

EC2O – Employee's commitment to the organization

AC – Affective Commitment

CC – Continuance Commitment

NC – Normative Commitment

Summary

Chapter one of this research study discussed: problem statement, research goals, research questions, relevance and significance, barriers and issues, limitations and delimitations, as well as definition of terms. The research problem that this research study addressed was cyberslacking at the workplace in Saudi Arabia. The main goal of this research study was to develop and validate, using Subject Matter Experts (SMEs), a Mobile Cyberslacking-Commitment Taxonomy using the measures of mobile devices cyberslacking based on the self-reported frequency of cyberslacking (FCyS) and employee's commitment to the organization (EC2O) to provide indirect indication for employee productivity. This chapter also defined the research questions that this research study addressed. The main research question of this research study was how employees at the workplace were classified in terms of their potential for productivity based on self-reported frequency of mobile device cyberslacking and employee's commitment to the organization. Also, chapter one presented the relevance and significance of the research study, as well as issues and barriers. Finally, this chapter discussed the limitations and delimitations of the study, as well as presented a list of definitions to key terms that are deemed helpful to the reader.

Chapter 2

Review of the Literature

Overview

This chapter presents a literature review based on relevant research studies related to productivity, including employee productivity and productivity paradox. Then, relevant research studies related to cyberslacking and frequency of cyberslacking are discussed. The last section in this chapter addresses relevant research studies related to employee's commitment to the organization, including affective commitment, continuance commitment, and normative commitment. According to Levy and Ellis (2006), an effective literature review should analyze and synthesize quality literature, establish a foundation for the research problem and research methodology, and demonstrate the contributions of the proposed study to the overall body of knowledge. Also, when conducting the literature review, careful attention was paid to clearly state where authors have suggested additional research related to this research study. This method contributes to information systems' body of knowledge.

Productivity

Productivity refers to the average productivity of each employee in the organization (Carter, Armenakis, Feild, & Mossholder, 2013). While productivity was recognized as a crucial measure of the organization's success, measuring productivity has

become more than measuring only financial accomplishments (Burney & Widener, 2013; Webber et al., 2015). Productivity is measured by both the abilities of the employee to accomplish the assigned tasks using specific procedures and the success of achieving the organization's goals (Deepa, Palaniswamy, & Kuppusamy, 2014; Uddin, Luva, & Hossain, 2012). As organizations vary based on the services and products that they offer, productivity's measurement will also vary. Productivity can be measured based on factors such as the quality of products and services, the efficiency and flexibility of customer service, employee productivity, fluency of operations, and the quality of operations (Mazayed, Khan, Kundi, Qureshi, Akhtar & Bilal, 2014). Thus, Hwang and Soh (2013) indicated that productivity measurement can help in evaluating and motivating employee productivity.

Employee Productivity

Employee productivity is one of the main calculation factors for organizational efficiency and productivity, despite the organization's size and ownership structure (Carter et al., 2013). Researchers defined employee productivity in different ways. Some researchers defined employee productivity as a correlation between work hours and task accomplished (Moselhi & Khan, 2012). Hwang and Soh (2013) and Yi and Chan (2014) defined employee productivity as the ratio between the outcomes and the inputs used during the production process time. The benefit of employee productivity is to maximize the employee's effort and efficiency to achieve the organization's goals (Taleghani, Tanaomi, Farhangi, & Zarrinnegar, 2011). Because current economic experiences push some organizations to cut the number of employees, organizations are depending on highly productive employees to succeed under dire economic situations (Thamrin, 2012).

When employees fail to accomplish assigned tasks or are involved in activities that are not related to the organization's objectives, such as cyberslacking, the overall organizational productivity is negatively affected (Kidwell, Bennett, & Valentine, 2010). Among the workplace habits that influence employee productivity, personal attributes are considered to be the most influential factor as to whether or not an employee cyberslacks using a mobile device (Webber et al., 2015). Committed employees devote their working time to their assigned tasks, adapt to the work environment, and become more productive (He, Zhu, & Zheng, 2014). Osa and Amos (2014) stated that employee's commitment has significant positive impact on employee productivity that leads to enhancing organizational performance and efficiency. It appears that future research is warranted to study the impact of employee's commitment to the organization and cyberslacking using mobile devices on employee productivity (Osa & Amos, 2014). Also, measuring productivity in many situations is challenging because there are rare acknowledged metrics, benchmarks, and credible productivity data (Hwang & Soh, 2013). Thus, this study can be used as a benchmark tool to measure employee productivity based on frequency of cyberslacking and employee's commitment to the organization at the workplace.

Productivity Paradox

The Internet has become a common technology at the workplace (Contreras et al., 2012) that offers instant communication, improved productivity, and reduced costs for organizations (Betts et al., 2018; Li et al., 2015; Najarzadeh et al., 2014; Xu, He, & Li, 2014). Thus, organizations have increased employees' capabilities by adopting mobile devices with wireless access (Elliott, Scornavacca, & Barnes, 2015). However, with the

increased availability of the Internet at the workplace, opportunities to use the Internet for personal reasons have also increased (Askew et al., 2014; Moody & Siponen, 2013). It is stated in the literature that personal Internet usage involves organizational issues such as reduced productivity, increased risk of viruses and spyware attack, as well as the waste of organizational resources (Betts et al., 2018; Cheng et al., 2014; Gramberg et al., 2014; Rosli et al., 2015).

Organizations are confronting productivity losses due to employees' involvement in counterproductive behaviors such as cyberslacking (Gözü et al., 2015). Johnson and Rawlins (2008) indicated that poor productivity costs organizations billions of dollars in losses when employees waste more than one hour a day cyberslacking at the workplace. The losses caused by cyberslacking exceed poor productivity and include reduced network security and performance that, in the United States, costs around $130,000 per organization (Metin et al., 2016). In another study, D'Abate and Eddy (2007) projected the cost associated with cyberslacking during working hours per year as $8875 per employee. Organizations face an increasing issue related to the personal use of the Internet during work hours (Liberman, Seidman, Mckenna, & Buffardi, 2011).

Internet-enabled mobile devices facilitated Internet access for everyone, anytime, and anywhere. Therefore, the mobile device may be considered as a useful tool at the workplace (Yueh et al., 2016) or as a distractive tool that should be controlled (Mashal, 2017). The prevalence of mobile devices will allow employees to cyberslack away from the organization's monitoring practices at the workplace (Mashal, 2017). Employees can send and/or receive instant messages through their mobile devices that may cause repetitive distractions and lower employee productivity (Lebbon & Sigurjunsson, 2016).

However, Chen (2018) indicated that using mobile device at workplace has been found to provide the benefits of flexibility and empowerment to employees as well as improve productivity, and employee retention to organizations. Employees are spending more time looking for new ways to use mobile devices to be more effective and efficient in their work (Whitten, Hightower, & Sayeed, 2014). MacCormick, Dery, and Kolb (2012) found that the use of mobile devices will enhance employee productivity and communication by staying connected. In addition, Yueh et al. (2016) found a positive relationship between mobile device use and an increase in employee productivity. Thus, organizations are implementing mobile devices into their workplaces to improve and facilitate the flexibility of the workflow (Chung, Lee, & Kim, 2014). It appears that the literature has contradictory findings regarding the use of mobile device at the workplace as it relates to productivity, thus, additional research is warranted.

Table 1. Summary of Productivity Related Research

Study	**Methodology**	**Sample**	**Instrument/ Constructs**	**Main Findings**
Uddin et al., 2012	interviews	34 managers and employees	Employee performance, employee productivity, and organizational culture	The findings of this study indicate that organizational culture has significant positive impact on employee performance and productivity in the dynamic emerging context. Employees' beliefs, norms, gestures have significant impact on employee performance and productivity.
Burney & Widener, 2013	Survey	242 employees	Employee productivity, perceived self-efficacy, strategic performance	The study found that he extent to which the strategic performance measurement system is tightly coupled with

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
			measurement system, distributive justice, and procedural justice	strategy affects employee productivity through perceived self-efficacy and perceived psychological contract. The employee's age and education levels serve as boundary conditions since the study found that the relation between self-efficacy and employee productivity holds only for the older, less-educated employees
Osa & Amos, 2014	Survey	200 senior staff and supervisors	Employee's commitment, organizational commitment, and employee productivity	Employee's commitment on employee productivity is a vital concept, which must be embraced by any organization that wishes to excel and achieve its goals and objectives. Organizational commitment has significant impact on employee productivity and as such improves organizational performance and effectiveness. Employee's commitment to their organization is significant to organization performance, which manifest in employees' skills, performance and devotion to duty so as to fulfill the set

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
				organizational goals and objectives.
Cheng et al., 2014	Survey	230 employees	Influence of neutralization techniques, perceived sanction severity, perceived detection certainty and perceived benefits.	The study finds that both neutralization techniques and perceived benefits have a positive effect on personal use of the Internet. Perceived detection certainty is found to have a negative effect on personal use of the Internet, while the effect of perceived sanctions severity on personal use of the Internet is not significant. The effect of neutralization and perceived benefits are much stronger than perceived detection certainty. The findings suggest that people may think more about neutralization and perceived benefits than they do about costs, when deciding whether to use the Internet at work for personal purposes.
Askew et al., 2014	Survey	429 employees	Theory of Planned Behavior	Cyberloafing met the definition of withdrawal behavior (it is a behavior that reduces the amount of time working to less than is expect by the organization).

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
				Empirical links between cyberloafing and withdrawal behaviors (absenteeism, lateness, extended breaks, leaving early, and a composite withdrawal variable). The different perspective of cyberloafing that arises when considering the nature of two constructs in the model: social norms and the ability to hide cyber- loafing. Collectively, these two variables suggest that people are motivated to cyberloaf but avoid doing so to the extent that they believe it would be socially disapproved of and the extent to which they would get caught for doing it.
Metin et al., 2016	Survey	384 participants	procrastination at work, including workplace characteristics, boredom and counterproductive work behavior.	Procrastination at work can empirically be distinguished from conceptually similar concepts such as counterproductive work behaviour, general procrastination and boredom. Workplace that contain insufficient resources and demands, may increase boredom, which might eventually lead employees to

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
				engage in irrelevant or even harmful behaviors.
Yueh et al., 2016	Survey	692 employees	performance expectancy, facilitating conditions, and social influence.	Using mobile technology at the workplace positively influenced employees' perceived improvement of work performance and that the performance expectancy also affected work performance improvement. Facilitating conditions and social influence affected mobile device usage behavior.

Cyberslacking

Information technologies and the Internet have become inevitable parts of both employees and organizations (Ozler & Polat, 2012). Organizations have been quick to recognize the potential of information technologies and the Internet for conducting business in nontraditional ways, and as a tool for improving employee productivity (Lim, 2002). However, the use of the Internet at the workplace offers employees a new way to engage in unrelated work activities, otherwise known as cyberslacking (Askew et al., 2014). Cyberslacking occurs mostly at the workplace (Pee, Woon, & Kankanhalli, 2008), by enabling employees to perform unrelated work activities such as planning vacations, shopping online, and sending personal e-mail (Blanchard & Henle, 2008).

There are different definitions and terms for unrelated work activities in organizations. Several terms have been used to explain the phenomenon, including

cyberloafing, cyberslacking, on-line loafing, Internet deviance, problematic Internet use, personal web usage at the workplace, Internet dependency, and Internet abuse (Kim & Bryne, 2011). All these terms emphasize the unproductive use of the Internet for personal purposes at the workplace during working hours (Ugrin et al, 2008). The most common terms used are cyberslacking and cyberloafing (Ozler & Polat, 2012). Ugrin et al. (2008) stated that any time that employees perform activities unrelated to work using the Internet can be categorized as cyberslacking or cyberloafing. Lim (2002) defined cyberloafing as voluntary acts of employees using their organization's Internet access for unrelated work activities during working hours. Lim and Chen (2012) defined cyberslacking as a form of workplace production deviance because these cyber activities establish an unproductive use of time and distract employees from accomplishing their assigned tasks. Also, O'Neill et al. (2014) defined cyberslacking as "a phenomenon in which employees are distracted by non-work Internet browsing when they should be accomplishing work tasks" (p.152). Different types of cyberslacking have been documented in literature, such as browsing the Internet, sending e-mail, sharing content, shopping online, accessing online content, and gaming (Akbulut Dursun, Dönmez, & Şahin, 2016; O'Neill et al., 2014; Vitak et al., 2011).

The use of Internet and technology resources at the workplace has been recognized as an inalienable right for organizational employees (Chandrasekar, 2011). Although the Internet may be useful at the workplace, employees, in many incidents, misuse it and engage in activities unrelated to work (Jia, Jia, & Karau, 2013). In addition, as mobile devices have become common at the workplace, Internet access and usage has changed, and the potential for employees to cyberslack during working hours has

increased (Kim, Triana, Chung, & Oh, 2016). Gouveia (2013) reported that employees waste an average of two hours daily for cyberslacking. With this overuse, new concerns exist during working hours (Vitak et al., 2011), because it causes billions of dollars in productivity losses (Blanchard & Henle, 2008). Thus, researchers explored countermeasures to control cyberslacking such as blocking websites, offering reminder procedures to decrease Internet misuse (Glassman et al., 2015), implementing security tools to inspect Internet usage, and imposing sanctions on those who perform cyberslacking (Ugrin & Pearson, 2013).

Frequency of Cyberslacking

Surfing the Internet for shopping and visiting new websites, using mobile device for sending e-mails, and sharing photos on social media (Glassman et al., 2015), following news, playing games, downloading music, and using social media such as Twitter and Facebook for chatting and interacting with friends (Blanchard & Henle, 2008) are the main examples of cyberslacking. Akbulut et al. (2016) indicated that the enhancements in instant access to Internet and mobile devices will increase the frequency of cyberslacking. Employees at work will send and receive text and instant messages through their mobile devices, and this will cause frequent disruptions (Lebbon & Sigurjunsson, 2016). The frequent distraction of mobile devices (McBride, 2015) will decrease employee productivity (Lebbon & Sigurjunsson, 2016). Blanchard and Henle (2008) categorized cyberslacking into two groups: minor cyberslacking (sending and receiving e-mails at work) and major cyberslacking (online gambling and visiting adult Websites). In addition, Beugre and Kim (2006) categorized cyberslacking into two groups: destructive and constructive for organizations. They indicated that cyberslacking

can be considered as an opportunity to learn the technology better and to decrease the anxiety level.

The possibility of engaging in cyberslacking activities is also dependent on employee beliefs about the behavior (Askew et al., 2014). For example, if an employee observes a coworker cyberslacking frequently, their own belief about cyberslacking becomes more acceptable (Stoddart, 2016). Vitak, Crouse, and LaRose (2011) stated that, "being younger, male, and a racial minority positively predict cyberslacking variety and frequency" (p. 1751). According to Ergun and Polat (2012), "gender may affect the frequency and duration of cyberslacking as well as types of cyberslacking engaged and perceptions of cyberslacking" (p. 7). The literature has mixed results about the frequency of cyberslacking deterrence.

While countermeasures such as sanctions, policies, and IT tracking have been discovered to deter cyberslacking frequency (Andreassen, Torsheim, & Pallesen, 2014), Baturay and Toker (2015) indicated that countermeasures fail to reduce the cyberslacking activities, especially with mobile devices that give employees the ability to hide their actions (Askew et al., 2014). In addition, Askew et al. (2014) found that employees will cyberslack if they are confident that they will not be seen. Hernández et al. (2016) stated that future research related to cyberslacking activities using mobile devices at the workplace is warranted. Thus, this study will uncover the use of mobile devices for cyberslacking based on the self-reported frequency of cyberslacking at the workplace and employees' commitment to the organization.

Table 2. Summary of Cyberslacking Related Research

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
Vitak et al., 2011	Reanalysis of data	2134 employees	Cyberslacking variety, communicative cyberslacking	The oeuvre of cyberslacking literature has not yet provided a fully comprehensive review of all behaviors that could potentially predict cyberslacking behaviors. The relationship between media habits and cyberslacking remains an understudied area of research, but appears to be playing a significant role in predicting these behaviors. The incidence of cyberslacking is a significant issue since it helps to define the relative social significance of the cyberslacking problem and related research.
Lim & Chen, 2012	Survey	191 employees	The impact of cyberloafing on employees' emotion and work. Employees' attitudes towards cyberloafing.	Browsing activities were found to have a positive impact on employees' emotion, while emailing activities have a negative impact. The study found that men were more likely than women to report that cyberloafing had a positive

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
				impact on work, helping them to deal with problems at work and to be better workers. Most respondents indicated that it was acceptable for them to use their workplace Internet access for personal purposes during working hours. Male were more likely to experience resource gain in that they can cyberloaf with greater ease and are better able to apply seemingly non-work-related information they obtained from surfing the net to specific work goals. Women, have been found to be less confident in using the Internet and experience more information glut compared to men.
O'Neill et al., 2014	Survey	148 employees	Personality and novel intermediary variables	Personality appears to be a factor involved in distributed work effectiveness and behavior. Personality and intermediary variables were also found to influence work engagement.

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
				The current study supports the practical implications of personality assessment by making linkages to workplace criteria of increasing relevance to modern organizations that are rapidly incorporating distributed work arrangements.
Glassman et al., 2015	Data set analysis	275 employees	Appropriate use, block, confirmation block, confirmation allow, quota block, quota allow	The real-time Internet usage warnings implemented by the organization to combat cyberloafing were effective for enhancing the appropriate use of Internet resources. The use of Internet filtering and monitoring software for operant conditioning is an effective way of reducing cyberloafing. The root of the cyberloafing problem in an organization is the existence of an agency conflict between the employees and the management of the organization.

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
Lebbon & Sigurjónsson, 2016	Experimental study (laboratory setting)	38 participants	Frequent instant messaging, productivity, quality of work, and time on-task.	Overall, instant messaging does not significantly affect work performance. Separation of work and personal instant messaging demonstrated no performance differences. Data demonstrated little performance differences between those who received IMs and those who did not. Instant messaging has some impact on overall task completion time but participants' productivity time was faster.

Employee Commitment to the Organization

Employee commitment to the organization is a crucial indicator of organizational success (Konya, Matić, & Pavlović, 2016). Commitment is "a force that binds an individual to a course of action of relevance to one or more targets" (Meyer & Herscovitch, 2001, p. 301). Bateman and Strasser (1984) stated that commitment is an organizational indicator "involving an employee's loyalty to the organization, willingness to exert effort on behalf of the organization, degree of goal and value congruency with the organization, and desire to maintain membership" (p. 95). Employees with higher levels of commitment are dedicated to their jobs, expect high demands from themselves,

accomplish excellent outcomes, and establish higher levels of productivity (Konya et al., 2016).

The last two decades have witnessed a transition from satisfied employees to committed employees, who are not put at risk of attrition, rather immersed in the success of their organization, and often considered as the force behind organizational success (Zareie & Navimipour, 2016). There is an increasing interest by organizations in promoting commitment among employees to enhance their productivity (Bisharat, Obeidat, Tarhini, & Mukattash, 2016). Employee commitment to the organization reflects the employee's loyalty to the organization, dedication to its goals, and desire to stay employed by the organization (Messner, 2013; Owoyemi, Oyelere, Elegbede, & Gbajumo-Sheriff, 2011). Many organizations believe that employee commitment to the organization is a major source of competitive advantage because it helps understand and predict employee productivity, absenteeism, and turnover (Irefin & Mechanic, 2014; Owoyemi et al., 2011). Thus, employers understand that by focusing on employees' commitment to their organizations, they can create a more efficient and productive workplace (Kompaso & Sridevi, 2010).

The types of employee commitment to the organization as stated by Meyer, Allen, and Topolnytsky (1997) include: affective commitment, continuance commitment, and normative commitment. Affective commitment describes an employee's emotional attachment and involvement in the organization and its success. Continuance commitment is a feeling of commitment among employees to their organization after considering the possible loss of leaving the organization. Employees may commit to the organization because they perceive a high cost of losing organizational membership.

Normative commitment is the employees' commitment to stay with their organization because of believing in obligation and loyalty. It is conveyed by the extent to which an employee feels obliged to make personal sacrifices and not criticize the organization.

Affective Commitment

Affective commitment is defined as a positive connection between employees and an organization (Meyer, Srinivas, Lal, & Topolnytsky, 2007). Affective commitment is an emotional commitment to the organization's values and goals, as well as engagement in the organization (Kónya et al., 2016). Of the three types of commitment, affective commitment is considered to be the most significant type of commitment to influence employee behavior; thus, organizations are motivated to instill it in their employees (Lau, Tong, Lien, Hsu, & Chong, 2017). Jaiswal and Dhar (2016) indicated that affective commitment has a positive relationship with employee productivity. Employees that are committed to their organizational values do not think about moving to different organizations; however, they stay at their organization because of their own free will (Kónya et al., 2016). Affective commitment can be built by using open organizational communication, including employees in decision making, and facilitating employees to access organizational information (Dirani & Kuchinke, 2011; Suma & Lesha, 2013).

Continuance Commitment

While affective commitment is emotional, continuance commitment emphasizes the calculative side of the association between employees and an organization (Meyer et al., 2007). Continuance commitment is a feeling of commitment among employees to their organization after reflecting on the cost of leaving the organization (Duffy, Bott, Allan, Torrey, & Dik, 2012). The more resources employees accumulate over time and could risk losing by walking away from the organization, the greater the commitment

they will have to the organization (Lin & Wang, 2012). Researchers revealed that there are two factors that act as the foundation of continuance commitment that include the number of investments made by the employee and the lack of alternative employment opportunities (Obeidat & Abdallah, 2014). The indicators of commitment to stay in the organization include employees' personalities, alternatives, and personal investments, while the benefits of commitment to stay in the organization include reducing variations in the organization and increasing organizational productivity (Kónya et al., 2016).

Normative Commitment

In this type of commitment, the idea of leaving the organization is not considered (Meyer & Herscovitch, 2001). Previous researchers agreed in defining normative commitment among employees as the feeling of an ethical obligation to stay at the organization (Mowday, Porter, & Steers, 2013). Meyer et al. (2007) indicated that there are two factors relating to normative commitment: indebted obligation, which refers to the meeting of expectations set by others, and moral imperative, which reflects meeting valued outcomes. For example, an organization may invest in the training of its employees; thus, employees will feel ethically obliged to return the favor by staying at the organization and working hard towards accomplishing the organization goals even though they find better opportunities elsewhere (Bisharat et al., 2016; Imran & Ahmed, 2012). Fu and Deshpande (2014) found that there is a significant positive relationship between normative commitment and employee productivity.

For affective commitment, employees stay in an organization longer because of what they want. Whereas, for continuance commitment, employees stay in an organization for financial reasons, and for normative commitment, employees stay in an

organization for the sense of obligation they have. The study of employee commitment to the organization is important as employees with a sense of employee commitment to the organization are less likely to be involved in unethical behaviors, such as cyberslacking (Irefin & Mechanic, 2014; Lo, Ramayah, & Min, 2009). The level of employee commitment to their organization is a critical factor in determining the employees' productivity (Ramdhani, Ramdhani, & Ainissyifa, 2017). Most organizations have realized that the employee productivity plays a vital role in determining the success of the organization (Fu & Deshpande, 2014; WeiBo, Kaur, & Jun, 2010). Hence, there is no doubt that these values appear to have potentially serious consequences for overall organizational productivity. However, very few studies have investigated the direct and indirect the interaction effect of employee commitment to the organization and mobile device cyberslacking on productivity (Fu & Deshpande 2014).

Table 3. Summary of Employee's commitment to the Organization Related Research

Study	**Methodology**	**Sample**	**Instrument/ Constructs**	**Main Findings**
Meyer et al., 2007	Survey	337 employees	Employees' commitment (affective, normative and continuance) and support for organizational change	There are significant relations between employee's commitment and support as an organizational change unfolds. The finding stated that employees with a strong continuance commitment are more likely to restrict their behavior to what is absolutely required. In contrast, those who have strong affective commitment and/or normative

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
				commitment state a willingness to go beyond minimum requirements and do what is require to make the change work, even if it requires some sacrifice on their part.
Dixit & Bhati, 2012	A review of the academic research papers and survey.	50 managers	Employees Commitment (Affective, Normative, continuous), sustained productivity	The results of the study indicate that the Employees Commitment (Affective, Normative, continuous) are significantly related to sustained productivity in Auto component industry. The research findings reveal that there exists positive relationship between the three commitments- affective, continuance and normative commitment and sustained productivity of the organization.
Thamrin, 2012	Survey	105 employees	Employee productivity, organizational commitment, transformational leadership, and job satisfaction	Transformational leadership has a positive significant influence on organizational commitment and employee productivity. Organizational commitment has a positive significant influence on job satisfaction and

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
				employees' productivity. Job satisfaction has a positive significant influence on employees' productivity.
Phipps et al., 2013	Literature review		Employee's commitment, employee involvement, and organizational productivity	The findings stated that employee involvement and organizational commitment have a positive impact on organizational productivity. Employees' commitment to their organization can induce behaviors that positively influence organizational productivity. Strong employees' commitment can certainly be an asset to an organization. If channeled in the right direction, it can greatly influence productivity as well as other organizational outcomes.
Fu & Deshpande, 2014	Survey	476 employees	Caring climate, job satisfaction, organizational commitment, and job performance.	This study found that organizational commitment had a significant direct impact on job performance. Caring climate also had a significant indirect on job performance through the mediating

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
				role organizational commitment.
Irefin & Mechanic, 2014	Survey	120 employees	Employee's commitment, organizational performance, and employees' turnover	The findings indicated that there is high relationship between employee's commitment and organizational performance; there is also a very high relationship between employee's commitment and employees' turnover
Mazayed et al., 2014				This study revealed that there is a significant positive relationship between job involvements, employee's commitment and organizational productivity. Also, the study concludes that organizations with high job involvement and employees' commitment are performing well than organizations with little job involvement and low employees' commitment.

Study	Methodology	Sample	Instrument/ Constructs	Main Findings
Ramdhani et al., 2017	Literature review		Employee's commitment to the organization and organizational culture	To maintain efficiency, effectivity and organization productivity could be conducted by enhancing employee's commitment to the organization. The concept of employee's commitment to the organization is described with causal relation toward corporate culture which is decomposed into the dimension of teamwork, communication, training development and reward-recognition. the study shows that the employee's commitment to the organization can be improved through corporate culture that consists of teamwork, communication, training development and reward-recognition.

What is Known and Unknown

Organizations are confronting productivity losses due to employee involvement in counterproductive behaviors such as cyberslacking (Gözü et al., 2015). The existence of mobile devices encourages employees to cyberslack away from the organization's monitoring practices at the workplace, especially when they use their personal mobile

device (Mashal, 2017). The losses caused by cyberslacking surpass poor productivity and include risk to network security and reduced network performance (Metin et al., 2016). In addition, Phipps et al. (2013) indicated that employees' commitment to their organization can prompt behaviors that positively impact employee productivity in many ways, such as increasing performance, reducing absenteeism, and diminishing turnover, thus, resulting in sustained productivity (Dixit & Bhati, 2012). However, limited knowledge exists on the interaction of employee cyberslacking using mobile devices and employee commitment to the organization on employee productivity (Fu & Deshpande, 2014). Also, Jamaluddin et al. (2015) and Hernández et al. (2016) stated that future research related to cyberslacking activities using mobile devices at the workplace is warranted. Therefore, it appears that this research study answered the call for additional research to further empirically assess, indirectly, how employee productivity is associated with mobile device usage based on self-reported frequency of cyberslacking and employee commitment to the organization at the workplace.

Chapter 3

Methodology

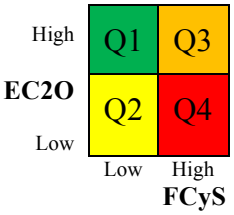
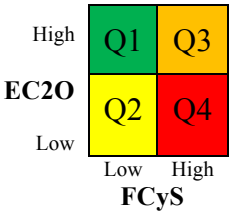
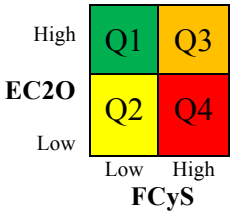
Research Design

This research study was developmental in nature and developed the previously described Mobile Cyberslacking-Commitment Taxonomy. The main goal of this research study was to develop and validate, using Subject Matter Experts (SMEs), a Mobile Cyberslacking-Commitment Taxonomy using the measures of mobile device cyberslacking based on the self-reported frequency of mobile device cyberslacking (FCyS) and employee commitment to the organization (EC2O) to provide indirect indication for employee productivity (Table 4).

Table 4: Measurement Overview of the Employee Commitment to Organization, Frequency of Cyberslacking, and Employees' Implied Productivity

The Institution's Perspective	**Employees' Frequency of Cyberslacking (FCyS)**	**Employees' Commitment to the Organization (EC2O)**	**Employees' Implied Productivity**
What is asked?	Employees self-report their level of cyberslacking activities using mobile device in the workplace during working hours	Employees self-report their level of commitment to the organization	The implied (indirect measure) employee's productivity level correspond to their perceived performance desired by the organization.
What perspective the organization gets from respondents?	Self-reflection of employees' cyberslacking activities	Self-reflection of employees' commitment to the organization	Normative perspective

The Institution's Perspective	Employees' Frequency of Cyberslacking (FCyS)	Employees' Commitment to the Organization (EC2O)	Employees' Implied Productivity
What is the measure's dependency on time?	Snapshot of time, can fluctuate significantly between work hours and work days. Is dependent upon workload, cognitive demand of tasks, work policy, work environment, etc.	Snapshot of time, but more stable over longer period of time of employment. Is less dependent in the short time upon workload, cognitive demand for tasks, work policy, work environment, etc., but if such factors have longer harsh durations it can have severe impact.	Relative measure
What is measured?	The employees' self-reported level of cyberslacking activities when using mobile device in the workplace during working hours	The self-reported level of employees' commitment to the organization	The implied employees' productivity level based on the associative relationship of FCyS and EC2O
How is it measured?	FCyS level	EC2O level	Implied indirect measure based on the positioning in the taxonomy
What is desired by the organization	Low FCyS activities in the workplace during working hours	High level of EC2O	Low FCyS activities in the workplace during working hours and high level of EC2O in which the employees should achieve high level of productivity
How is the organization going to improve?	Improve employee productivity with self-reported high FCyS activities	Improve employee productivity of self-reported low EC2O	See table 4 for actions and improvement priorities

The Institution's Perspective	Employees' Frequency of Cyberslacking (FCyS)	Employees' Commitment to the Organization (EC2O)	Employees' Implied Productivity
			

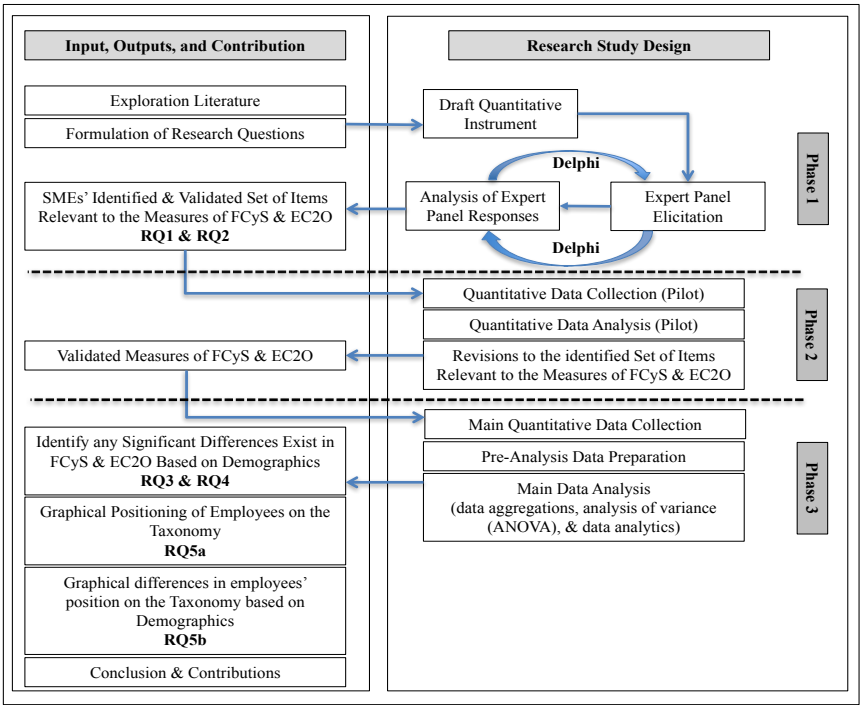


Figure 2: Overview of the Research Design Process

The study included three phases of data collection (See Figure 2). Phase 1 followed the Delphi methodology with 19 SMEs from the field of IS, who were recruited to identify and validate a set of items relevant to the measures of self-reported mobile device FCyS and EC2O (Appendix A). Then, Phase 2 of the study performed a pilot quantitative survey assessment using the measures validated by the SMEs with 35 employees. Adjustments were made following the pilot study to ensure the survey

readability and the data collection are free of any errors. Following the pilot study, Phase 3 included the main data collection using the validated survey instrument to measure the self-reported mobile device FCyS and EC2O at the workplace. The overall target population for this study was employees who work at organizations in Saudi Arabia and use mobile devices on a daily basis.

The main research question (RQ) that this study addressed was: how are employees at the workplace classified in terms of their potential for productivity based on self-reported frequency of mobile device cyberslacking and employee commitment to the organization. There are five specific research questions that this research study addressed.

RQ1: What are the specific subject matter experts (SMEs) identified set of items, using Delphi methodology, relevant to the measures of self-reported mobile device FCyS and EC2O at the workplace?

RQ2: What is the validity, using subject matter experts (SMEs) via the Delphi methodology, of the proposed Mobile Cyberslacking-Commitment Taxonomy to classify employee potential for productivity based on self-reported mobile device FCyS and EC2O?

RQ3: Are there any significant differences in employee self-reported frequency of engagement in mobile device cyberslacking activities based on: (1) age, (2) gender, (3) education level, (4) industry Type, (5) level at the organization, (6) years of experience using the Internet, and (7) organization type?

RQ4: Are there any significant differences in employee commitment to the organization based on: (1) age, (2) gender, (3) education level, (4) industry

Type, (5) level at the organization, (6) years of experience using the Internet, and (7) organization type?

RQ5a: How are the aggregated scores of 200 employees for the measures of self-reported mobile device FCyS and EC2O for employees positioned on the Mobile Cyberslacking-Commitment Taxonomy?

RQ5b: Are there any differences in employees' positions on the Mobile Cyberslacking-Commitment Taxonomy based on: (1) age, (2) gender, (3) education level, (4) industry Type, (5) level at the organization, (6) years of experience using the Internet, and (7) organization type?

Measurement Instrument Development

Phase One - Delphi Methodology

To validate the constructs measures, Delphi methodology was used, and SMEs from the field of IS were recruited (Figure 3). The Delphi methodology is an expert panel that was established in the 1950s by the RAND Corporation (Dalkey & Helmer, 1963). Skulmoski, Hartman, and Krahn (2007) indicated that "the Delphi method is an iterative process to collect and distill the anonymous judgments of experts using a series of data collection and analysis techniques interspersed with feedback" (p. 1). Delphi methodology is a technique designed as a group communication process, which aims to achieve an informed judgment with consensus on specific subjects (Brown, 1968; Ramim & Lichvar, 2014). This group communication process normally occurs in the form of anonymous questionnaires or surveys interspersed with controlled opinion feedback (Skinner, Nelson, Chin, & Land, 2015). Major characteristics that are regarded as the

Delphi methodology include anonymity, iteration, controlled feedback, and statistically clustering the responses (Rowe & Wright, 1999; Skinner et al., 2015).

The Delphi methodology is beneficial when accurate information is not available and there is a necessity for inputs based on human judgment (Ramim & Lichvar, 2014). Okoli and Pawlowski (2004) stated that the Delphi methodology is effective in IS research due to the four specific ways it relates to theory building. First, assisting scholars to identify the variables of interest and generate propositions. Second, the Delphi methodology aids with strengthening the grounding of the theory and enhancing the probability that the resulting theory will hold across various contexts and settings. Third, helps with understanding the causal relationships between factors, an understanding that is necessary to build theory. Fourth, the Delphi methodology can contribute to construct validity.

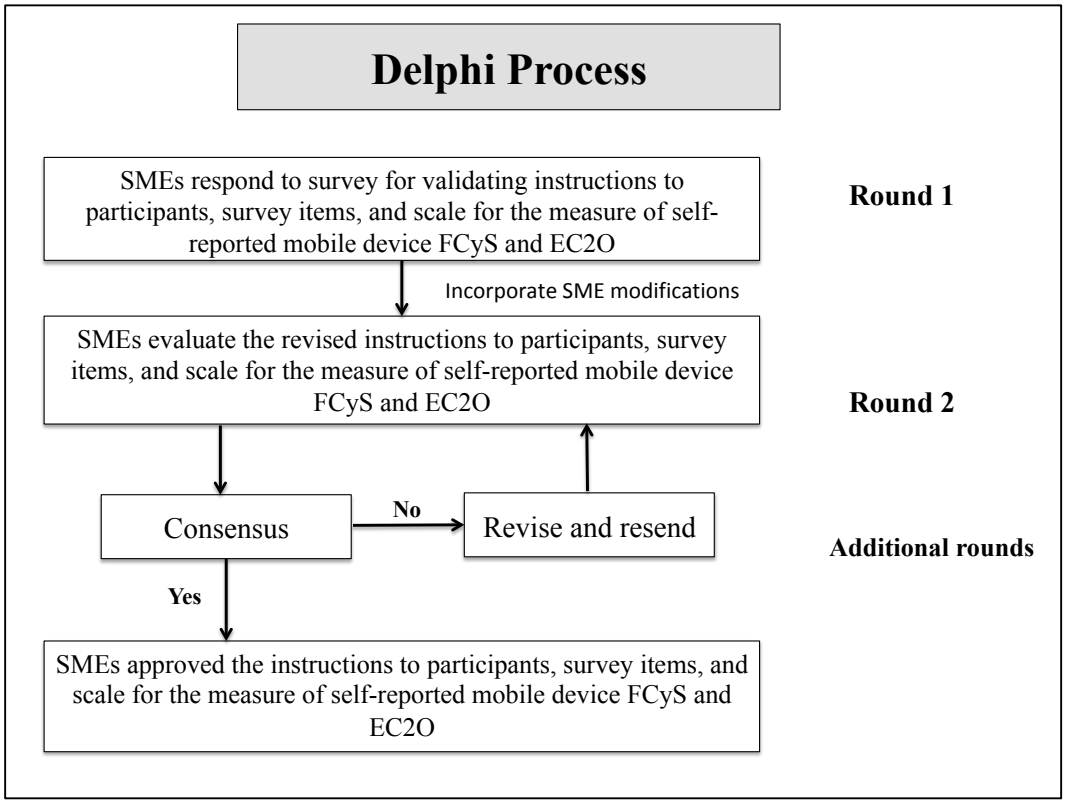


Figure 3: Research Design for Delphi Process

A study performed using the Delphi method will usually iterate through one to six rounds (Worrell, Di Gangi, & Bush, 2013). Each round will use a measurement instrument such as a survey, which often is developed based on the findings of the previous surveys (Skulmoski et al., 2007). Each round iterates until the goal is accomplished or a research question has been answered (Worrell et al., 2013). This may occur when consensus is reached, theoretical saturation is achieved, or when sufficient information has been exchanged (Skinner et al., 2015; Skulmoski et al., 2007). A consensus is achieved when at least 70% of the SMEs are in agreement (Sumsion, 1998). SMEs from the pertinent discipline will be identified and invited via email to participate in the panel (Appendix A). Experts are specialists or authorities who are qualified to explore answers from a relevant disciplinary perspective and are considered experienced as well as knowledgeable in the field (Gray & Hovav, 2014). This study ensured the SMEs' full anonymity of the data collected. The SMEs were encouraged to express their findings and comments to help resolve any issues occurring in the survey instrument. According to Clayton (1997), the expert panel size can vary depending on the complexity and the expertise required for consensus on the topic. The expert panel in the research study included 19 SMEs in the IS field to evaluate the initial draft survey for the measure of self-reported mobile device FCyS and EC2O (See Appendix B).

This research study conducted an anonymous evaluation round on the initial survey to validate the measures for each category (Figure 4). The proposed survey used Google® Forms survey (Appendix B) consisting of self-reported mobile device FCyS and EC2O measures found in the literature. In the round, SMEs were asked to evaluate the survey instructions to participants, the survey items, survey scale, and to validate the

proposed taxonomy to classify the employees at the workplace in terms of their potential for productivity based on self-reported mobile device FCyS and EC2O across all categories. The SMEs were presented with a seven-point Likert scale, ranging from (1) "Strongly Disagree" to (7) "Strongly Agree". Consensus for each round was determined by computing the response values based on the Likert scale number. A consensus is achieved when at least 70% of the SMEs are in agreement. If the experts panel, in the round, reach at least 70% consensus for each category there is no need for another round. If the experts panel did not reach at least 70% consensus for each category, the results of the first round will be gathered anonymously, synthesized, and then follow-up round(s) of questions may be sent to help reach consensus amongst the panel as needed. This process encouraged the SMEs to reassess their views in light of reasoning presented by others or to refute the position of others when necessary. The second round, if needed, would have only displayed the categories' items that were not accepted in the first round. When a consensus is achieved on all proposed categories' items, the first and second specific goals are met as well as RQ1 and RQ2 are addressed. Thus, Phase 1 of this proposed study is complete and the study will initiate Phase 2.

Survey Instrument

The final survey instrument, as illustrated in Appendix I, includes a total of 59 questions divided into three sections: (1) frequency of cyberslacking activities; (2) employee commitment to the organization; and (3) employee's demographics. In the first section, 29 survey items were used to measure the employees' self-reported frequency of engagement in cyberslacking. These items, FCyS1 through FCyS29, were based on extensive literature review of cyberslacking and adapted to the context of this research

study (Akbulut et al., 2016; Blanchard & Henle, 2008; Kalaycı, 2010). The measurement scales of this section of the survey used a seven-point Likert-type scale ranging from "Never" to "Every Time."

In the second section, 24 survey items were used to measure employee commitment to the organization. These items, EC2O1 through EC2O24, were based on extensive literature review of employee commitment to the organization and adapted to the context of this research study (Allen & Meyer, 1990; Bisharat et al., 2016). The measurement scales of this section of the survey used a seven-point Likert-type scale ranging from "strongly disagree" to "strongly agree" based on the scale used. The final section of the survey, employee demographics, collected seven demographic items from the survey participants: (D1) age, (D2) gender, (D3) educational level, (D4) level at the Organization, (D5) industry type, (D6) years of experience using the Internet, and (D7) organization type.

Survey Deployment

The administration approach of the survey instrument was utilizing a web-based tool. An internet-based delivery of the instrument was used to collect the data. This method was considered to be more likely to generate a satisfactory number of unique responses and to avoid duplicated respondents. Furthermore, web-based surveys have the benefit of completely automating data entry into analysis programs and, thus, decreasing losses that may occur in a mail delivered survey (Fan & Yan, 2010). Each participant was sent an email invitation that included a summary of the study's goals, expected value of the findings, and guidelines for its completion (Appendix C). The participants completing the survey were told that their participation is completely voluntary, their privacy is

protected, the completion of the survey is not required, they can stop at any time, and there is no request for personal or sensitive information.

Phase Two - Pilot Study

A pilot study was conducted using a sample of 35 participants to verify the validity of the survey instrument (Appendix C). This phase did not only ensure that the instruments had construct validity, but also, that they were internally and externally reliable.

Phase Three – Main Data Collection and Analysis

Following the pilot study, adjustments to the initial survey instrument were made to ensure that the instrument had construct validity and were internally and externally reliable to measure the self-reported mobile device FCyS and EC2O at the workplace. Then, the survey instrument was sent to the main participants using the adjusted and validated version. This phase allowed the empirical collection of the data that was then used to address RQ3 through RQ5b.

Instrument Validity and Reliability

Construct Validity

Construct validity is defined as "the degree of correspondence between constructs and their measures" (Peter, 1981, p. 133). In this proposed study, the two applicable constructs are frequency of mobile device cyberslacking and employee commitment to the organization. The survey instrument that will be used in this proposed study will be validated to ensure its design (Straub, 1989). Although items from previously published work were used in the initial draft of the survey instrument, an expert panel were

conducted to enhance the validity of the survey instrument. The SMEs were asked to provide feedback on all survey instrument items (Appendix B). Also, a pilot study was conducted using a sample of 35 participants to verify the validity of the survey instrument.

Internal Validity

Leedy and Ormrod (2013) described the internal validity of a research study as "the extent to which its design and the data it yields allow the researcher to draw accurate conclusions about cause-and-effect and other relationships within the data" (p. 97). According to Straub (1989), an instrument will have internal validity when "the observed effect could have been caused by or correlated with a set of non-hypothesized and/or measured variables" (p. 151). As this research study used items from instruments that have been validated in prior research, threats to the internal validity of this research study were minimized. Furthermore, using Delphi methodology and SMEs as a mechanism for the evaluation/re-evaluation of the survey instrument before dissemination to the study target population minimized the threats to the internal validity.

External Validity

External validity refers to the extent to which the findings can be generalized in contexts other than the current study (Leedy & Ormrod, 2013). Research is confirmed to have external validity if the distribution of outcomes realized by a representative sample of the population is the same as the distribution of outcomes that would be realized in an actual population (Manski, 2007). The external validity of the findings was reinforced by distributing the survey to a diverse population of people and measured through demographic indicators including age, gender, educational level, industry Type, level at

the organization, years of experience using the Internet, and organization type. Thus, the results from this study may be generalized to broader populations of similar features.

Instrument Reliability

Reliability is the degree to which a test repetitively measures whatever it is proposed to measure (Gay, Mills, & Airasian, 2011). One common type of reliability measure is measured by the Cronbach's Alpha coefficient. The larger the reliability coefficient, the more the researcher will feel confident that the results are consistent (Straub, 1989). Reliability, thus, indicates "measurement accuracy" (Straub, 1989, p. 151). Cronbach's Alpha coefficient is considered low when the factor loading is less than 0.5, considered satisfactory when it is greater than 0.5 and less than 0.7, and considered high when the coefficient is greater than 0.7 (Rovai, Baker, & Ponton, 2013).

Ethical Considerations

Permission to conduct this research study was obtained from the Institutional Review Board (IRB) at Nova Southeastern University (Appendix G). The research study followed the IRB standards for collecting data. The participants completing the survey were told that their participation is completely voluntary, their anonymity is protected, the completion of the survey is not required, and they can stop at any point, as well as there is no request for personal or sensitive information.

Sample Selection

The target population for this study was 800 employees who worked at organizations in Saudi Arabia. Then, a randomized selection of the sampling was

accomplished to provide the sample that was studied. A sample size of 200 participants who worked at organizations in Saudi Arabia was needed in order to assess the validity and generalization of the findings. Given a usual response rate of about 20%-30%, a total of 800 employees were invited to participate in the study, to achieve the anticipated 200 participants. Each participant was sent an email invitation that included a summary of the study's goals, expected value of the findings, and guidelines for its completion (Appendix E). As suggested by Fan and Yan (2010), in order to increase participation rates, the following guidelines are recommended: decreasing the length of the survey, ensuring the clarity of the survey questions, pre-notifying participants, and using reminders. Once a satisfactory sample size has been reached, the data will be analyzed.

Pre-Analysis Data Screening

Before starting the data analysis, it is important to perform a data screening to ensure validity of data, and that data is free of any irregularities (Levy, 2006). Moreover, pre-analysis data screening must be conducted prior to final analysis of data as missing data may result in significant effects (Hair, Black, Babin, & Anderson, 2010). The pre-analysis data screening steps as recommended by Levy (2006) include the identification of missing data, response-sets (when users mark on all items the same score), outliers, and ensured data accuracy. The research study ensured that the Web-based instrument have all items required to eliminate missing data. Furthermore, this research study used Mahalanobis Distance to detect multivariate outliers (Levy, 2008).

Data Analysis

This research study dealt with quantitative data that was solicited from a sample survey population in order to measure the user FCyS and EC2O constructs. Four types of techniques were conducted to address the six research questions: Delphi, data aggregations, analysis of variance (ANOVA), and data analytics. This research study answered RQ1and RQ2 by using Delphi methodology to identify a set of items relevant to the measures of self-reported FCyS and EC2O as well as to establish the validation of the Mobile Cyberslacking-Commitment Taxonomy.

This research study conducted two data aggregations. The first data aggregation calculated the overall user's FCyS. The 29 items of user FCyS that were adopted were based on an extensive review of the literature (Akbulut et al., 2016; Blanchard & Henle, 2008; Kalaycı, 2010). This research study computed the scores of the user FCyS items to generate an overall score to be used in data analysis. As illustrated in Appendix F and in Section 1 of the survey instrument, the items for the user FCyS are 29 items: FCyS1 through FCyS29. Thus, the equation for FCyS, as illustrated in Equation 1, includes the user FCyS assigned values for FCyS1 through FCyS29 in its calculation. This research study calculated the scores of the user FCyS items to generate an overall score to be used in data analysis.

$$FCyS = \sum_{i=1}^{n} \text{Frequency of Mobile Cyberslacking Dimension(FCyS)}_i$$

where,

FCyS = the user assigned value for a given frequency of mobile cyberslacking dimension, and;

n = the number of frequency of mobile cyberslacking dimensions i, and;

i = a given frequency of mobile cyberslacking dimension.

Or, specifically,

$$FCyS = \sum_{i=1}^{29} \mathrm{FCyS}_i$$

Equation 1. Equation for User Frequency of Mobile Cyberslacking (FCyS)

For the purposes of this study and the use of the Mobile Cyberslacking-Commitment Taxonomy, these scores were normalized on a zero (0) to one (1) scale for consistency and means are (.5) (Figure 4). Using the normalized scores for FCyS, (1) a survey participant's FCyS score of less than .5 indicated a low user frequency of cyberslacking activities, and (2) a survey participant's FCyS score of .5 or greater indicated a high user frequency of cyberslacking activities. However, according to Levy, Murphy, and Zanakis (2009), when findings demonstrate that no participant scores in the low-low quadrant, it may be appropriate to rescale the cut-off point between the low and high quadrants on both axes to 75% of the maximum scale.

The second data aggregation calculated the overall EC2O score. The 24 items of EC2O that were adopted were based on an extensive review of the literature (Allen & Meyer, 1990; Bisharat et al., 2016). This research study computed the scores of the EC2O items to generate an overall score to be used in data analysis. As illustrated in Appendix F and in Section 2 of the survey instrument, the items for EC2O are 24 items: EC2O1 through EC2O24. Thus, the equation for EC2O, as illustrated in Equation2, includes the EC2O assigned values for EC2O1 through EC2O24 in its calculation. This research study

calculated the scores of EC2O items to generate an overall score to be used in data analysis.

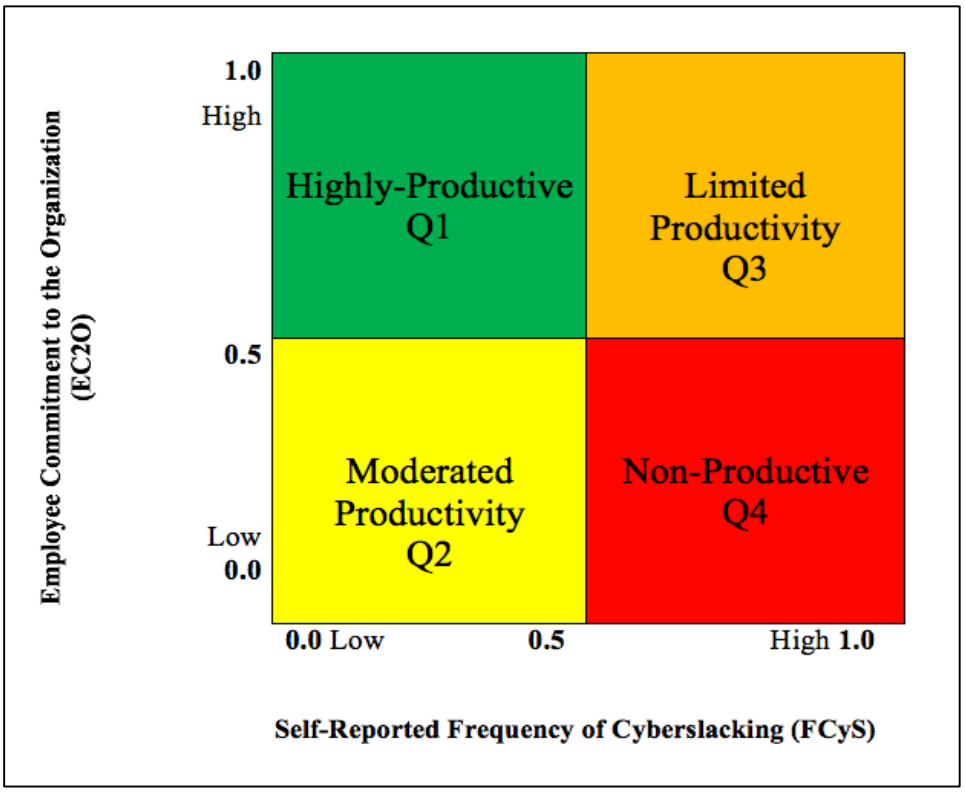


Figure 4: The Proposed Mobile Cyberslacking-Commitment Taxonomy with Normalized Scale (0.0 – 1.0)

$$EC2O = \sum_{i=1}^{n} \text{Employee Commitment to Organization Dimension}(EC2O)_i$$

where,

EC2O = the employee assigned value for a given commitment to organization dimension, and;

n = the number of employee commitment to organization dimensions *i*, and;

i = a given employee commitment to organization dimension.

Or, specifically,

$$EC2O = \sum_{i=1}^{24} EC2O_i$$

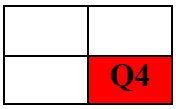
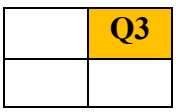
Equation 2. Equation for Employee Commitment to Organization (EC2O)

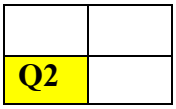
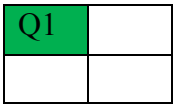
For the purposes of this study and the use of the Mobile Cyberslacking-Commitment Taxonomy, these scores were normalized on a zero (0) to one (1) scale for consistency and means are (.5) (Figure3). Using the normalized scores for EC2O, (1) a survey participant's EC2O score of less than .5 indicated a low EC2O, and (2) a survey participant's EC2O score of .5 or greater indicated a high EC2O. However, according to Levy et al. (2009), when findings demonstrate that no participant scores in the low-low quadrant, it may be appropriate to rescale the cut-off point between the low and high quadrants on both axes to 75% of the maximum scale.

To answer RQ3 and RQ4, a one-way ANOVA was conducted on age, gender, educational level, industry Type, level at the organization, years of experience using the Internet, and organization type to identify any significant differences that existed in employees' self-reported FCyS and EC2O. To answer RQ5a, after participants completed the survey questions, a numerical score was determined, and the mean was used to dichotomize each variable for low (below the mean) and high (equal or above the mean), which allowed the development of the plots of the Mobile Cyberslacking-Commitment Taxonomy. The numerical score was determined using the two equations, previously described, to compute the overall score for FCyS and EC2O. To assign a numerical score for a given survey participant, the user answered the 29 items for FCyS and 24 items for EC2O. The participant's scores were placed within one of the four quadrants of this proposed taxonomy: Q1, Q2, Q3, or Q4 (Table 5), statistically clustering the responses,

based on the two measures of FCyS and EC2O. Analysis of RQ5a were comprised of descriptive statistics to understand the distribution of the data and infer conclusions with respect to users in each quadrant of the taxonomy as well as an overall view of the distribution. To answer RQ5b, the previous aggregated plots were done, followed by data analytics techniques to visualize the result on the developed Mobile Cyberslacking-Commitment Taxonomy. Then, coloring was used for each sub-category of the age, gender, educational level, industry type, level at the organization, years of experience using the Internet, and organization type to identify any clusters of individuals that may form within the four quadrants.

Table 5: Summary of the Mobile Cyberslacking-Commitment Taxonomy Quadrants in the Context of Employee Implied Productivity

Quadrant	Implied Productivity Priority Level	Implied Productivity	Improvement Recommendations
Fourth Quadrant (Q4): Non-Productive 	1st	The employees' implied productivity in this quadrant is **non-productive**. This may occur when employees are dissatisfied with their current wage or position and may want to leave the organization.	The organization could improve productivity by investigating on how to reduce FCyS by assigning challenging tasks to the employees and improve EC2O by offering appropriate rewards to the employees.
Third Quadrant (Q3): Limited Productivity 	2nd	The employees' implied productivity in this quadrant is **limited**. This may occur when employees feel that their tasks are easy to accomplish, and have too much "free" time at work.	Productivity could improve by providing more challenging tasks to increase employees' engagement and reduce FCyS.

Quadrant	Implied Productivity Priority Level	Implied Productivity	Improvement Recommendations
Second Quadrant (Q2): Moderated Productivity 	3rd	The employees' implied productivity in this quadrant is **moderated**. This may occur when employees understand the severe consequences of cyberslacking, however, they may have some level of dissatisfaction with their current workplace, boss/supervisor, position, tasks, or wage.	The organization could improve productivity by investigation on how to improve the EC2O by offering appropriate rewards to the employees or alleviate some of the factor(s) causing the dissatisfaction.
First Quadrant (Q1): Highly-Productive 	4th	The employees' implied productivity in this quadrant is **highly-productive**. This may occur when employees are highly engaged with their assigned tasks and very satisfied and committed to their organization.	The organization is doing well with these employees and it may be more appropriately if the focus to improve productivity reallocated to other employees located in non-productive, limited, or moderated quadrants.

Resources

Access to IS SMEs was required for the Delphi methodology. IRB approval was required to conduct the proposed survey. An online survey tool, Google form, that is accessible via the Internet was also needed to allow participants to complete the survey. The Statistical software tool, SPSS, was needed to analyze the data.

Chapter 4

Results

Overview

This chapter contains the results and data analysis performed by this research study. This study used a three-phased approach data collection, with each phase required data analysis, and each phase addressed a set of research questions. Data collection and analysis for Phase One, used subject matter experts (SMEs) via the Delphi methodology, identified and validated a set of items relevant to the measures of self-reported FCyS and EC2O, as well as established the validation of the Mobile Cyberslacking-Commitment Taxonomy to classify employee potential for productivity based on self-reported mobile device FCyS and EC2O. Data collection and analysis for Phase Two, validated the revised survey instrument by SMEs and approved the final version of the survey instrument. Phase Three involved the main data collection and analysis which included the response rate, pre-analysis data screening, description of the study participants, and results of the reliability analysis. This chapter concludes with an overall summary of the results of this study.

Phase One - Delphi Methodology (RQ1 &RQ2)

To answer RQ1 and RQ2, the Phase One survey instrument was sent to 37 SMEs and collected 19 responses for a 51.4% response rate. The SMEs validated a set of items

relevant to the measures of self-reported mobile device FCyS and EC2O. Also, SMEs validated the Mobile Cyberslacking-Commitment Taxonomy to classify employee potential for productivity based on self-reported mobile device FCyS and EC2O. Although items from previously published works were used in the initial draft of the survey instrument, the SMEs review was also conducted to add validity. To be validated, a consensus rate of at least 70% was required from the SMEs, or five on a seven point Likert scale. Additionally, if 70% of the SMEs rated items at five or above, but identified typographical errors and/or duplicate item(s), the errors will be corrected and the self-reported mobile device FCyS and EC2O measurement method is considered as accepted due to consensus.

Pre-Analysis Data Screening

Pre-analysis data preparation did not identify any SME responses that needed to be removed, and no response sets were identified. No incomplete data sets were submitted, as designed, due to all survey categories being set as 'required' when developing the instrument.

Demographic Data Analysis

Upon completing pre-analysis data preparation, demographic analysis was conducted on the collected data to assess the sample. Phase One accomplished the goal of ensuring that respondents were experts in the IS field from both academia and industry. A summary of the demographic data is shown in Table 6.

Table 6: Summary of Phase One Demographic Data (N= 19)

Item	Frequency	Percentage
Age		
21–30	3	15.8%
31–40	9	47.4%
41–50	5	26.3%

Item	Frequency	Percentage
51–60	2	10.5%
Gender		
Female	4	21%
Male	15	79%
Education Level		
Master	8	42%
Doctorate	11	58%
Level at the Organization		
Entry Level/staff	1	5.3%
Supervisor	1	5.3%
Middle Manager	3	15.8%
Top Manager/Chief Officer	2	10.5%
Academic/Higher Education	12	63.1%
Industry Type		
Education/Higher Education	12	63.1%
Healthcare	1	5.3%
IT Services	4	21%
Professional Services	1	5.3%
Retail	1	5.3%
Years of Experience in the Information Systems field		
1 to 5 years	4	21%
6 to 10 years	5	26.3%
11 to 15 years	3	15.8%
16 to 20 years	1	5.3%
21 years or longer	6	31.6%
Publications in the Last Five Years		
No Publications	6	31.6%
One Publication or Industry Report	2	10.5%
Two Publications or Industry Reports	3	15.8%
Three Publications or Industry Reports	2	10.5%
Four Publications or Industry Reports	1	5.3%
Five Publications or Industry Reports	0	0
More Than Five Publications or Industry Reports	5	26.3%

Data Analysis

There were two main goals in Phase One. The first main goal of Phase One data analysis was to decide if SMEs accepted or rejected the measures of self-reported mobile device FCyS and EC2O that were found in literature. The second main goal of Phase One data analysis was to decide if SMEs accepted or rejected the validation of the Mobile Cyberslacking-Commitment Taxonomy to classify employee potential for productivity based on self-reported mobile device FCyS and EC2O.

The result of the expert panel indicated that all measures of self-reported mobile device FCyS and EC2O, evaluated by the SMEs, met the acceptance criteria of having achieved a rating of five or higher by 70% of the SMEs. Also, the validation of the Mobile Cyberslacking-Commitment Taxonomy, evaluated by the SMEs, met the acceptance criteria of having achieved a rating of five or higher by 70% of the SMEs as shown in Table 7. The first and second specific goals were met, hence RQ1 and RQ2 were addressed. Thus, Phase One of this proposed study is complete and the study will initiate Phase Two.

Table 7: Summary of Phase One Levels of Agreement (N= 19)

Item	**Category**	**Rated 5 or Higher**
Self-Reported FCyS		85%
	Instructions and Scale	74%
	Sharing	95%
	Shopping	79%
	Real-Time Update	89%
	Access Online Content	89%
	Gaming/Betting	84%
EC2O		91%
	Instructions and Scale	89%
	Affective	84%
	Continuance	95%
	Normative	95%

Item	Category	Rated 5 or Higher
The Mobile Cyberslacking-Commitment Taxonomy		89%

Phase Two – Pilot Study

The Phase Two survey instrument was sent to 201 participants and collected 38 responses for an 18.9% response rate. The participants validated a set of items relevant to the measures of self-reported FCyS and EC2O. Although items from previously published works were used in the initial draft of the survey instrument and validated by SMEs, a pilot participants' review was also conducted to add validity.

Pre-Analysis Data Screening

Pre-analysis data preparation identified and removed three response sets, providing a total of 35 useable participants. No incomplete data sets were submitted, as designed, due to all survey categories being set as 'required' when developing the instrument.

Demographic Data Analysis

Upon completing pre-analysis data preparation, demographic analysis was conducted on the collected data to assess the sample. Phase Two accomplished the goal of ensuring that respondents were from different industry types, genders, ages, levels of education, levels at organization, and experiences using the Internet. A summary of the demographic data is shown in Table 8.

Table 8: Summary of Phase Two Pilot Demographic Data (N=35)

Item	Frequency (#)	Percentage (%)
Age		
18–20	1	2.9%
21–30	12	34.3%
31–40	18	51.4%

Item	Frequency (#)	Percentage (%)
41–50	3	8.6%
51–60	1	2.9%
Gender		
Female	12	34.3%
Male	23	65.7%
Education Level		
High School	7	20%
Online Courses	1	2.9%
Associate Degree	3	8.6%
Undergraduate	11	31.4%
Master	13	37.1%
Level at the Organization		
Entry Level/staff	11	31.4%
Supervisor	10	28.6%
Middle Manager	9	25.7%
Academic/Higher Education	5	14.3%
Industry Type		
Banking and Financial Institutions	2	5.7%
Construction	7	20%
Education/Higher Education	7	20%
Electronics	1	2.9%
Energy and Petroleum	5	14.3%
Government military	2	5.7%
Healthcare	2	5.7%
IT Services	1	2.9%
Insurance	1	2.9%
Professional Services	1	2.9%
Real Estate	1	2.9%
Retail	1	2.9%
Telecommunication	3	8.6%
Transportation	1	2.9%
Years of Experience Using the Internet		
Less than 1 year	3	8.6%
1 to 5 years	5	14.3%
6 to 10 years	10	28.6%
11 to 15 years	7	20%
16 to 20 years	5	14.3%
21 years or longer	5	14.3%
Organization Type		

Item	Frequency (#)	Percentage (%)
Public	19	54.3%
Private	16	45.7%

Data Analysis

The pilot study feedback included only minor wording changes and added a definition to the commitment type. Attesting to the clarity of the survey one pilot study, a participant commented, "The survey was easy to understand and could be completed quickly". Based on the pilot study feedback, only minor wording changes and the addition of a definition to the commitment type were performed leading to the final version of the survey instrument for distribution in the study. Thus, the result of the pilot study indicated that all measures of self-reported mobile device FCyS and EC2O, evaluated by the pilot participants, met the acceptance criteria of having achieved a rating of five or higher by 70% of the pilot participants.

Table 9. Summary of Phase Two (Pilot Study) Level of Agreement (N=35)

Scale	Frequency (#)	Percentage (%)
For FCyS measures		
1	1	2.9%
2	0	0
3	1	2.9%
4	3	8.6%
5	11	31.4%
6	7	20.0%
7	12	34.3%
Total	35	100%
FCyS Measures Overall Level of Agreement	*31*	*85.7%*
	Mean	Std.Dev
	5.63	1.37
For EC2O measures		
1	0	0
2	1	2.9%

3	3	8.6%
4	6	17.1%
5	14	40.0%
6	3	8.6%
7	8	22.9%
Total	35	100%
EC2O Measures Overall Level of Agreement	*25*	*71.5%*
	Mean	Std.Dev
	5.11	1.35

Phase Three – Main Data Collection and Analysis

Main Data collections

The Phase Three survey instrument, the final Web-based survey instrument as evaluated and validated by the SMEs and pilot study, was sent to 1,063 participants. 272 responses were received, constituting a response rate of 25.6%. The targeted population was employees who work at organizations in Saudi Arabia.

Pre-Analysis Data Screening

According to Levy (2006), "a pre-analysis data screening deals with the process of detecting irregularities or problems with the collected data" (p. 150). This research study evaluated the accuracy of data collected from the survey. This study ensured that the Web-based instrument has all items required to eliminate missing data. Furthermore, to deal with response set issues, the results were manually reviewed for cases where a respondent selected the same score for all items in the instrument. The cases with a response set of above 95% similar score across all items measured were identified, which resulted in 7 cases that were deleted, providing a total of 265 usable cases. Finally, to identify extreme cases or outliers, this research study used Mahalanobis Distance to

identify multivariate outliers. According to Levy (2008), "Mahalanobis distance was performed to detect outliers in the data collected" (p. 1667). Using IBM's SPSS Statistics software tools, Mahalanobis Distance was conducted on the two independent constructs: self-reported mobile device FCyS and EC2O. Based on the Mahalanobis Distance calculations no case was removed as none were significant multivariate outliers, providing a total of 265 usable cases.

Demographic Data Analysis

Based on the pre-analysis data screening described in the previous section, the demographics of the remaining 265 responses were analyzed. Participants in this study were employees who work at organizations in Saudi Arabia. The data showed that 208 or 78.5% of the respondents were males, and 57 or 21.5% were females, while 204 or 76.9% were between the ages of 31 and 50. In education level, 65 or 24.5% of the respondents had a bachelor's degree and 104 or 39.2% of the respondents had a master's degree. Also, the data showed that 125 or 47.1% of the respondents had years of experience using the internet between 11 and 20. Table 9 shows the detailed demographic statistics of the 265 respondents, indicating their frequencies and associated percentages. Based on demographic data of the target organization, these results indicate a good representation of the overall sample of employees approached.

Table 10: Descriptive statistics of population (N=265)

Item	Frequency	Percentage
Age		
21–30	2	0.8%
31–40	78	29.4%
41–50	126	47.5%
51–60	34	12.8%
61–70	23	8.7%
71 and over	2	0.8%
Total	**265**	**100%**

Item	Frequency	Percentage
Gender		
Female	57	21.5%
Male	208	78.5%
Total	**265**	**100%**
Education Level		
High School	21	7.9%
Online	5	1.9%
Associate Degree	27	10.2%
Undergraduate	65	24.5%
Master	104	39.2%
Doctorate	43	16.2%
Total	**265**	**100%**
Level at the Organization		
Entry Level/staff	72	27.2%
Supervisor	44	16.6%
Middle Manager	66	24.9%
Top Manager/Chief Officer	18	6.8%
Academic/Higher Education	65	24.5%
Total	**265**	**100%**
Industry Type		
Banking and Financial Institutions	24	9.1%
Construction	23	8.7%
Education/Higher Education	70	26.4%
Electronics	7	2.6%
Energy and Petroleum	22	8.3%
Government military	16	6.0%
Healthcare	36	13.6%
IT Services	25	9.4%
Insurance	4	1.5%
Professional Services	14	5.3%
Real Estate	1	0.4%
Retail	4	1.5%
Telecommunication	9	3.4%
Transportation	10	3.8%
Total	**265**	**100%**
Years of Experience Using the Internet		
Less than 1 year	10	3.8%
1 to 5 years	41	15.5%
6 to 10 years	55	20.8%
11 to 15 years	78	29.4%

Item		Frequency	Percentage
16 to 20 years		47	17.7%
21 years or longer		34	12.8%
	Total	**265**	**100%**
Organization Type			
Public		171	64.5%
Private		94	35.5%
	Total	**265**	**100%**

Validity Analysis

Construct validity is defined as "the degree of correspondence between constructs and their measures" (Peter, 1981, p. 133). In this proposed study, the two applicable constructs are frequency of mobile device cyberslacking and employee commitment to the organization. The survey instrument of this research study was validated to ensure its design (Straub, 1989). Construct validity of self-reported FCyS and EC2O, was assessed through the first two phases. Items from previously published works were used in the survey instrument to add validity (Akbulut et al., 2016; Allen & Meyer, 1990; Bisharat et al., 2016; Blanchard & Henle, 2008; Kalaycı, 2010). In the Phase One, an expert panel of 19 SMEs was asked to review and validate the quantitative survey instrument. The expert panel validated the instrument items and the constructs assessed. The expert panel submitted their recommendations, and the instrument was adjusted according to the feedback. In Phase Two, a pilot study of 35 participants was asked to review and validate the quantitative survey instrument that was revised by SMEs. The participants submitted their recommendations, and the instrument was adjusted according to the feedback.

Leedy and Ormrod (2013) described the internal validity of a research study as "the extent to which its design and the data it yields allow the researcher to draw accurate conclusions about cause-and-effect and other relationships within the data" (p. 97).

According to Straub (1989), an instrument will have internal validity when "the observed effect could have been caused by or correlated with a set of non-hypothesized and/or measured variables" (p. 151). Internal validity was supported by 19 SMEs who were invited to review the proposed measures (Appendix B). The members of the expert panel were professionals that have academic degrees and extensive experience in cybersecurity and information systems. They validated the instrument according to their knowledge and experience in their respective professional fields by providing feedback for improving the language, wording, as well as activities proposed. Several minor word changes were preformed as a result of the expert panel process before proceedings to deploy the survey to the participants.

External validity refers to the extent to which the findings can be generalized in different contexts (Leedy & Ormrod, 2013). Research is confirmed to have external validity if the distribution of outcomes realized by a representative sample of the population is the same as the distribution of outcomes that would be realized in an actual population (Manski, 2007). External validity was supported by attaining 265 responses based on distributing the survey to the population of 1,063 personnel of the case study organization. Further, external validity was supported by the demographic data which showed the diversity of the population through items including age, gender, education level, level at the organization, industry type, years of experience using the Internet, and organization type.

Reliability Analysis

Reliability analysis is the degree to which a test repetitively measures whatever it is proposed to measure (Gay, Mills, & Airasian, 2011). One common type of reliability

measure is measured by the Cronbach's Alpha coefficient. The larger the reliability coefficient, the more the researcher will feel confident that the results are consistent (Straub, 1989). A valid Cronbach's Alpha for a construct is usually one that is over 0.7 (Rovai, Baker, & Ponton, 2013). Table 10 provides an overview of the Cronbach's Alpha. According to Table 10, both constructs have acceptable reliability, given that both constructs demonstrated Cronbach's Alpha above 0.7, while FCyS construct had Cronbach's Alpha of over 0.85, indicating high reliability.

Table 11: Results of Reliability Analysis

Variable	No of Items	Cronbach's Alpha
FCyS	29	0.952
EC2O	24	0.717

One-Way Analysis of Variance (ANOVA) Analysis (RQ3 & RQ4)

To answer RQ3, the first ANOVA was performed to analyze differences in self-reported mobile device FCyS based on age, gender, level at the organization, education level, industry type, years of experience using the Internet, and organization type. The ANOVA for education level was significant, $F(5, 265) = 2.940$, $p = 0.013$ and suggested that self-reported mobile device FCyS scores differed by education level due to a p-value that is less than 0.05. Also, the ANOVA for industry type was significant, $F(13,265) = 1.793$, $p = 0.045$, and suggested that self-reported mobile device FCyS scores differed by industry type. The one-way ANOVA for age, gender, level at organization, years of experience using the internet, and organization type were not significant, which suggested that there is no difference in self-reported mobile device FCyS scores.

Table 12: ANOVA Results for Self-Reported FCyS (N= 265)

Construct	Item	df	Mean Square Between Groups	F	Sig.
FCyS	Age	5	4326.878	0.804	0.547
	Gender	1	25.896	0.024	0.877
	Level at Organization	4	770.605	0.716	0.582
	Education Level	5	3039.503	2.940	***0.013****
	Industry type	13	1849.691	1.793	***0.045****
	Years of Experience	5	984.238	0.917	0.471
	Using the Internet Organization Type	1	291.129	0.271	0.603

*-p<.05, **-p<.01, ***-p<.001

To answer RQ4, the first ANOVA was performed to analyze differences in EC2O based on age, gender, level at the organization, education level, industry type, years of experience using the Internet, and organization type. The ANOVA for age was significant, $F(5,265) = 2.289$, $p = 0.046$, and suggested that EC2O scores differed by age due to a p-value that is less than 0.05. The ANOVA for gender was significant, $F(1,265) = 4.276$, $p = 0.040$, and suggested that EC2O scores differed by gender. The one-way ANOVA for level at the organization, education level, industry type, years of experience using the Internet, and organization type were not significant, which suggested that there is no difference in EC2O scores.

Table 13: ANOVA Results for EC2O (N=265)

Construct	Item	df	Mean Square Between Groups	F	Sig.
EC2O	Age	5	572.646	2.289	***0.046****
	Gender	1	1082	4.276	***0.040****
	Level at Organization	4	153.312	0.595	0.667
	Education Level	5	36.311	0.139	0.983
	Industry type	13	249.806	0.973	0.478
	Years of Experience	5	338.784	1.330	0.252
	Using the Internet Organization Type	1	342.827	1.339	0.248

*-p<.05, **-p<.01, ***-p<.001

Data Aggregation

To answer RQ5a, the Mobile Device Cyberslacking-Commitment Taxonomy was developed to classify employees' potential for productivity based on the measures of self-reported mobile device FCyS and EC2O. The Mobile Device Cyberslacking-Commitment Taxonomy was constructed for the four quadrants (Q1: Highly Productive, Q2: Moderated Productivity, Q3: Limited Productivity, and Q4: Non-Productive). The results for the two aforementioned constructs were normalized on a zero (0) to one (1) scale for consistency (Figure 4). As shown in Table 14, the self-reported mobile device FCyS results show the sample scores had a positive skew indicating an overall low frequency of mobile cyberslacking activities (M = .345, SD = .161, N = 265). The EC2O results show that the sample scores had a positive skew indicating an overall high employee commitment to their organization (M = .522, SD = .095, N = 265).

Table 14: Constructs Statistics (N= 265)

Item		**Self-Reported Mobile Device FCyS**	**EC2O**
N	Valid	265	265
	Missing	0	0
Mean		.345	.522
Std. Deviation		.161	.095
Skewness		.601	.509
Minimum		.076	.333
Maximum		.869	.857

Taxonomy Analysis– Construct and Quadrant Results

Figure 5 shows the scatter plot of the survey results based on the two constructs. Though there are fewer cases found in the lower end of the scales for the two constructs, the cut-off points were deemed acceptable and not requiring an adjustment to 75% of the low and high ranges, as discussed in chapter three. Visual inspection of the results shows

that cases are dispersed across the Mobile Cyberslacking-Commitment taxonomy with the most cases found in Q1: Highly Productive, designating that most employees demonstrated a high commitment to the organization with low frequency of mobile cyberslacking activities, thus indicating a high employee potential for productivity.

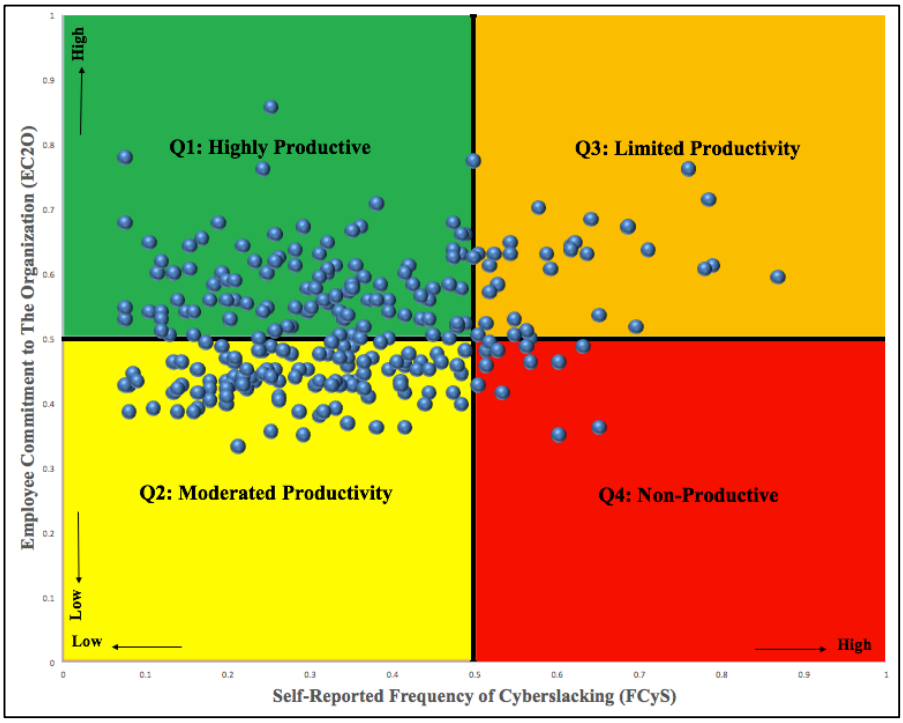


Figure 5. Mobile Device Cyberslacking-Commitment Taxonomy Scatter Plot of Constructs Responses

Table 15 shows Q4 having the least number of cases, (13) and Q1 with the most number of cases (112). These results, per the Mobile Cyberslacking-Commitment Taxonomy Q4, indicate that 4.91% of the participants have the lowest potential for productivity since they have higher frequency of mobile cyberslacking activities and lower commitment to the organization. Conversely, per the Mobile Cyberslacking-Commitment Taxonomy Q1, the results indicate that 42.26% of the participants are the most likely to have a better potential for productivity since they have a low frequency of mobile cyberslacking activities and high commitment to the organization.

Table 15: Mobile Device Cyberslacking-Commitment Taxonomy – Quadrants Descriptive (N= 265)

Quadrant	Frequency	Percent	Cumulative Percent
Q1: Highly Productive	112	42.26%	42.26%
Q2: Moderated Productivity	105	39.62%	81.88%
Q3: Limited Productivity	35	13.21%	95.09%
Q4: Non-Productive	13	4.91%	100%
Total	265	100%	

Mobile Cyberslacking-Commitment Taxonomy Analysis– Demographics

To answer RQ5b, eight taxonomies were developed and analyzed to identify differences, if any, in employees' positions on the Mobile Cyberslacking-Commitment Taxonomy based on age, gender, education level, level at the organization, industry type, years of experience using the Internet, and organization type.

Taxonomy Analysis– Age (D1)

An analysis of the cross-tabulation data between the Mobile Cyberslacking-Commitment Taxonomy quadrants (Q1 – Q4) and the demographic age (D1) was performed to investigate unique distributions (Figure 6). The 21- to 30-year-old employees, as well as those 71 and over, were excluded from this analysis since each group had only two cases. The taxonomy for age indicates a few noteworthy observations. First, all age groups had the majority of their cases located in Q1 and Q2. This is consistent with the overall scores for the two constructs indicated in the main taxonomy (Figure 5) suggesting that employees, regardless of age, had an overall low frequency of mobile cyberslacking activities and high commitment to their organization. Also, the means of the aggregated constructs scores based on age (Figure 7) showed that the older the employees are, the less they mobile cyberslack and the higher the

commitment they have towards their organization. Thus, they have better potential for productivity.

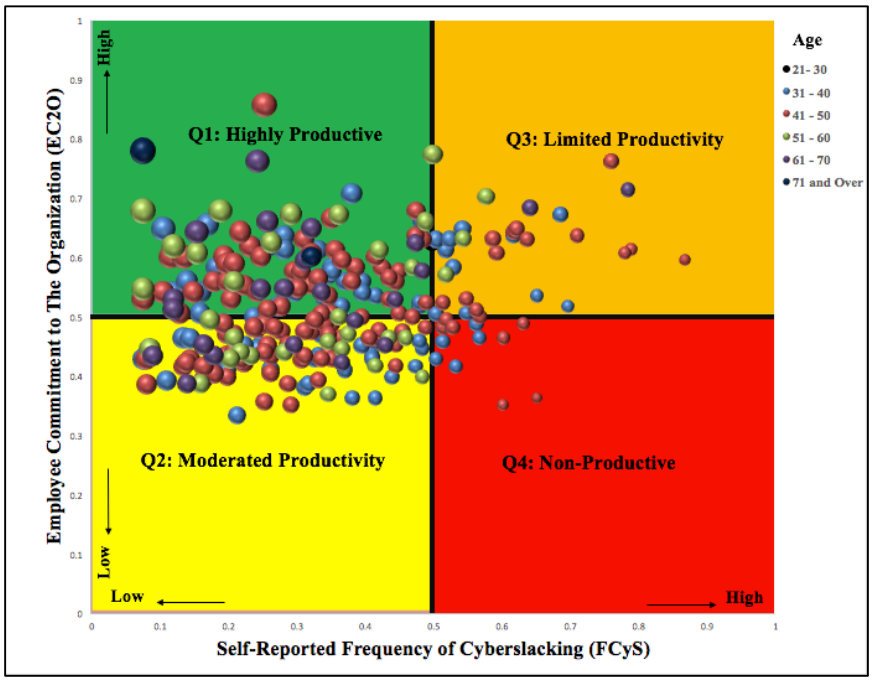


Figure 6. Mobile Device Cyberslacking-Commitment Taxonomy Scatter Plot of Age (N= 265)

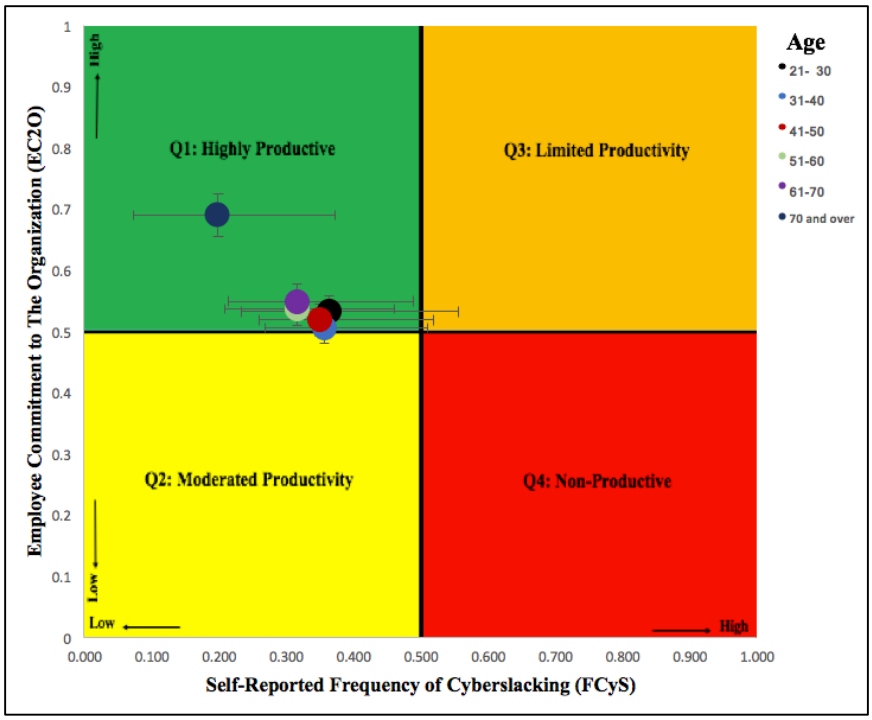


Figure 7. Means and Standard Deviation of the Aggregated Constructs Scores Based on Age (N= 265)

Taxonomy Analysis– gender (D2)

The next Mobile Cyberslacking-Commitment Taxonomy analysis consisted of analyzing the cross-tabulation data between the Mobile Cyberslacking-Commitment Taxonomy quadrants (Q1 – Q4) and the demographic gender (D2) to investigate unique distributions (Figure 8). The Taxonomy for gender indicates two noteworthy observations. First, both gender groups had the majority of their cases located in Q1 and Q2. This is consistent with the overall scores for the two constructs indicated in the main taxonomy (Figure 5) suggesting that employees, regardless of gender, had an overall low frequency of mobile cyberslacking activities and high commitment to their organization. Also, in the problematic quadrant Q4, the results indicate that a higher percentage of males (84.62%) are located in this quadrant as compared to females (15.38%). Also, the means of the aggregated constructs scores based on gender (Figure 9) showed that females are slightly more likely to have better potential for productivity than males.

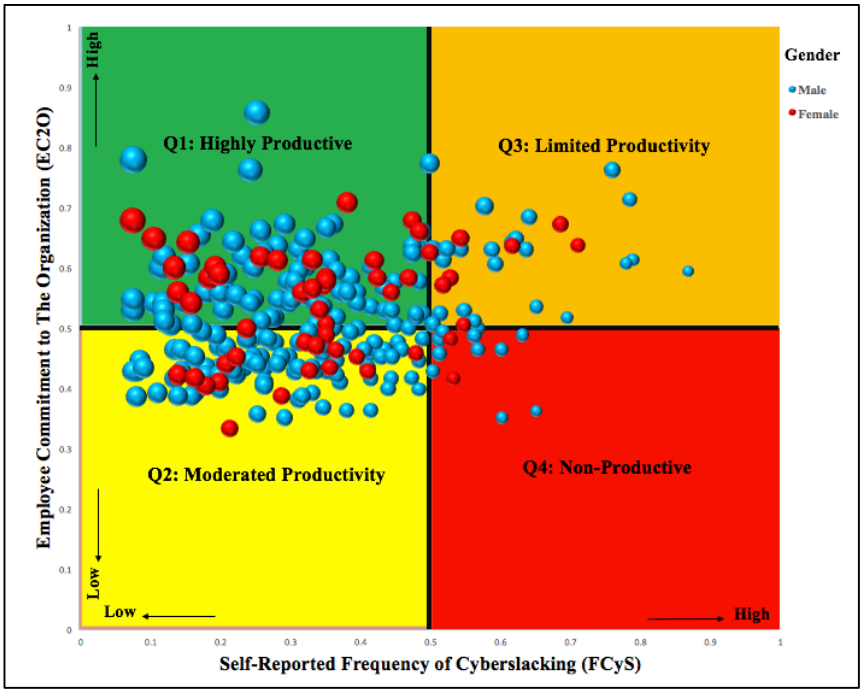


Figure 8. Mobile Device Cyberslacking-Commitment Taxonomy Scatter Plot of Gender (N= 265)

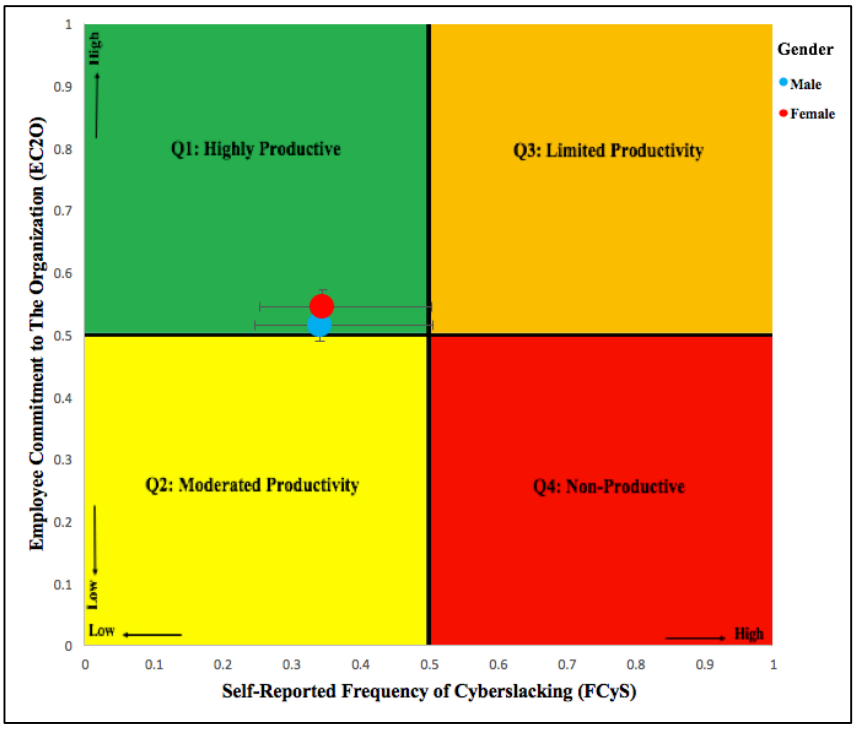


Figure 9. Means and Standard Deviation of the Aggregated Constructs Scores Based on Gender (N= 265)

Taxonomy Analysis– Education Level (D3)

The next Mobile Cyberslacking-Commitment Taxonomy analysis consisted of analyzing the cross-tabulation data between the Mobile Cyberslacking-Commitment Taxonomy quadrants (Q1 – Q4) and the demographic education level (D3) to investigate unique distributions (Figure 10). The Taxonomy for education level indicates two noteworthy observations. First, all education level groups had the majority of their cases located in Q1 and Q2. This is consistent with the overall scores for the two constructs indicated in the main taxonomy (Figure 5) suggesting that employees, regardless of education level, had an overall low frequency of mobile cyberslacking activities and high commitment to their organization. Also, the means of the aggregated constructs scores based on education level (Figure 11) showed that the high school group is the most likely group to cyberslack and the associate degree group is the least likely to cyberslack. Thus,

employees in the associate degree group had slightly better potential for productivity (Figure 11).

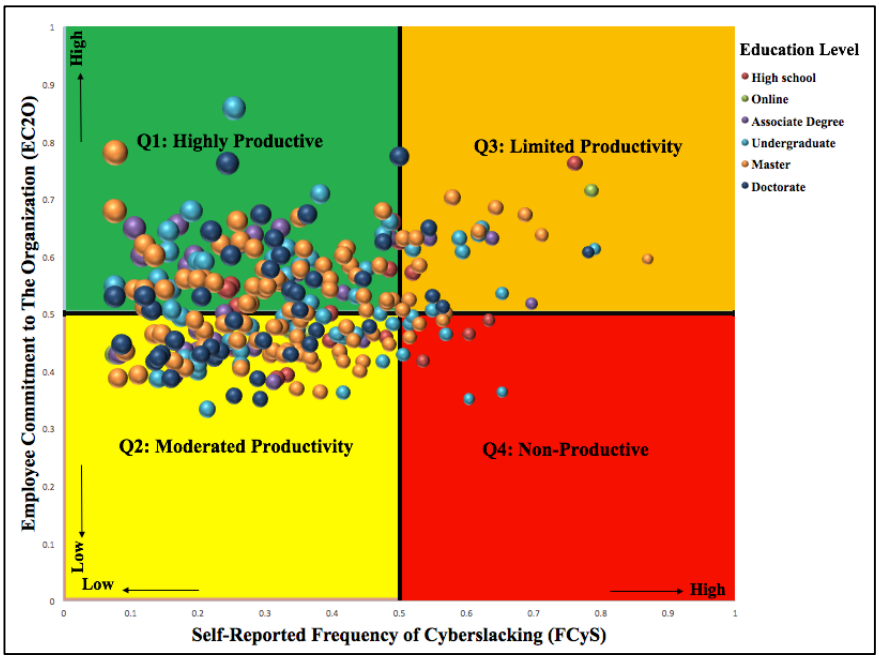


Figure 10. Mobile Device Cyberslacking-Commitment Taxonomy Scatter Plot of Education Level (N= 265)

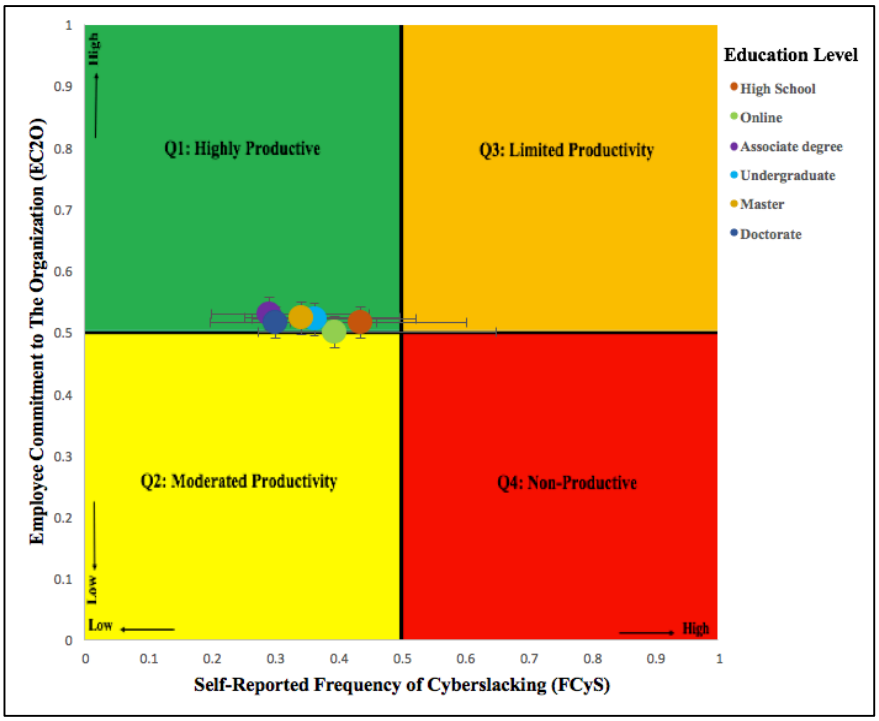


Figure 11. Means and Standard Deviation of the Aggregated Constructs Scores Based on Education Level (N= 265)

Taxonomy Analysis– Level at the Organization (D4)

The next Mobile Cyberslacking-Commitment Taxonomy analysis consisted of analyzing the cross-tabulation data between the Mobile Cyberslacking-Commitment Taxonomy quadrants (Q1 – Q4) and the demographic level at the organization (D4) to investigate unique distributions (Figure 12). The Taxonomy for level at the organization indicates two noteworthy observations. All levels at the organization groups had the majority of their cases located in Q1 and Q2. This is consistent with the overall scores for the two constructs indicated in the main taxonomy (Figure 5) suggesting that employees, regardless of level at the organization, had an overall low frequency of mobile cyberslacking activities and high commitment to their organization. Also, the means of the aggregated constructs scores based on level at the organization (Figure 13) showed that the top manager/CEO group is more likely to have better potential for productivity than the other groups and Supervisor group is the least likely group to have better potential for productivity.

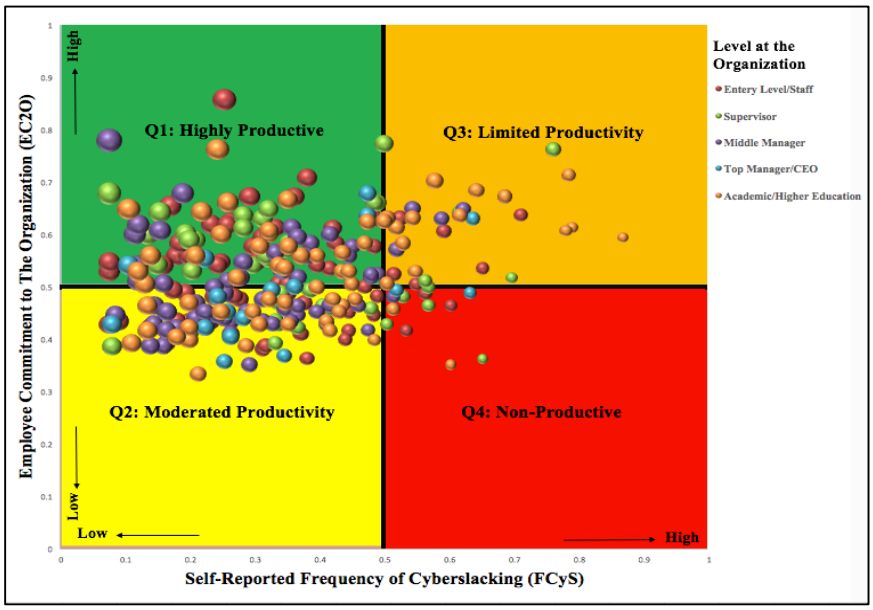


Figure 12. Mobile Device Cyberslacking-Commitment Taxonomy Scatter Plot of Level at the Organization (N= 265)

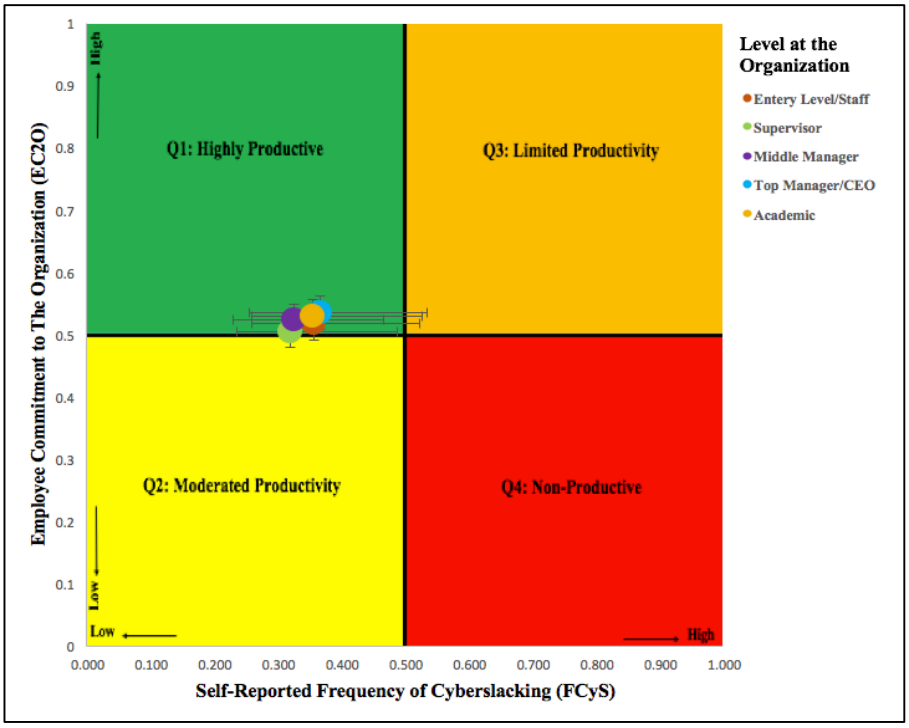


Figure 13. Means and Standard Deviation of the Aggregated Constructs Scores Based on Level at the Organization (N= 265)

Taxonomy Analysis– Industry Type (D5)

The next Mobile Cyberslacking-Commitment Taxonomy analysis consisted of analyzing the cross-tabulation data between the Mobile Cyberslacking-Commitment Taxonomy quadrants (Q1 – Q4) and the demographic industry type (D5) to investigate unique distributions (Figure 14). The real estate group was excluded from this analysis since it had only one case. All industry type groups had the majority of their cases located in Q1 and Q2. This is consistent with the overall scores for the two constructs indicated in the main taxonomy (Figure 5) suggesting that employees, regardless of industry type, had an overall low frequency of mobile cyberslacking activities and high commitment to their organization. Also, the means of the aggregated constructs scores based on industry type (Figure 15) showed that the retail group had a higher commitment to the

organization than other groups. Thus, employees who were within the retail group were most likely to have better potential for productivity.

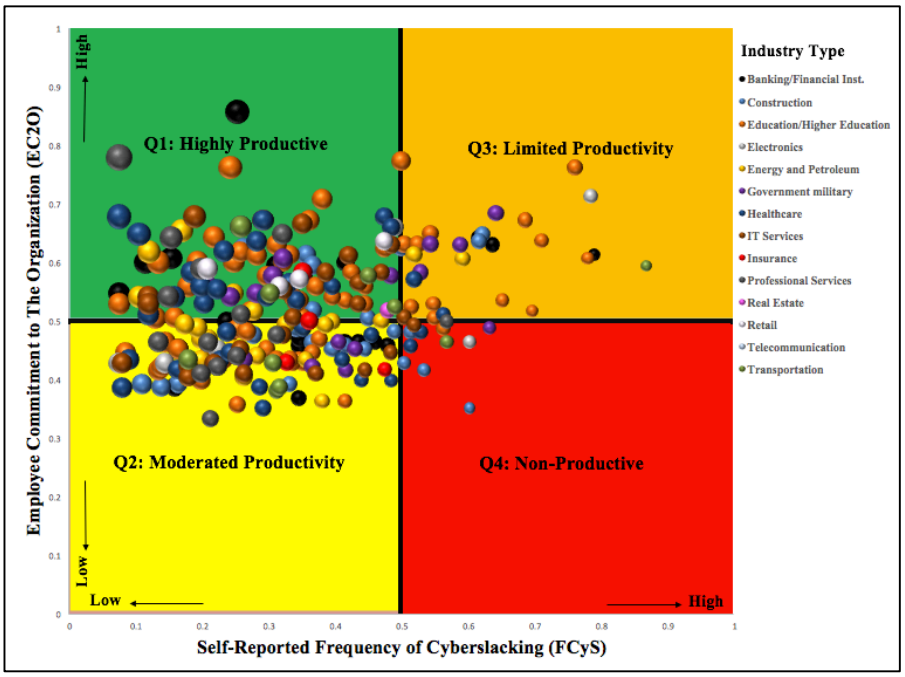


Figure 14. Mobile Device Cyberslacking-Commitment Taxonomy Scatter Plot of Industry Type (N= 265)

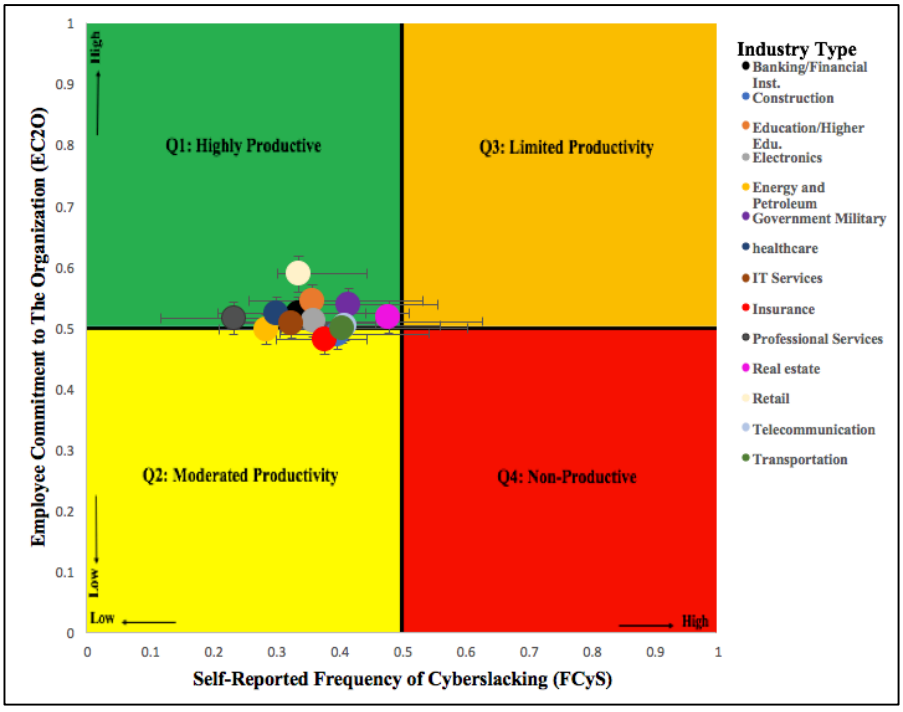


Figure 15. Means and Standard Deviation of the Aggregated Constructs Scores Based on Industry Type (N= 265)

Taxonomy Analysis– Years of Experience Using the Internet (D6)

The next Mobile Cyberslacking-Commitment Taxonomy analysis consisted of analyzing the cross-tabulation data between the Mobile Cyberslacking-Commitment Taxonomy quadrants (Q1 – Q4) and the years of experience using the Internet (D6) to investigate unique distributions (Figure 16). All years of experience using the Internet groups had the majority of their cases located in Q1 and Q2. This is consistent with the overall scores for the two constructs indicated in the main taxonomy (Figure 5) suggesting that employees, regardless of years of experience using the Internet, had an overall low frequency of mobile cyberslacking activities and high commitment to their organization. Also, the means of the aggregated constructs scores based on years of experience using the internet (Figure 17) showed that the less-than-one-year group had a higher frequency of mobile cyberslacking activities and lower commitment to the organization than other groups. Thus, employees who were within the less-than-one-year group were the least likely to have potential for productivity.

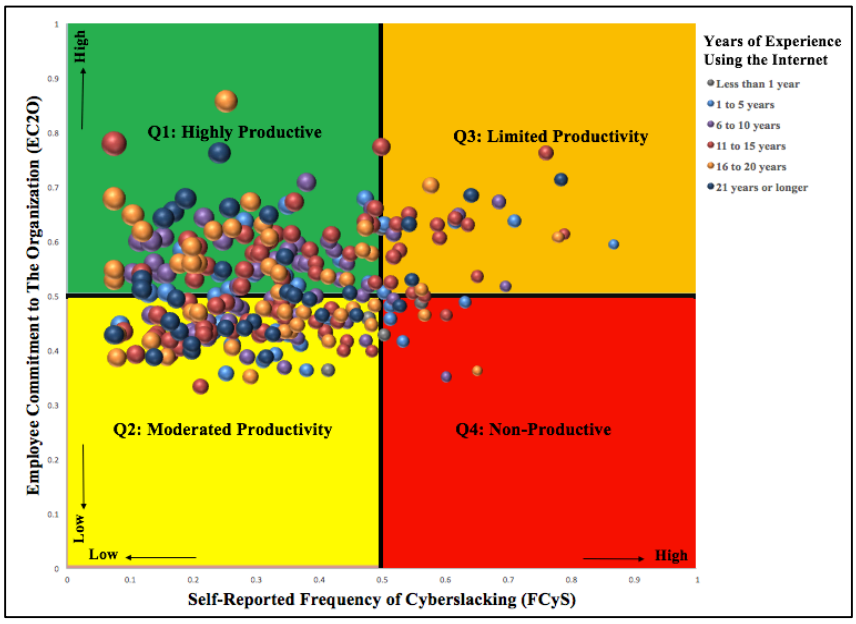


Figure 16. Mobile Device Cyberslacking-Commitment Taxonomy Scatter Plot of Years of Experience Using the Internet (N= 265)

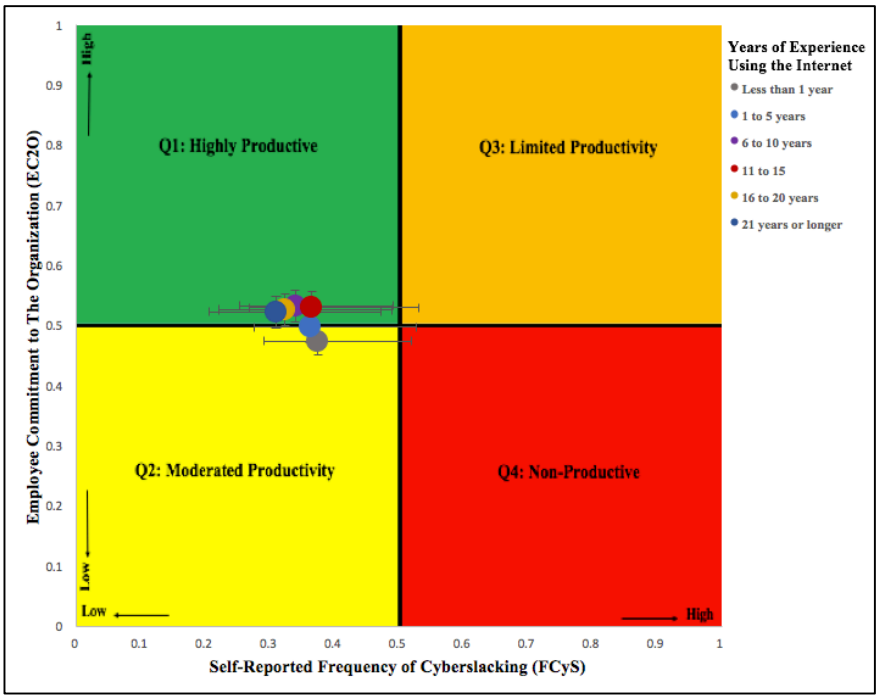


Figure 17. Means and Standard Deviation of the Aggregated Constructs Scores Based on Years of Experience Using the Internet (N= 265)

Taxonomy Analysis– Organization Type (D7)

The next Mobile Cyberslacking-Commitment Taxonomy analysis consisted of analyzing the cross-tabulation data between the Mobile Cyberslacking-Commitment Taxonomy quadrants (Q1 – Q4) and the organization type (D7) to investigate unique distributions (Figure 18). Both organization type groups had the majority of their cases located in Q1 and Q2. This is consistent with the overall scores for the two constructs indicated in the main taxonomy (Figure 5) suggesting that employees, regardless of years of experience using the internet, had an overall low frequency of mobile cyberslacking activities and high commitment to their organization. Also, the means of the aggregated constructs scores based on organization type (Figure 19) showed that both groups had similar potential for productivity.

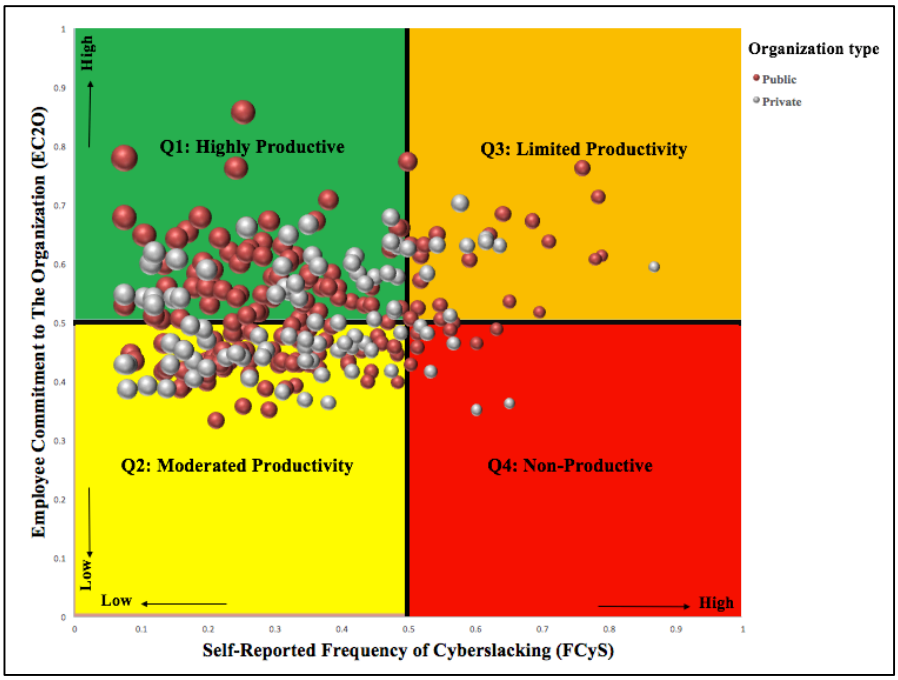


Figure 18. Mobile Device Cyberslacking-Commitment Taxonomy Scatter Plot of Organization Type (N= 265)

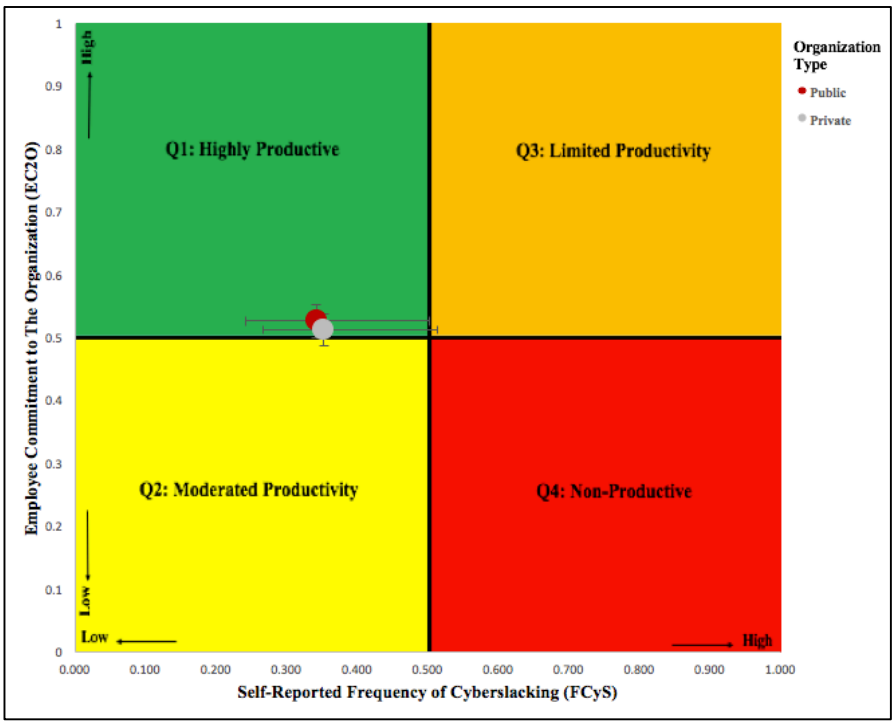


Figure 19. Means and Standard Deviation of the Aggregated Constructs Scores Based on Organization Type (N= 265)

Summary of Results

This chapter presented the results of this research study, from the developments of the Web-based survey instrument to the analyses and statistical tests that were performed on data collected from participants who work at organizations in Saudi Arabia. This study used a three-phased approach, with each phase collecting data and performing data analysis. Data collection and analysis for Phase One, using SMEs, validated the measures of self-reported mobile device FCyS, EC2O, and the Mobile Cyberslacking-Commitment Taxonomy to classify employee potential for productivity based on self-reported mobile device FCyS and EC2O, thus, addressed RQ1 and RQ2. Data collection and analysis for Phase Two validated the measures of self-reported mobile device FCyS and EC2O, using the pilot group, that were validated before using SMEs in Phase One.

Data collection and analysis for Phase Three included three different analysis techniques and methods. After the completion of the second phase, the final survey was sent to 1,063 participants. 272 responses were received, constituting a response rate of 25.6%, which was an appropriate number for analysis. Next, seven response-sets were identified and removed from further analysis, yielding a final total of 265 responses for subsequent analysis. Tests for validity and reliability were also performed and both were found to be well supported. Then, One-Way ANOVA Analysis was performed to analyze differences in self-reported mobile device FCyS based on the study demographics and found education level and industry type are significant, thus, addressed RQ3. Also, One-Way ANOVA Analysis was performed to analyze differences in EC2O based on the study demographics and found age and gender are significant, thus, addressed RQ4. To answer RQ5a, the developed Mobile Device Cyberslacking-Commitment Taxonomy was

used to demonstrate the employees' positions. Figure 5 shows the scatter plot of the survey results based on the two constructs. To answer RQ5b, 14 taxonomies were developed and analyzed to identify differences, if any, in employees' positions on the Mobile Cyberslacking-Commitment Taxonomy based on the study demographics.

Chapter 5

Conclusions, Implications, Recommendations, and Summary

Conclusions

This chapter presents the conclusions and implications drawn from the results of this research study with respect to the research problem and main goal. The research study's limitations are also provided, as well as recommendations for future research. Finally, this chapter concludes with an overall summary of this research study.

This research study addressed the problem of cyberslacking at the workplace during working hours (Betts et al., 2018; Gözü et al., 2015; Glassman et al., 2015; Hernández et al., 2016). The need for this work is demonstrated by (Fu & Deshpande, 2014; Glassman et al., 2015; Hernández et al., 2016; Jamaluddin et al., 2015; Phipps et al., 2013). This research study built on the aforementioned research by developing a taxonomy to classify employees' potential for productivity based on the measures of self-reported mobile device frequency of cyberslacking (FCyS) and employee's commitment to the organization (EC2O) (Figure 1). The main goal of this research study was to develop and validate, using Subject Matter Experts (SMEs), a Mobile Cyberslacking-Commitment Taxonomy using the measures of mobile devices cyberslacking based on the self-reported mobile device FCyS and EC2O to provide indirect indication for employee productivity. To develop a reliable and valid method of measuring the self-

reported mobile device FCyS and EC2O, this study achieved six goals using a three-phased approach.

In Phase One, this research study recruited a group of 19 SMEs from academic and industry sectors to answer the first two research questions:

RQ1: What are the specific subject matter experts (SMEs) identified set of items, using Delphi methodology, relevant to the measures of self-reported mobile device FCyS and EC2O at the workplace?

RQ2: What is the validity, using subject matter experts (SMEs) via the Delphi methodology, of the proposed Mobile Cyberslacking-Commitment Taxonomy to classify employee potential for productivity based on self-reported mobile device FCyS and EC2O?

This study performed a thorough review of literature to identify a list of measures for self-reported mobile device FCyS and EC2O. Then, using an anonymous online survey to collect quantitative data, one round of the Delphi method was conducted with 19 SMEs to evaluate and validate the measures of self-reported mobile device FCyS and EC2O at the workplace. The feedback from the SMEs was used to modify the measures for both constructs, which resulted in a consensus to accept the measures of self-reported mobile device FCyS and EC2O, thus answering RQ1 and RQ2.

In Phase Two, this research study recruited a group of 35 participants to validate the measures that were evaluated and revised by the SMEs. Using an anonymous online survey, quantitative data were collected and analyzed resulting in only minor wording changes, thus a consensus to accept the measures of self-reported mobile device FCyS and EC2O was achieved.

In Phase Three, one-way ANOVA was used to answer research questions RQ3 and RQ4.

RQ3: Are there any significant differences in employee self-reported frequency of engagement in mobile device cyberslacking activities based on: (1) age, (2) gender, (3) education level, (4) industry Type, (5) level at the organization, (6) years of experience using the Internet, and (7) organization type?

RQ4: Are there any significant differences in employee commitment to the organization based on: (1) age, (2) gender, (3) education level, (4) industry Type, (5) level at the organization, (6) years of experience using the Internet, and (7) organization type?

The data analysis in Phase Three used one-way ANOVA to identify any significant differences in employee self-reported mobile device FCyS based on age, gender, education level, industry Type, level at the organization, years of experience using the Internet, and organization type. The analysis of the first demographic revealed that age did not have a significant effect on the frequency of engagement in mobile device cyberslacking activities. This result is consistent with the previous findings (Khansa et al., 2017; Hernández et al., 2016) which found that there were no significant differences in employees' cyberslacking activities based on age. The analysis of the second demographic showed that gender did not have a significant effect on the frequency of engagement in mobile device cyberslacking activities This result is consistent with previous findings (Khansa et al., 2017; Hernández et al., 2016) which found that there are no significant differences in employees' cyberslacking activities based on gender. The analysis of the third demographic revealed that education level has

a significant effect on the frequency of engagement in mobile device cyberslacking activities. This result is consistent with previous findings (Hartijasti and Fathonah, 2014; Sheikh et al., 2015) which found that there were significant differences in employees' cyberslacking activities based on education level. However, the result was contrary to the findings of Hernández et al. (2016), who found that there were no significant differences in employees' cyberslacking based on level of education. The analysis of the fourth demographic revealed that industry type has a significant effect on the frequency of engagement in mobile device cyberslacking activities. The analysis of the fifth demographic revealed that level at the organization did not have a significant effect on the frequency of engagement in mobile device cyberslacking activities. This result is consistent with the preceding findings of Hernández et al. (2016), who found that there were no significant differences in employees' cyberslacking based on level at the organization. The analysis of the sixth demographic revealed that years of experience using the Internet did not have a significant effect on the frequency of engagement in mobile device cyberslacking activities. This result is contrary to the preceding findings of Ugrin and Pearson (2013) and Chang et al. (2015) who found that employees with more Internet experience cyberslack more than employees who are less experienced. The analysis of the seventh demographic revealed that organization type did not have a significant effect on the frequency of engagement in mobile device cyberslacking activities.

Also, the data analysis in Phase Three used one-way ANOVA to identify any significant differences in employee commitment to the organization based on age, gender, education level, industry type, level at the organization, years of experience using

the Internet, and organization type. The analysis of the first demographic revealed that age has a significant effect on employee commitment to the organization. This result is consistent with the preceding findings of Amangala (2013). The analysis of the second demographic showed that gender has a significant effect on employee commitment to the organization. This result is contrary with the previous findings (Konya et al., 2016), which found that gender did not have a significant effect on employee commitment to the organization. However, Amangala (2013) found that gender had a significant effect on employee commitment to the organization, which is consistent with the finding of the result of this study. The analysis of the third demographic revealed that education level did not have a significant effect on employee commitment to the organization. This result is contrary to the previous findings of Nifadkar & Dongre (2014). The analysis of the fourth demographic revealed that level at the organization did not have a significant effect on employee commitment to the organization. This result is contrary to the preceding findings (Amangala, 2013; Pala, Eker, & Eker, 2008), which found that level at the organization had a significant impact on employee commitment to the organization. The analysis of fifth demographic revealed that industry type did not have a significant effect on employee commitment to the organization. The analysis of the sixth demographic revealed that years of experience using the Internet did not have a significant effect on employee commitment to the organization. The analysis of the seventh demographic revealed that organization type did not have a significant effect on employee commitment to the organization. This result is contrary to the preceding findings of Konya et al. (2016), who found that employees of privately-owned organizations were more committed than those in public organization.

In Phase three, two data aggregations and data analytics techniques to visualize the result on the developed Mobile Cyberslacking-Commitment Taxonomy were used to answer research questions RQ5a and RQ5b.

RQ5a: How are the aggregated scores of 200 employees for the measures of self-reported mobile device FCyS and EC2O for employees positioned on the Mobile Cyberslacking-Commitment Taxonomy?

RQ5b: Are there any differences in employees' positions on the Mobile Cyberslacking-Commitment Taxonomy based on: (1) age, (2) gender, (3) education level, (4) industry Type, (5) level at the organization, (6) years of experience using the Internet, and (7) organization type?

The results of RQ5a showed that cases were distributed across all four quadrants (Q1 – Q4). A concern identified is that 4.91% of the employees were positioned in the more problematic quadrant Q4: Non-Productive, indicating this portion of the employees will not use their mobile devices at the workplace to improve their productivity. This may occur when employees are dissatisfied with their current wage or position and may want to leave the organization. The organization could improve productivity by investigating how to reduce FCyS by assigning challenging tasks to the employees and improve EC2O by offering appropriate rewards to the employees. Overall, RQ5a results also revealed that the participants had a low frequency of mobile device cyberslacking activities and a high commitment to the organization, as demonstrated with the most number of cases positioned in Q1: highly productive. This may occur when employees are highly engaged with their assigned tasks and very satisfied and committed to their organization (Table 5).

For RQ5b, the results of the analysis of Q1 – Q4 with respect to the demographics suggest general characteristics that were most frequently found among the participants whom were found in the most desirable Q1: Highly productive, as well as those in the most problematic Q4: Non-Productive. First, Q1: Highly productive, analysis suggests that females, 61-70 years old with top manager/CEO level at the organization, and having more experience using the Internet are the least likely employees to use mobile devices to cyberslack. Thus, they have better potential for productivity. Conversely, employees most likely to use mobile devices for cyberslacking activities, per Q4: will likely have a combination of the following characteristics: males, 31-50 years old, with a bachelor's degree, in construction industry, and having a supervisory position.

Study Limitations

This study identified several limitations of the research being conducted. The first limitation was the level of commitment by participants. Due to the size of the survey instrument, and the necessary time required to complete the instrument, the level of commitment by participants was a limitation. The second limitation was the survey instrument language. The English language is considered as a second language for most of the target population as result the understandability of the survey items may have affected the amount of the responses received. The third limitation was that since the case study organizations were Saudi Arabia-based, the Saudi culture may have played a role in cyberslacking activities and commitment to the organization, thus, a limitation of this study if likely it's Saudi workforce context. Finally, the quantity of questions in the survey was another limitation.

Implications

Implications for practice

The primary implication of this research study is that the results and conclusions may assist organizations in their continuous efforts to mitigate mobile cyberslacking activities at the workplace during working hours. In the context of this research, organizations can use the Mobile Cyberslacking-Commitment Taxonomy, as a benchmarking tool, to identify the position of employees where the potential for productivity is compromised and to provide recommendations to improve their productivity. Moreover, the results can help organizations to prioritize their level of effort and focus on the group of employees who is the most in need of improvement. Thus, organizations may establish organizational practices to mitigate cyberslacking issues and reduce the negative consequences associated with cyberslacking activities. Another implication is that classifying mobile cyberslacking activities and employees' commitment statements in groups will help organizations to focus on the mobile cyberslacking activities and commitment types that need more attention and immediate actions.

Implications for research

Another implication of this research study is that the Mobile Cyberslacking-Commitment Taxonomy can be used to compare the distributions of people in the quadrants across other industries, thereby increasing insight into consistencies, or inconsistencies, related to the mobile cyberslacking activities affecting employees' potential for productivity. Researchers, especially those investigating models and frameworks for employee productivity assessments, can leverage insights gained by the

Mobile Cyberslacking-Commitment Taxonomy to ensure a focus beyond mobile cyberslacking activities, thus, including more personal attributes considerations (He et al., 2014; Webber et al., 2015). Another implication is that the survey measurements were validated using SMEs from IS field; using SMEs from different domains will increase the validity of the items.

Recommendations for Future Research

The results, conclusions, and implications of this research suggest several areas for future research. One recommendation would be to perform similar research, using both the Mobile Cyberslacking-Commitment Taxonomy as well as the demographics, in different contexts, such as a developed country, and would likely present an effective comparison. Another area of future research would be measuring the daily amount of time spent on engagement in mobile cyberslacking activities and determining if there are any significant differences based on the employees' demographics. Another future research area is that researchers can further complement and elaborate the list of mobile cyberslacking activities. For instance, research can examine every group activity in further detail and provide mitigation practices. Finally, translating the survey instrument to Arabic will allow researchers to recruit more participants from different industries with different levels at the organization, which will enhance the generalizability of the findings. Also, translating the survey instrument to Arabic may increase the number of the responses, thus, improve the generalizability of the results. Each of these future studies would add to the information systems body of knowledge by adding necessary insights and recommendations regarding the impact of mobile cyberslacking activities

and employees' commitment to the organization on the employees' potential of productivity.

Summary

This research study addressed the problem of cyberslacking at the workplace during working hours (Betts et al., 2018; Gözü et al., 2015; Glassman et al., 2015; Hernández et al., 2016). The main goal of this research study was to develop and validate, using SMEs, a Mobile Cyberslacking-Commitment Taxonomy to classify employees' potential for productivity based on the based on the measures of self-reported mobile device FCyS and EC2O. The significance of this proposed study is evidenced by the magnitude of the negative consequences resulting from cyberslacking that include: reduced productivity, increased risk of viruses and spyware attack, and wasted organizational resources (Betts et al., 2018; Lebbon & Sigurjunsson, 2016; Leuprecht et al., 2016). With mobile devices connected to the Internet, most cyberslacking activities are no longer performed using the organizational information systems or devices. Thus, it has become more problematic to detect and regulate employees' cyberslacking activities (Elwell, 2014; Klotz & Buckley, 2013).

This research study is relevant because the results of developed taxonomy will contribute to the information systems body of knowledge. Organizations can use the developed taxonomy as a benchmarking tool to provide quantitative indicators and as a means of comparison when evaluating the significance of different organizational productivity issues. Thus, researchers and practitioners will be able to use the results of this research study to shape future research. Furthermore, the results of this research

study can be used to establish organizational practices to mitigate cyberslacking issues and reduce the negative consequences associated with cyberslacking activities.

To develop a reliable and valid method of measuring the self-reported mobile device FCyS and EC2O, this study achieved specific six goals using a three-phased approach. For the First Phase, using the Delphi method, an expert panel of 19 SMEs was used to validate the measures of the self-reported mobile device FCyS and EC2O as well as validate the Mobile Device Cyberslacking-Commitment Taxonomy to classify employees' potential for productivity based on the measures of self-reported mobile device FCyS and EC2O, and thus achieved the first and second specific goals. For the Second Phase, using a pilot study, a group of 35 participants were recruited to verify the validity of the survey instrument revised by SMEs. For the Third Phase, using a Web-based survey instrument, data was collected from employees who worked at organizations in Saudi Arabia. The results of the survey yielded 265 usable responses for analysis, a response rate of 24.93%.

Tests for validity and reliability were also performed and both were found to be well supported. Then, one-Way ANOVA Analysis was performed to analyze differences in self-reported mobile device FCyS based on the study demographics and found education level and industry type were significant, and thus achieved the third specific goal. Also, One-Way ANOVA Analysis was performed to analyze differences in EC2O based on the study demographics and found age and gender were significant, and thus achieved the fourth specific goal.

The data aggregations showed that cases were distributed across all four quadrants (Q1 – Q4). The results also revealed that the participants had a low frequency

of mobile device cyberslacking activities and a high commitment to the organization, as demonstrated with the most number of cases positioned in Q1: highly productive. Also, the analysis revealed that with respect to the demographics general characteristics that were most frequently found among the participants whom were found in the most desirable Q1: Highly productive, as well as those in the most problematic Q4: Non-Productive. Q1analysis suggests that females, 61-70 years old with top manager/ CEO level at the organization, and having more experience using the Internet were the least likely employees to use mobile devices to cyberslack. Thus, they had better potential for productivity. Conversely, employees most likely to use mobile devices for cyberslacking activities, per Q4: will likely have a combination of the following characteristics: males, 31-50 years old, with a bachelor's degree, in construction industry, and having a supervisory position. Thus, this analysis achieved the fifth and sixth specific goals.

Appendix A

Expert Panel Recruitment

Dear IT/IS Expert,

My name is Saleh Alharthi and I am a doctoral candidate at the college of Engineering and Computing, Nova Southeastern University (NSU). I am currently working on a dissertation entitled "A Developmental Research of a Taxonomy for Employees' Mobile Device Cyberslacking and Commitment to the Organization in the Context of Productivity." The research problem that this proposed study will address is cyberslacking at the workplace as it relates to productivity. The main goal of this proposed research study is to develop and validate, using Subject Matter Experts (SMEs), a Mobile Cyberslacking-Commitment Taxonomy using the measures of mobile device cyberslacking based on the self-reported frequency of mobile device cyberslacking (FCyS) and employee's commitment to the organization (EC2O) to provide indication for employee productivity.

Based on your expertise you were identified as an expert who could provide a qualitative evaluation of the survey instrument for the aforementioned research. I am asking for your volunteer participation as a member of an expert panel for this research. In this capacity, I respectfully ask that you review the preliminary survey instrument attached to this email and complete the qualitative evaluation form using the link below. Your input will shape the final instrument for this proposed study.

Your participation is voluntary and all responses will be strictly confidential. I expect your evaluation should take 10 to 20 minutes. I appreciate that your time is very valuable so I sincerely appreciate your support.

If you are willing to participate in this research, please select the link below to complete the expert panel evaluation.

Click Here for Expert Panel Evaluation Form

Should you have any questions, please e-mail me at sa1497@mynsu.nova.edu.

Best Regards,

Saleh Alharthi
College of Engineering and Computing
Nova Southeastern University

Appendix B

Expert Panel Instrument

A Developmental Research of a Taxonomy for Employees' Mobile Device Cyberslacking and Commitment to the Organization in the Context of Productivity

Dear IT/IS Expert,
My name is Saleh Alharthi and I am a doctoral candidate at the college of Engineering and Computing, Nova Southeastern University (NSU). I am currently working under the supervision of Dr. Yair Levy on a dissertation entitled "A Developmental Research of a Taxonomy for Employees' Mobile Device Cyberslacking and Commitment to the Organization in the Context of Productivity." In this study, cyberslacking refers to employees perform activities unrelated to work using the Internet at the workplace during working hours. The research problem that this proposed study will address is cyberslacking at the workplace as it relates to productivity. The main goal of this proposed research study is to develop and validate, using Subject Matter Experts (SMEs), a Mobile Cyberslacking-Commitment Taxonomy using the measures of mobile device cyberslacking based on the self-reported frequency of mobile device cyberslacking (FCyS) and employee commitment to the organization (EC2O) to provide indication for employee productivity.

Based on your expertise you were identified as an expert who could provide a qualitative evaluation of the survey instrument for the aforementioned research. I am asking for your volunteer participation as a member of an expert panel for this research. In this capacity, I respectfully ask that you review the preliminary survey instrument attached to this email and complete the quantitative and qualitative evaluation form using the link below. Your input will shape the final instrument for this proposed study.

Your participation is voluntary and all responses will be strictly confidential. the evaluation may take 10 to 20 minutes to complete. I appreciate that your time is very valuable so I sincerely appreciate your support.

In these sections below, you are asked to provide your expert opinion about the survey directions, the survey items for both sections, and validate the Mobile Cyberslacking-Commitment Taxonomy.

For each of the proposed section below, please answer the following questions:

1- Please rate your level of agreement, from 1 (Strongly Disagree) to 7 (Strongly Agree), with the participant instructions to answer the survey items and the proposed scale stated in a clear and understandable manner?
2- Please rate your level of agreement, from 1 (Strongly Disagree) to 7 (Strongly Agree), with the survey items related to the frequency of mobile device cyberslacking (FCyS) and employee commitment to the organization (EC2O) stated in a clear and understandable manner.
3- Please rate your level of agreement, from 1 (Strongly Disagree) to 7 (Strongly Agree), with the validity of the Mobile Cyberslacking-Commitment Taxonomy to classify employees' potential for productivity based on the frequency of mobile device cyberslacking (FCyS) and employee commitment to the organization (EC2O).

NOTE:
Participants may not want to reveal the accurate frequency of their cyberslacking activities because they consider it to be personal or may not consider some of their activities as cyberslacking. Thus, specific list of activities will be provided under the term "Internet activities", without the use of the term "cyberslacking". If you have additional expert opinion on how to provide the list of Internet activities to the participants to measure cyberslacking, but allow a reduce bias from the users, please do provide it at the recommendation fields available below.

Should you have any questions, please e-mail me at sa1497@mynsu.nova.edu.

Regards,

Saleh Alharthi
PhD Student in Information Systems
Nova Southeastern University

* Required

Section 1: Frequency of Mobile Device Internet Activities During Working Hours in the Workplace

You are asked to evaluate the Instructions to the participants noted below that will be used for the following five categories (1. Sharing, 2. Shopping, 3. Real-Time Updating, 4. Accessing Online Content, & 5. Gaming/Betting).

Instructions to participants:

The items below are related to your frequency of mobile Internet activities using mobile device during working hours at the workplace. Please indicate the frequency that you are engaged in each of the following Internet activities by indicating one of the options from "Never (1)" to "Every Time (7)" using the following scale:
1 – Never
2 – Rarely, in less than 10% of the chances when I could have
3 – Occasionally, in about 30% of the chances when I could have
4 – Sometimes, in about 50% of the chances when I could have
5 – Frequently, in about 70% of the chances when I could have
6 – Usually, in about 90% of the chances I could have.
7 – Every time.

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the participant instructions to answer the survey items for the list of activities in the five categories as well as proposed scale stated in a clear and understandable manner? *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the instructions and scale.

Your answer

1. Sharing

As an expert, please provide your evaluation of the following list of activities.

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Check my friends' posts.	○	○	○	○	○	○	○
Check my friends' social networking profiles.	○	○	○	○	○	○	○
Share content on social networks (photo, video, etc.).	○	○	○	○	○	○	○
Like posts that are interesting.	○	○	○	○	○	○	○
Comment on shared photos.	○	○	○	○	○	○	○
Post status updates on social networks.	○	○	○	○	○	○	○
Tag friends on photos.	○	○	○	○	○	○	○
Chat with friends.	○	○	○	○	○	○	○
Watch shared videos.	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey items related to sharing activities stated in a clear and understandable manner. *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the items.

Your answer

2. Shopping

As an expert, please provide your evaluation of the following list of activities.

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Shop online.	○	○	○	○	○	○	○
Visit deal-of-the-day websites.	○	○	○	○	○	○	○
Visit auction sites.	○	○	○	○	○	○	○
Visit online shopping sites.	○	○	○	○	○	○	○
Use online banking services.	○	○	○	○	○	○	○
Post status updates on social networks.	○	○	○	○	○	○	○
Check job advertisements	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey items related to shopping activities stated in a clear and understandable manner. *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the items.

Your answer

3. Real-Time Updating

As an expert, please provide your evaluation of the following list of activities.

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Retweet a tweet I like.	○	○	○	○	○	○	○
Favorite a post I like in online social network sites (e.g., Twitter and Facebook).	○	○	○	○	○	○	○
Post messages in online social network sites (e.g., Twitter and Facebook)	○	○	○	○	○	○	○
Read post messages in online social network sites (e.g., Twitter and Facebook).	○	○	○	○	○	○	○

Comment on trending topics.	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey items related to real-time update activities stated in a clear and understandable manner. *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the items.

Your answer

4. Accessing Online Content

As an expert, please provide your evaluation of the following list of activities.

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Download music.	○	○	○	○	○	○	○
Listen to music online.	○	○	○	○	○	○	○
Download videos.	○	○	○	○	○	○	○
Download applications I need.	○	○	○	○	○	○	○
Watch videos online	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey items related to accessing online content activities stated in a clear and understandable manner. *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the items.

Your answer

5. Gaming/Betting

As an expert, please provide your evaluation of the following list of activities.

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Visit betting sites.	○	○	○	○	○	○	○
Check online sport sites.	○	○	○	○	○	○	○
Download online games	○	○	○	○	○	○	○
Play online games.	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey items related to gaming/betting activities stated in a clear and understandable manner.

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the items.

Your answer

Section 2: Employee Commitment to the Organization

You are asked to evaluate the Instructions to the participants noted below that will be used for the following three categories (1. Affective Commitment, 2. Continuance Commitment, & 3. Normative Commitment).

Instructions to participants:

The items below are related to your commitment to your organization. Please rate how probable you think each of the following statements are by indicating one of the options from "Strongly Disagree (1)" to "Strongly Agree (7)."

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree)with the participant instructions to answer the survey statements for Employee Commitment to the Organization stated in clear and understandable manner? *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the instructions and scale.

Your answer

1. Affective Commitment

As an expert, please provide your evaluation of the following list of statements.

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree
I would be very happy to spend the rest of my career with this organization.	○	○	○	○	○	○	○
I enjoy discussing my organization with people outside it.	○	○	○	○	○	○	○
I really feel as if this organization's problems are my own.	○	○	○	○	○	○	○
This organization has a great deal of personal meaning for me.	○	○	○	○	○	○	○
I think that I could easily become as attached to another organization as I am to this one	○	○	○	○	○	○	○
I do not feel like 'part of the family' at my organization.	○	○	○	○	○	○	○
I do not feel 'emotionally attached' to this organization.	○	○	○	○	○	○	○
I do not feel a strong sense of belonging to my organization	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey statements related to affective commitment stated in a clear and understandable manner. *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the statements.

Your answer

2. Continuance Commitment

As an expert, please provide your evaluation of the following list of statements.

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree
I am not afraid of what might happen if I quit my job without having another one lined up	○	○	○	○	○	○	○
It would be very hard for me to leave my organization right now, even if I wanted to	○	○	○	○	○	○	○
Too much in my life would be disrupted if I decide I want to leave my organization now	○	○	○	○	○	○	○
It would not be too costly for me to leave my organization now	○	○	○	○	○	○	○
Right now, staying with my organization is a matter of necessity as much as desire.	○	○	○	○	○	○	○

I feel that I have too few options to consider leaving this organization	○	○	○	○	○	○	○
One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.	○	○	○	○	○	○	○
One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice – another organization may not match the overall benefits I have here.	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey statements related to continuance commitment that in a clear and understandable manner. *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the statements.

Your answer

3. Normative Commitment

As an expert, please provide your evaluation of the following list of statements.

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree
I think that people these days move from company to company too often.	○	○	○	○	○	○	○
I do not believe that a person must always be loyal to his or her organization.	○	○	○	○	○	○	○
Jumping from organization to organization does not seem at all unethical to me.	○	○	○	○	○	○	○
One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.	○	○	○	○	○	○	○
If I got another offer for a better job elsewhere I would not feel it was right to leave my organization.	○	○	○	○	○	○	○
I was taught to believe in the value of remaining loyal to one organization.	○	○	○	○	○	○	○

I was taught to believe in the value of remaining loyal to one organization.	○	○	○	○	○	○	○
Things were better in the days when people stayed with one organization for most of their careers.	○	○	○	○	○	○	○
I do not think that wanting to be a 'company man' or 'company woman' is sensible anymore.	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey statements related to normative commitment stated in a clear and understandable manner. *

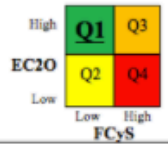
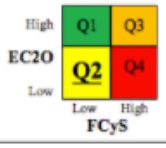
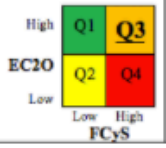
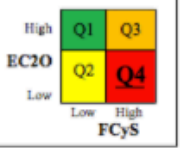
	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the statements.

Your answer

Section 3: The Mobile Cyberslacking-Commitment Taxonomy

As an expert, you are asked to evaluate the validity of the Mobile Cyberslacking-Commitment Taxonomy

First Quadrant (Q1) Highly-Productive	Second Quadrant (Q2) Moderated Productivity	Third Quadrant (Q3) Limited Productivity	Fourth Quadrant (Q4) Non-Productive
Consists of high employee commitment to the organization (EC2O) and low frequency of cyberslacking activities (FCyS)	Consists of low employee commitment to the organization (EC2O) and low frequency of cyberslacking activities (FCyS)	Consists of high employee commitment to the organization (EC2O) and high frequency of cyberslacking activities (FCyS)	Consists of low employee commitment to the organization (EC2O) and high frequency of cyberslacking activities (FCyS)
Employees positioned in this quadrant are expected to be the most likely to use mobile devices to improve their productivity	Employee positioned in this quadrant may use mobile devices less intensively to improve their productivity	Employees positioned in this quadrant are expected to be the least likely to use mobile devices to improve their productivity	Employees positioned in this quadrant will not use mobile devices to improve their productivity
			

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) that the Mobile Cyberslacking-Commitment Taxonomy is valid to classify employees' potential for productivity based on the frequency of mobile device cyberslacking (FCyS) and employee commitment to the organization (EC2O) *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the Mobile Cyberslacking-Commitment Taxonomy

Your answer

Section 4: Expert Demographics

Please tell us more about yourself.

Age *

- ◯ 1) 21–30
- ◯ 2) 31–40
- ◯ 3) 41–50
- ◯ 4) 51–60
- ◯ 5) 61–70
- ◯ 6) 71 and over

Gender *

- ◯ Male
- ◯ Female

Education Level *

- ◯ High School
- ◯ Associate Degree
- ◯ Undergraduate
- ◯ Master
- ◯ Doctorate

Level at the Organization *

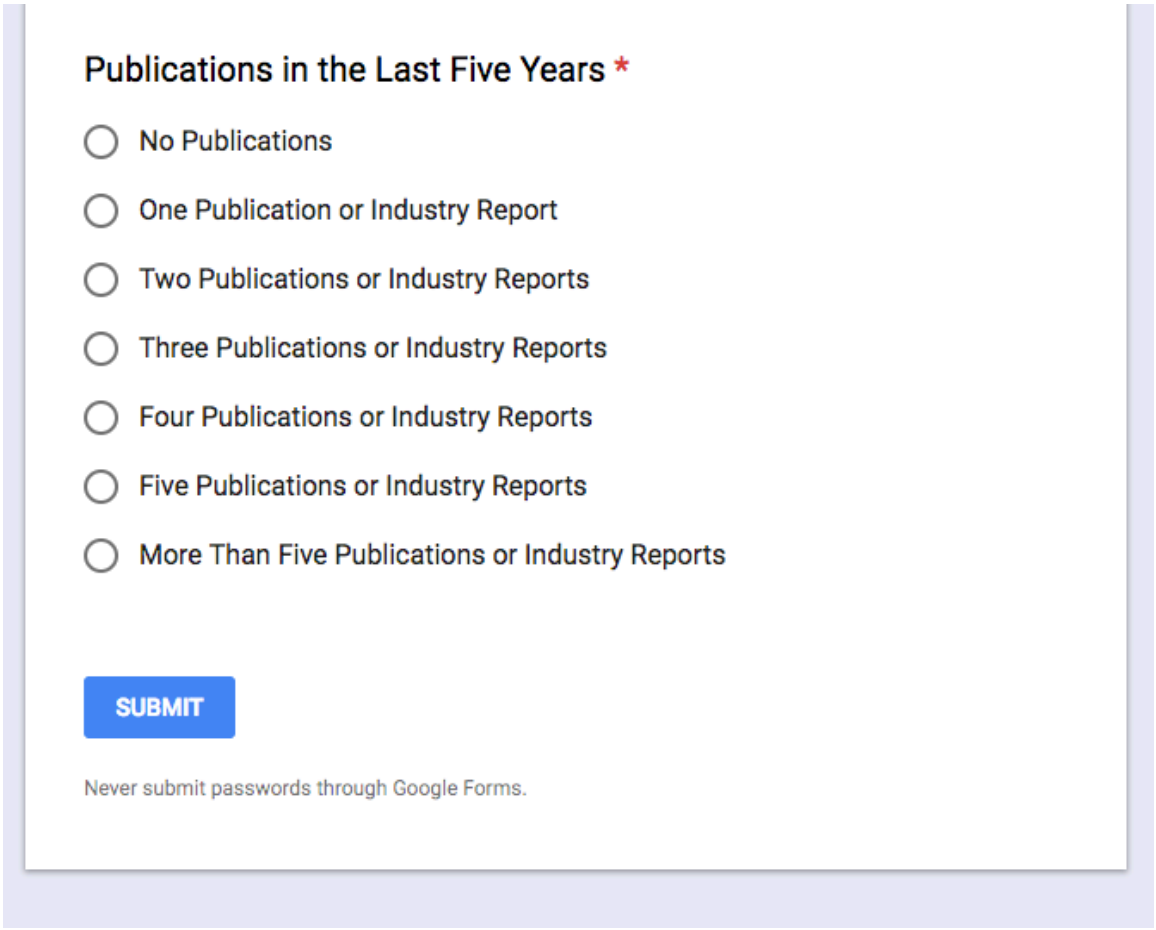
- ◯ Entery Level/staff
- ◯ Supervisor
- ◯ Middle Manager
- ◯ Top Manager/Chief Officer
- ◯ Academic/Higher Education

Industry Type *

- ◯ Banking and Financial Institutions
- ◯ Construction
- ◯ Education/Higher Education
- ◯ Electronics
- ◯ Energy and Petroleum
- ◯ Government military
- ◯ Healthcare
- ◯ IT Services
- ◯ Insurance
- ◯ Professional Services
- ◯ Real Estate
- ◯ Retail
- ◯ Telecommunication
- ◯ Other: _____

Years Of Experience in the Information Systems field *

- ◯ 1) Less than 1 year
- ◯ 2) 1 to 5 years
- ◯ 3) 6 to 10 years
- ◯ 4) 11 to 15 years
- ◯ 5) 16 to 20 years
- ◯ 6) 21 years or longer



Publications in the Last Five Years *

- ○ No Publications
- ○ One Publication or Industry Report
- ○ Two Publications or Industry Reports
- ○ Three Publications or Industry Reports
- ○ Four Publications or Industry Reports
- ○ Five Publications or Industry Reports
- ○ More Than Five Publications or Industry Reports

SUBMIT

Never submit passwords through Google Forms.

Appendix C

Pilot Study Participants' Recruitment Announcement

Dear Participants,

I am a doctoral candidate at Nova Southeastern University working on a dissertation that investigating the use of mobile device for cyber activities by employees during working hours at the workplace. The results of this proposed study will provide researchers and practitioners more insight on the use of mobile devices by employees for cyber activities.

I would appreciate your time in participating in this quantitative research survey. The survey is divided into three sections and will take approximately 10 to 15 minutes to complete. You will be asked to review the survey items, provide your answer to them, and then complete a brief form to solicit your feedback on the clarity of the survey questions and scales, as well as any other recommendations you may have to improve the survey before it is distributed to the participants.

Thus, your feedback is very important. Your participation is voluntary and all responses will be strictly confidential. All information gathered during this study will be protected and will not be distributed for any other use than academic research. Furthermore, the survey does not collect any personal identification information and is completely anonymous.

If you are willing to participate in this research, please select the link below to complete this brief survey. Completion of this survey indicates your voluntary participation in this study.

Click Here for Pilot Test

Should you have any questions, please e-mail me at sa1497@mynsu.nova.edu.

Best Regards,

Saleh Alharthi
College of Engineering and Computing
Nova Southeastern University

Appendix D

Initial Draft Pilot Study Participants' Survey Instrument

NOTE: This initial draft will be revised after the expert panel reach consensus for the initial survey instrument

Section 1: Frequency of Cyber Activities During Working Hours at the workplace
The items in Section 2 below are related to your frequency of cyber activities using mobile device during working hours at the workplace. Please indicate the frequency that you are engaged in each of the following cyber activities by indicating one of the options from "Never (1)" to "Every Time (7)" using the following scale:
1 – Never
2 – Rarely, in less than 10% of the chances when I could have
3 – Occasionally, in about 30% of the chances when I could have
4 – Sometimes, in about 50% of the chances when I could have
5 – Frequently, in about 70% of the chances when I could have
6 – Usually, in about 90% of the chances I could have.
7 – Every time.

Item	(1) Never	(2) Rarely	(3) Occasionally	(4) Sometimes	(5) Frequently	(6) Usually	(7) Every Time
Factor 1 – Sharing							
FCyS1: Check my friends' posts.	☐	☐	☐	☐	☐	☐	☐
FCyS2: Check my friends' social networking profiles.	☐	☐	☐	☐	☐	☐	☐
FCyS3: Share content on social networks (photo, video, etc.).	☐	☐	☐	☐	☐	☐	☐
FCyS4: Like posts that are interesting	☐	☐	☐	☐	☐	☐	☐
FCyS5: Comment on shared photos.	☐	☐	☐	☐	☐	☐	☐
FCyS6: Post status updates on social networks.	☐	☐	☐	☐	☐	☐	☐
FCyS7: Tag friends on photos.	☐	☐	☐	☐	☐	☐	☐
FCyS8: Chat with friends.	☐	☐	☐	☐	☐	☐	☐
FCyS9: Watch shared videos.	☐	☐	☐	☐	☐	☐	☐
Factor 2 – Shopping							

Item	(1) Never	(2) Rarely	(3) Occasionally	(4) Sometimes	(5) Frequently	(6) Usually	(7) Every Time
FCyS10: Shop online	☐	☐	☐	☐	☐	☐	☐
FCyS11: Visit deal-of-the-day websites.	☐	☐	☐	☐	☐	☐	☐
FCyS12: Visit auction sites.	☐	☐	☐	☐	☐	☐	☐
FCyS13: Visit online shopping sites.	☐	☐	☐	☐	☐	☐	☐
FCyS14: Use online banking services.	☐	☐	☐	☐	☐	☐	☐
FCyS15: Check job advertisements	☐	☐	☐	☐	☐	☐	☐
Factor 3 – Real-time updating							
FCyS16: Retweet a tweet I like.	☐	☐	☐	☐	☐	☐	☐
FCyS17: Favorite a post I like in online social network sites (e.g., Twitter and Facebook).	☐	☐	☐	☐	☐	☐	☐
FCyS18: Post messages in online social network sites (e.g., Twitter and Facebook)	☐	☐	☐	☐	☐	☐	☐
FCyS19: Read post messages in online social network sites (e.g., Twitter and Facebook).	☐	☐	☐	☐	☐	☐	☐
FCyS20: Comment on trending topics.	☐	☐	☐	☐	☐	☐	☐
Factor 4 – Accessing online content							
FCyS21: Download music.	☐	☐	☐	☐	☐	☐	☐
FCyS22: Listen to music online.	☐	☐	☐	☐	☐	☐	☐
FCyS23: Download videos.	☐	☐	☐	☐	☐	☐	☐
FCyS24: Download applications I need.	☐	☐	☐	☐	☐	☐	☐
FCyS25: Watch videos online	☐	☐	☐	☐	☐	☐	☐

Item	(1) Never	(2) Rarely	(3) Occasionally	(4) Sometimes	(5) Frequently	(6) Usually	(7) Every Time
Factor 5 – Gaming/Betting							
FCyS26: Visit betting sites.	☐	☐	☐	☐	☐	☐	☐
FCyS27: Check online sport sites.	☐	☐	☐	☐	☐	☐	☐
FCyS28: Download online games	☐	☐	☐	☐	☐	☐	☐
FCyS29: Play online games.	☐	☐	☐	☐	☐	☐	☐

Section 2: Employee commitment to the Organization.

The items in Section 2 below are related to your commitment to your organization. Please rate how probable you think each of the following statements are by indicating one of the options from "Strongly Disagree (1)" to "Strongly Agree (7)."

Item	(1) Strongly Disagree	(2) Somewhat Disagree	(3) Disagree	(4) Neither Agree nor Disagree	(5) Agree	(6) Somewhat Agree	(7) Strongly Agree
Affective Commitment							
EC2O1: I would be very happy to spend the rest of my career with this organization.	☐	☐	☐	☐	☐	☐	☐
EC2O2: I enjoy discussing my organization with people outside it.	☐	☐	☐	☐	☐	☐	☐
EC2O3: I really feel as if this organization's problems are my own.	☐	☐	☐	☐	☐	☐	☐
EC2O4: this organization has a great deal of personal meaning for me.	☐	☐	☐	☐	☐	☐	☐
EC2O5: I think that I could easily become as attached to another organization as I am to this one	☐	☐	☐	☐	☐	☐	☐
EC2O6: I do not feel like 'part of the	☐	☐	☐	☐	☐	☐	☐

Item	(1) Strongly Disagree	(2) Somewhat Disagree	(3) Disagree	(4) Neither Agree nor Disagree	(5) Agree	(6) Somewhat Agree	(7) Strongly Agree
family' at my organization.							
EC2O7: I do not feel 'emotionally attached' to this organization.	☐	☐	☐	☐	☐	☐	☐
EC2O8: I do not feel a strong sense of belonging to my organization	☐	☐	☐	☐	☐	☐	☐
Continuance Commitment							
EC2O9: I am not afraid of what might happen if I quit my job without having another one lined up	☐	☐	☐	☐	☐	☐	☐
EC2O10: It would be very hard for me to leave my organization right now, even if I wanted to	☐	☐	☐	☐	☐	☐	☐
EC2O11: Too much in my life would be disrupted if I decide I want to leave my organization now	☐	☐	☐	☐	☐	☐	☐
EC2O12: It wouldn't be too costly for me to leave my organization now	☐	☐	☐	☐	☐	☐	☐
EC2O13: Right now, staying with my organization is a matter of necessity as much as desire.	☐	☐	☐	☐	☐	☐	☐
EC2O14: I feel that I have too few options to consider leaving this organization	☐	☐	☐	☐	☐	☐	☐
EC2O15: One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.	☐	☐	☐	☐	☐	☐	☐
EC2O16: One of the major reasons I continue to work for	☐	☐	☐	☐	☐	☐	☐

Item	(1) Strongly Disagree	(2) Somewhat Disagree	(3) Disagree	(4) Neither Agree nor Disagree	(5) Agree	(6) Somewhat Agree	(7) Strongly Agree
this organization is that leaving would require considerable personal sacrifice — another organization may not match the overall benefits I have here.							
Normative Commitment							
EC2O17: I think that people these days move from company to company too often.	☐	☐	☐	☐	☐	☐	☐
EC2O18: I do not believe that a person must always be loyal to his or her organization.	☐	☐	☐	☐	☐	☐	☐
EC2O19: Jumping from organization to organization does not seem at all unethical to me.	☐	☐	☐	☐	☐	☐	☐
EC2O20: One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.	☐	☐	☐	☐	☐	☐	☐
EC2O21: If l got another offer for a better job elsewhere I would not feel it was right to leave my organization.	☐	☐	☐	☐	☐	☐	☐
EC2O22: I was taught to believe in the value of remaining loyal to one organization.	☐	☐	☐	☐	☐	☐	☐
EC2O23: Things were better in the days when people stayed with one organization for most of their careers.	☐	☐	☐	☐	☐	☐	☐

Item	(1) Strongly Disagree	(2) Somewhat Disagree	(3) Disagree	(4) Neither Agree nor Disagree	(5) Agree	(6) Somewhat Agree	(7) Strongly Agree
EC2O24: I do not think that wanting to be a 'company man' or 'company woman' is sensible anymore.	☐	☐	☐	☐	☐	☐	☐

Section 3. Employee's Demographics

Please tell us more about yourself

D1. Age
1. 18-20
2. 21–30
3. 31–40
4. 41–50
5. 51–60
6. 61–70
7. 71 and over

D2. Gender
1. Female
2. Male

D3. Level at the Organization
1. Entry Level/Staff
2. Supervisor
3. Middle Manager
4. Top Manager/Chief Officer
5. Academic/Higher education

D4. Education Level
1. High School
2. Associate Degree
3. Undergraduate
4. Master
5. Doctorate

D5. Industry Type
1. Banking and Financial Institutions
2. Construction
3. Education
4. Electronics
5. Energy and Petroleum
6. Government military
7. Healthcare
8. IT Services
9. Insurance
10. Professional Services
11. Real Estate
12. Retail
13. Telecommunication
14. Transportation
15. Other

D6. Years of Experience Using the Internet
1. Less than 1 year
2. 1 to 5 years
3. 6 to 10 years
4. 11 to 15 years
5. 16 to 20 years
6. 21 years or longer

D7. Organization Type
1. Public
2. Private

Appendix E

Study Participants' Recruitment Announcement

Dear Participant,

I am a doctoral candidate at Nova Southeastern University working on a dissertation that investigating the use of mobile device for cyber activities by employees during working hours at the workplace. The results of this proposed study will provide researchers and practitioners more insight on the use of mobile devices by employees for cyber activities.

I would appreciate your time in participating in this quantitative research survey. The survey is divided into three sections and will take approximately 10 to 15 minutes to complete. All information gathered during this study will be protected and will not be distributed for any other use than academic research. Furthermore, the survey does not collect any personal identification information and is completely anonymous.

If you are willing to participate in this research, please select the link below to complete this brief survey. Completion of this survey indicates your voluntary participation in this study.

Click Here for Survey

Should you have any questions, please e-mail me at sa1497@mynsu.nova.edu.

Best Regards,

Saleh Alharthi

College of Engineering and Computing
Nova Southeastern University

Appendix F

Initial Draft Study Participants' Survey Instrument

NOTE: This initial draft will be revised after the pilot study survey instrument is adjusted.

Section 1: Frequency of Cyber Activities During Working Hours at the workplace
The items in Section 2 below are related to your frequency of cyber activities using mobile device during working hours at the workplace. Please indicate the frequency that you are engaged in each of the following cyber activities by indicating one of the options from "Never (1)" to "Every Time (7)" using the following scale:
1 – Never
2 – Rarely, in less than 10% of the chances when I could have
3 – Occasionally, in about 30% of the chances when I could have
4 – Sometimes, in about 50% of the chances when I could have
5 – Frequently, in about 70% of the chances when I could have
6 – Usually, in about 90% of the chances I could have.
7 – Every time.

Item	(1) Never	(2) Rarely	(3) Occasionally	(4) Sometimes	(5) Frequently	(6) Usually	(7) Every Time
Factor 1 – Sharing							
FCyS1: Check my friends' posts.	☐	☐	☐	☐	☐	☐	☐
FCyS2: Check my friends' social networking profiles.	☐	☐	☐	☐	☐	☐	☐
FCyS3: Share content on social networks (photo, video, etc.).	☐	☐	☐	☐	☐	☐	☐
FCyS4: Like posts that are interesting	☐	☐	☐	☐	☐	☐	☐
FCyS5: Comment on shared photos.	☐	☐	☐	☐	☐	☐	☐
FCyS6: Post status updates on social networks.	☐	☐	☐	☐	☐	☐	☐
FCyS7: Tag friends on photos.	☐	☐	☐	☐	☐	☐	☐
FCyS8: Chat with friends.	☐	☐	☐	☐	☐	☐	☐
FCyS9: Watch shared videos.	☐	☐	☐	☐	☐	☐	☐
Factor 2 – Shopping							
FCyS10: Shop online	☐	☐	☐	☐	☐	☐	☐

Item	(1) Never	(2) Rarely	(3) Occasionally	(4) Sometimes	(5) Frequently	(6) Usually	(7) Every Time
FCyS11: Visit deal-of-the-day websites.	☐	☐	☐	☐	☐	☐	☐
FCyS12: Visit auction sites.	☐	☐	☐	☐	☐	☐	☐
FCyS13: Visit online shopping sites.	☐	☐	☐	☐	☐	☐	☐
FCyS14: Use online banking services.	☐	☐	☐	☐	☐	☐	☐
FCyS15: Check job advertisements	☐	☐	☐	☐	☐	☐	☐
Factor 3 – Real-time updating							
FCyS16: Retweet a tweet I like.	☐	☐	☐	☐	☐	☐	☐
FCyS17: Favorite a post I like in online social network sites (e.g., Twitter and Facebook).	☐	☐	☐	☐	☐	☐	☐
FCyS18: Post messages in online social network sites (e.g., Twitter and Facebook)	☐	☐	☐	☐	☐	☐	☐
FCyS19: Read post messages in online social network sites (e.g., Twitter and Facebook).	☐	☐	☐	☐	☐	☐	☐
FCyS20: Comment on trending topics.	☐	☐	☐	☐	☐	☐	☐
Factor 4 – Accessing online content							
FCyS21: Download music.	☐	☐	☐	☐	☐	☐	☐
FCyS22: Listen to music online.	☐	☐	☐	☐	☐	☐	☐
FCyS23: Download videos.	☐	☐	☐	☐	☐	☐	☐
FCyS24: Download applications I need.	☐	☐	☐	☐	☐	☐	☐
FCyS25: Watch videos online	☐	☐	☐	☐	☐	☐	☐
Factor 5 – Gaming/Betting							

Item	(1) Never	(2) Rarely	(3) Occasionally	(4) Sometimes	(5) Frequently	(6) Usually	(7) Every Time
FCyS26: Visit betting sites.	☐	☐	☐	☐	☐	☐	☐
FCyS27: Check online sport sites.	☐	☐	☐	☐	☐	☐	☐
FCyS28: Download online games	☐	☐	☐	☐	☐	☐	☐
FCyS29: Play online games.	☐	☐	☐	☐	☐	☐	☐

Section 2: Employee commitment to the Organization.

The items in Section 2 below are related to your commitment to your organization. Please rate how probable you think each of the following statements are by indicating one of the options from "Strongly Disagree (1)" to "Strongly Agree (7)."

Item	(1) Strongly Disagree	(2) Somewhat Disagree	(3) Disagree	(4) Neither Agree nor Disagree	(5) Agree	(6) Somewhat Agree	(7) Strongly Agree
Affective Commitment							
EC2O1: I would be very happy to spend the rest of my career with this organization.	☐	☐	☐	☐	☐	☐	☐
EC2O2: I enjoy discussing my organization with people outside it.	☐	☐	☐	☐	☐	☐	☐
EC2O3: I really feel as if this organization's problems are my own.	☐	☐	☐	☐	☐	☐	☐
EC2O4: this organization has a great deal of personal meaning for me.	☐	☐	☐	☐	☐	☐	☐
EC2O5: I think that I could easily become as attached to another organization as I am to this one	☐	☐	☐	☐	☐	☐	☐
EC2O6: I do not feel like 'part of the family' at my organization.	☐	☐	☐	☐	☐	☐	☐

Item	(1) Strongly Disagree	(2) Somewhat Disagree	(3) Disagree	(4) Neither Agree nor Disagree	(5) Agree	(6) Somewhat Agree	(7) Strongly Agree
EC2O7: I do not feel 'emotionally attached' to this organization.	☐	☐	☐	☐	☐	☐	☐
EC2O8: I do not feel a strong sense of belonging to my organization	☐	☐	☐	☐	☐	☐	☐
Continuance Commitment							
EC2O9: I am not afraid of what might happen if I quit my job without having another one lined up	☐	☐	☐	☐	☐	☐	☐
EC2O10: It would be very hard for me to leave my organization right now, even if I wanted to	☐	☐	☐	☐	☐	☐	☐
EC2O11: Too much in my life would be disrupted if I decide I want to leave my organization now	☐	☐	☐	☐	☐	☐	☐
EC2O12: It wouldn't be too costly for me to leave my organization now	☐	☐	☐	☐	☐	☐	☐
EC2O13: Right now, staying with my organization is a matter of necessity as much as desire.	☐	☐	☐	☐	☐	☐	☐
EC2O14: I feel that I have too few options to consider leaving this organization	☐	☐	☐	☐	☐	☐	☐
EC2O15: One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.	☐	☐	☐	☐	☐	☐	☐
EC2O16: One of the major reasons I continue to work for this organization is that leaving would	☐	☐	☐	☐	☐	☐	☐

Item	(1) Strongly Disagree	(2) Somewhat Disagree	(3) Disagree	(4) Neither Agree nor Disagree	(5) Agree	(6) Somewhat Agree	(7) Strongly Agree
require considerable personal sacrifice — another organization may not match the overall benefits I have here.							
Normative Commitment							
EC2O17: I think that people these days move from company to company too often.	☐	☐	☐	☐	☐	☐	☐
EC2O18: I do not believe that a person must always be loyal to his or her organization.	☐	☐	☐	☐	☐	☐	☐
EC2O19: Jumping from organization to organization does not seem at all unethical to me.	☐	☐	☐	☐	☐	☐	☐
EC2O20: One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.	☐	☐	☐	☐	☐	☐	☐
EC2O21: If l got another offer for a better job elsewhere I would not feel it was right to leave my organization.	☐	☐	☐	☐	☐	☐	☐
EC2O22: I was taught to believe in the value of remaining loyal to one organization.	☐	☐	☐	☐	☐	☐	☐
EC2O23: Things were better in the days when people stayed with one organization for most of their careers.	☐	☐	☐	☐	☐	☐	☐
EC2O24: I do not think that wanting to be a 'company man'	☐	☐	☐	☐	☐	☐	☐

Item	(1) Strongly Disagree	(2) Somewhat Disagree	(3) Disagree	(4) Neither Agree nor Disagree	(5) Agree	(6) Somewhat Agree	(7) Strongly Agree
or 'company woman' is sensible anymore.							

Section 3. Employee's Demographics

Please tell us more about yourself

D1. Age
1. 18-20
2. 21–30
3. 31–40
4. 41–50
5. 51–60
6. 61–70
7. 71 and over

D2. Gender
1. Female
2. Male

D3. Level at the Organization
1. Entry Level/Staff
2. Supervisor
3. Middle Manager
4. Top Manager/Chief Officer

D4. Education Level
1. High School
2. Associate Degree
3. Undergraduate
4. Master
5. Doctorate

D5. Industry Type
1. Banking and Financial Institutions
2. Construction
3. Education
4. Electronics
5. Energy and Petroleum
6. Government military
7. Healthcare
8. IT Services
9. Insurance
10. Professional Services
11. Real Estate
12. Retail
13. Telecommunication
14. Other

D6. Years of Experience Using the Internet
1. Less than 1 year
2. 1 to 5 years
3. 6 to 10 years
4. 11 to 15 years
5. 16 to 20 years
6. 21 years or longer

D7. Organization Type
1. Public
2. Private

Appendix G

IRB Approval Letter

NOVA SOUTHEASTERN UNIVERSITY
Institutional Review Board

MEMORANDUM

To: **Saleh Alharthi**

From: **Ling Wang, Ph.D.,**
Center Representative, Institutional Review Board

Date: **March 21, 2018**

Re: **IRB #: 2018-152; Title, "A Developmental Research of a Taxonomy for Employees' Mobile Device Cyberslacking and Commitment to the Organization in the Context of Productivity."**

I have reviewed the above-referenced research protocol at the center level. Based on the information provided, I have determined that this study is exempt from further IRB review under **45 CFR 46.101(b) (Exempt Category 2)**. You may proceed with your study as described to the IRB. As principal investigator, you must adhere to the following requirements:

1) CONSENT: If recruitment procedures include consent forms, they must be obtained in such a manner that they are clearly understood by the subjects and the process affords subjects the opportunity to ask questions, obtain detailed answers from those directly involved in the research, and have sufficient time to consider their participation after they have been provided this information. The subjects must be given a copy of the signed consent document, and a copy must be placed in a secure file separate from de-identified participant information. Record of informed consent must be retained for a minimum of three years from the conclusion of the study.

2) ADVERSE EVENTS/UNANTICIPATED PROBLEMS: The principal investigator is required to notify the IRB chair and me (954-262-5369 and Ling Wang, Ph.D., respectively) of any adverse reactions or unanticipated events that may develop as a result of this study. Reactions or events may include, but are not limited to, injury, depression as a result of participation in the study, life-threatening situation, death, or loss of confidentiality/anonymity of subject. Approval may be withdrawn if the problem is serious.

3) AMENDMENTS: Any changes in the study (e.g., procedures, number or types of subjects, consent forms, investigators, etc.) must be approved by the IRB prior to implementation. Please be advised that changes in a study may require further review depending on the nature of the change. Please contact me with any questions regarding amendments or changes to your study.

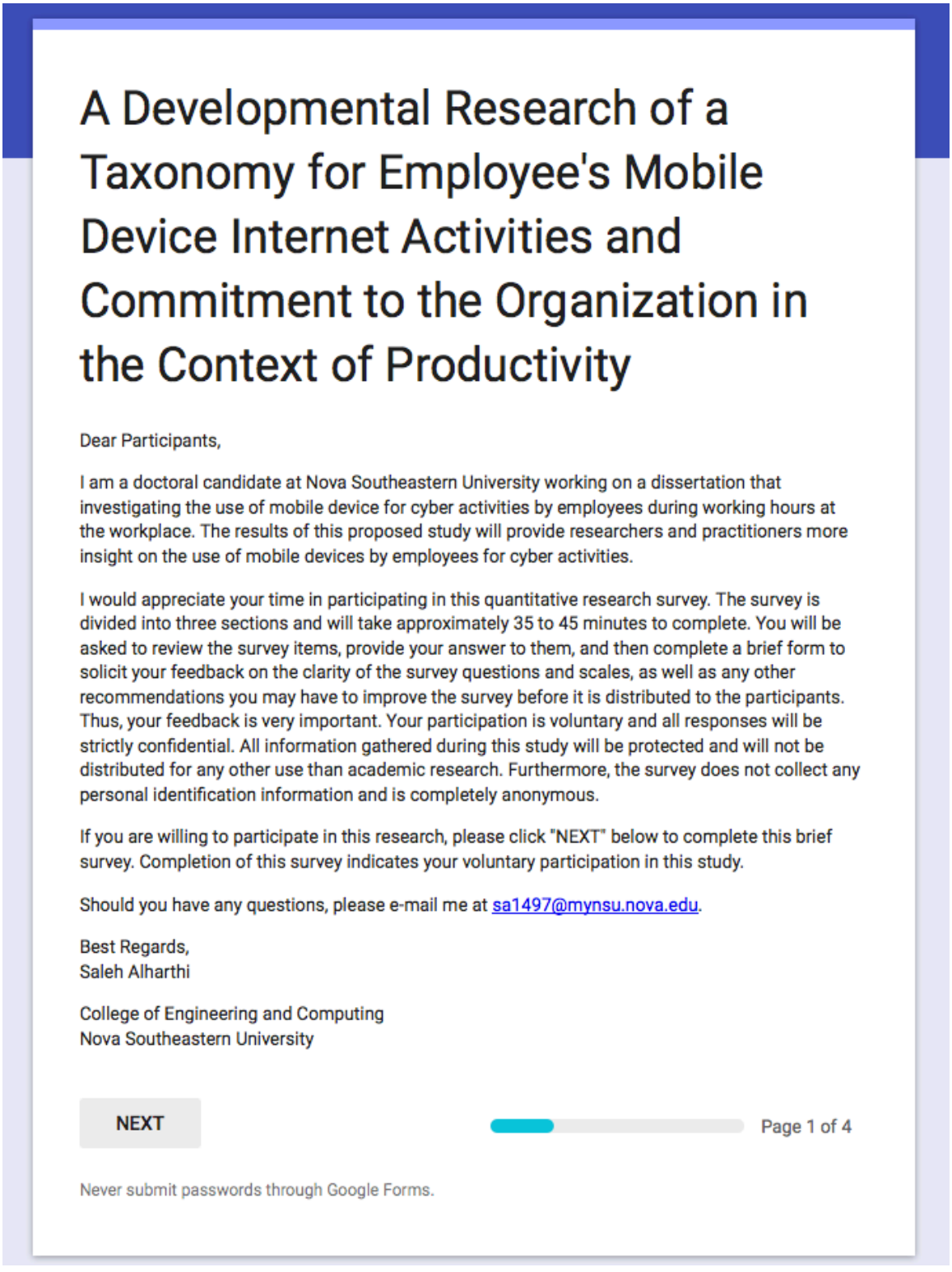
The NSU IRB is in compliance with the requirements for the protection of human subjects prescribed in Part 46 of Title 45 of the Code of Federal Regulations (45 CFR 46) revised June 18, 1991.

Cc: Yair Levy, Ph.D.
Ling Wang, Ph.D.

3301 College Avenue • Fort Lauderdale, Florida 33314-7796
(954) 262-0000 • 800-672-7223, ext. 5369 • Email: *irb@nova.edu* • Web site: www.nova.edu/irb

Appendix H

Final Pilot Study Participants' Survey Instrument



A Developmental Research of a Taxonomy for Employee's Mobile Device Internet Activities and Commitment to the Organization in the Context of Productivity

Dear Participants,

I am a doctoral candidate at Nova Southeastern University working on a dissertation that investigating the use of mobile device for cyber activities by employees during working hours at the workplace. The results of this proposed study will provide researchers and practitioners more insight on the use of mobile devices by employees for cyber activities.

I would appreciate your time in participating in this quantitative research survey. The survey is divided into three sections and will take approximately 35 to 45 minutes to complete. You will be asked to review the survey items, provide your answer to them, and then complete a brief form to solicit your feedback on the clarity of the survey questions and scales, as well as any other recommendations you may have to improve the survey before it is distributed to the participants. Thus, your feedback is very important. Your participation is voluntary and all responses will be strictly confidential. All information gathered during this study will be protected and will not be distributed for any other use than academic research. Furthermore, the survey does not collect any personal identification information and is completely anonymous.

If you are willing to participate in this research, please click "NEXT" below to complete this brief survey. Completion of this survey indicates your voluntary participation in this study.

Should you have any questions, please e-mail me at sa1497@mynsu.nova.edu.

Best Regards,
Saleh Alharthi

College of Engineering and Computing
Nova Southeastern University

NEXT

Page 1 of 4

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Frequency of Mobile Internet Activities During Working Hours in the Workplace

The items in Section 2 below are related to your frequency of mobile Internet activities using mobile device during working hours at the workplace. Please indicate the frequency that you are engaged in each of the following Internet activities by indicating one of the options from "Never (1)" to "Every Time (7)" using the following scale:

1 – Never
2 – Rarely, in less than 10% of the chances when I could have
3 – Occasionally, in about 30% of the chances when I could have
4 – Sometimes, in about 50% of the chances when I could have
5 – Frequently, in about 70% of the chances when I could have
6 – Usually, in about 90% of the chances I could have.
7 – Every time.

1. Sharing

*

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Check my friends' posts.	○	○	○	○	○	○	○
Check my friends' social networking profiles.	○	○	○	○	○	○	○
Share content on social networks (photo, video, etc.).	○	○	○	○	○	○	○
Like posts that are interesting.	○	○	○	○	○	○	○
Comment on shared photos.	○	○	○	○	○	○	○

Post status updates on social networks.	○	○	○	○	○	○	○
Tag friends on photos.	○	○	○	○	○	○	○
Chat with friends.	○	○	○	○	○	○	○
Watch shared videos.	○	○	○	○	○	○	○

2. Shopping *

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Shop online.	○	○	○	○	○	○	○
Visit deal-of-the-day websites.	○	○	○	○	○	○	○
Visit auction sites.	○	○	○	○	○	○	○
Visit online shopping sites.	○	○	○	○	○	○	○
Use online banking services.	○	○	○	○	○	○	○
Check job advertisements	○	○	○	○	○	○	○

3. Real-time updating *

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Retweet a tweet I like.	○	○	○	○	○	○	○

Favorite a post I like in online social network sites (e.g., Twitter and Facebook).	○	○	○	○	○	○	○
Post messages in online social network sites (e.g., Twitter and Facebook)	○	○	○	○	○	○	○
Read post messages in online social network sites (e.g., Twitter and Facebook).	○	○	○	○	○	○	○
Comment on trending topics.	○	○	○	○	○	○	○

4. Accessing online content *

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Download music.	○	○	○	○	○	○	○
Listen to music online.	○	○	○	○	○	○	○
Download videos.	○	○	○	○	○	○	○
Download applications I need.	○	○	○	○	○	○	○

Watch videos online	○	○	○	○	○	○	○

5. Gaming/Betting *

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Visit betting sites.	○	○	○	○	○	○	○
Check online sport sites.	○	○	○	○	○	○	○
Download online games	○	○	○	○	○	○	○
Play online games.	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey items related to Internet activities stated in a clear and understandable manner. *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the items.

Your answer

BACK NEXT

Page 2 of 4

Employee Commitment to the Organization

The items in Section 1 below are related to your commitment to your organization. Please rate how probable you think each of the following statements are by indicating one of the options from "Strongly Disagree (1)" to "Strongly Agree (7)."

1. Affective Commitment

*

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree
I would be very happy to spend the rest of my career with this organization.	○	○	○	○	○	○	○
I enjoy discussing my organization with people outside it.	○	○	○	○	○	○	○
I really feel as if this organization's problems are my own.	○	○	○	○	○	○	○
This organization has a great deal of personal meaning for me.	○	○	○	○	○	○	○
I think that I could easily become as attached to another organization as I am to this one	○	○	○	○	○	○	○

I do not feel like 'part of the family' at my organization.	○	○	○	○	○	○	○
I do not feel 'emotionally attached' to this organization.	○	○	○	○	○	○	○
I do not feel a strong sense of belonging to my organization	○	○	○	○	○	○	○

2. Continuance Commitment *

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree
I am not afraid of what might happen if I quit my job without having another one lined up	○	○	○	○	○	○	○
It would be very hard for me to leave my organization right now, even if I wanted to	○	○	○	○	○	○	○
Too much in my life would be disrupted if I decide I want to leave my organization now	○	○	○	○	○	○	○
It would not be too costly for me to leave my organization now	○	○	○	○	○	○	○

Right now, staying with my organization is a matter of necessity as much as desire.	○	○	○	○	○	○	○
I feel that I have too few options to consider leaving this organization	○	○	○	○	○	○	○
One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.	○	○	○	○	○	○	○
One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice – another organization may not match the overall benefits I have here.	○	○	○	○	○	○	○

3. Normative Commitment *

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree

I think that people these days move from company to company too often.	○	○	○	○	○	○	○
I do not believe that a person must always be loyal to his or her organization.	○	○	○	○	○	○	○
Jumping from organization to organization does not seem at all unethical to me.	○	○	○	○	○	○	○
One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.	○	○	○	○	○	○	○
If I got another offer for a better job elsewhere I would not feel it was right to leave my organization.	○	○	○	○	○	○	○

I was taught to believe in the value of remaining loyal to one organization.	○	○	○	○	○	○	○
Things were better in the days when people stayed with one organization for most of their careers.	○	○	○	○	○	○	○
I do not think that wanting to be a 'company man' or 'company woman' is sensible anymore.	○	○	○	○	○	○	○

Please rate your level of agreement from 1 (Strongly Disagree) to 7 (Strongly Agree) with the survey statements related to commitment stated in a clear and understandable manner. *

	1	2	3	4	5	6	7	
Strongly Disagree	○	○	○	○	○	○	○	Strongly Agree

If your score above is below 5, please provide information on how to adjust the items.

Your answer

BACK NEXT

Page 3 of 4

Demographics

1. Age *

- 1) 18–20
- 2) 21–30
- 3) 31–40
- 4) 41–50
- 5) 51–60
- 6) 61–70
- 7) 71 and over

2. Gender *

- 1) Male
- 2) Female

3. Level at the Organization *

- 1) Entery Level/staff
- 2) Supervisor
- 3) Middle Manager
- 4) Top Manager/Chief Officer
- 5) Academic/Higher Education

4. Education Level *

- 1) High School

- ◯ 2) Online courses
- ◯ 3) Associate Degree
- ◯ 4) Undergraduate
- ◯ 5) Master
- ◯ 6) Doctorate

5. Industry Type *

- ◯ 1) Banking and Financial Institutions
- ◯ 2) Construction
- ◯ 3) Education/Higher Education
- ◯ 4) Electronics
- ◯ 5) Energy and Petroleum
- ◯ 6) Government military
- ◯ 7) Healthcare
- ◯ 8) IT Services
- ◯ 9) Insurance
- ◯ 10) Professional Services
- ◯ 11) Real Estate
- ◯ 12) Retail
- ◯ 13) Telecommunication
- ◯ 14) Transportation
- ◯ Other: _____

6. Years of Experience Using the Internet *

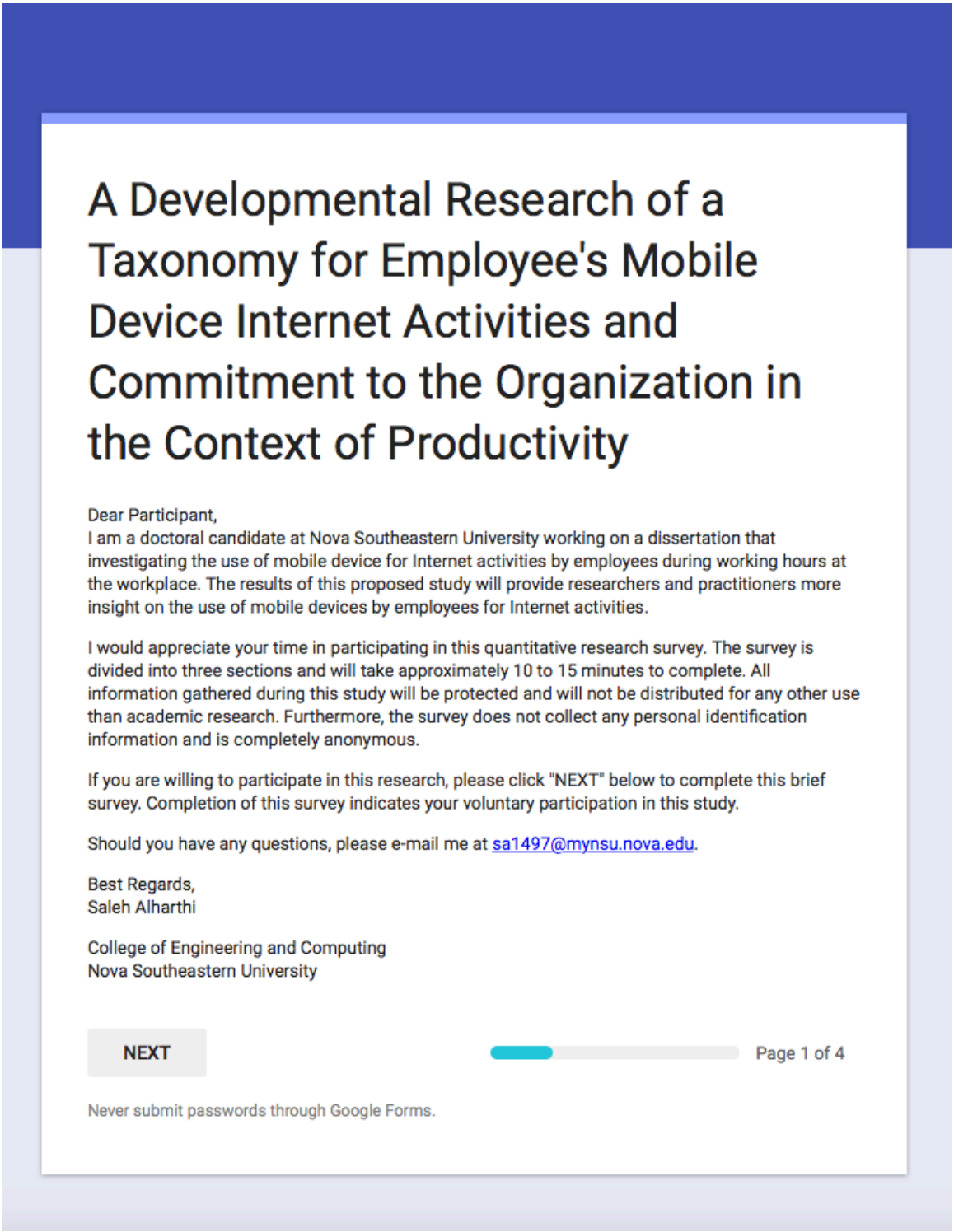
- ◯ 1) Less than 1 year
- ◯ 2) 1 to 5 years
- ◯ 3) 6 to 10 years
- ◯ 4) 11 to 15 years
- ◯ 5) 16 to 20 years
- ◯ 6) 21 years or longer

7. Organization Type *

- ◯ 1) Public
- ◯ 2) Private

Appendix I

Final Draft Study Participants' Survey Instrument



A Developmental Research of a Taxonomy for Employee's Mobile Device Internet Activities and Commitment to the Organization in the Context of Productivity

Dear Participant,
I am a doctoral candidate at Nova Southeastern University working on a dissertation that investigating the use of mobile device for Internet activities by employees during working hours at the workplace. The results of this proposed study will provide researchers and practitioners more insight on the use of mobile devices by employees for Internet activities.

I would appreciate your time in participating in this quantitative research survey. The survey is divided into three sections and will take approximately 10 to 15 minutes to complete. All information gathered during this study will be protected and will not be distributed for any other use than academic research. Furthermore, the survey does not collect any personal identification information and is completely anonymous.

If you are willing to participate in this research, please click "NEXT" below to complete this brief survey. Completion of this survey indicates your voluntary participation in this study.

Should you have any questions, please e-mail me at sa1497@mynsu.nova.edu.

Best Regards,
Saleh Alharthi

College of Engineering and Computing
Nova Southeastern University

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A Developmental Research of a Taxonomy for Employee's Mobile Device Internet Activities and Commitment to the Organization in the Context of Productivity

* Required

Frequency of Mobile Device Internet Activities During Working Hours in the Workplace

The items in Section 2 below are related to your frequency of mobile Internet activities using mobile device during working hours at the workplace. Please indicate the frequency that you are engaged in each of the following Internet activities by indicating one of the options from "Never (1)" to "Every Time (7)" using the following scale:
1 – Never
2 – Rarely, in less than 10% of the chances when I could have
3 – Occasionally, in about 30% of the chances when I could have
4 – Sometimes, in about 50% of the chances when I could have
5 – Frequently, in about 70% of the chances when I could have
6 – Usually, in about 90% of the chances I could have.
7 – Every time.

1. Sharing

*

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Check my friends' posts.	○	○	○	○	○	○	○
Check my friends' social networking profiles.	○	○	○	○	○	○	○

Share content on social networks (photo, video, etc.).	○	○	○	○	○	○	○
Like posts that are interesting.	○	○	○	○	○	○	○
Comment on shared photos.	○	○	○	○	○	○	○
Post status updates on social networks.	○	○	○	○	○	○	○
Tag friends on photos.	○	○	○	○	○	○	○
Chat with friends.	○	○	○	○	○	○	○
Watch shared videos.	○	○	○	○	○	○	○

2. Shopping *

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Shop online.	○	○	○	○	○	○	○
Visit deal-of-the-day websites.	○	○	○	○	○	○	○
Visit auction sites.	○	○	○	○	○	○	○
Visit online shopping sites.	○	○	○	○	○	○	○
Use online banking services.	○	○	○	○	○	○	○
Check job advertisements	○	○	○	○	○	○	○

3. Real-time updating *

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Retweet a tweet I like.	○	○	○	○	○	○	○
Favorite a post I like in online social network sites (e.g., Twitter and Facebook).	○	○	○	○	○	○	○
Post messages in online social network sites (e.g., Twitter and Facebook)	○	○	○	○	○	○	○
Read post messages in online social network sites (e.g., Twitter and Facebook).	○	○	○	○	○	○	○
Comment on trending topics.	○	○	○	○	○	○	○

4. Accessing online content *

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Download music.	○	○	○	○	○	○	○
Listen to music online (streaming).	○	○	○	○	○	○	○
Download videos.	○	○	○	○	○	○	○

Listen to music online (streaming).	○	○	○	○	○	○	○
Download videos.	○	○	○	○	○	○	○
Download applications for personal use.	○	○	○	○	○	○	○
Watch videos online (streaming).	○	○	○	○	○	○	○

5. Gaming/Bidding *

	1 Never	2 Rarely	3 Occasionally	4 Sometimes	5 Frequently	6 Usually	7 Every Time
Visit bidding sites (e.g., eBay.com and Souq.com).	○	○	○	○	○	○	○
Check online sport sites (e.g., live streaming soccer matches).	○	○	○	○	○	○	○
Download online games	○	○	○	○	○	○	○
Play online games.	○	○	○	○	○	○	○

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Employee Commitment to the Organization

The items in Section 1 below are related to your commitment to your organization. Please rate how probable you think each of the following statements are by indicating one of the options from "Strongly Disagree (1)" to "Strongly Agree (7)."

1. Affective Commitment

Defined as a positive attachment between employees and an organization

*

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree
I would be very happy to spend the rest of my career with this organization.	○	○	○	○	○	○	○
I enjoy discussing my organization's vision or goals with people outside the organization.	○	○	○	○	○	○	○
I really feel as if this organization's problems are my own.	○	○	○	○	○	○	○
This organization has a great deal of personal meaning for me.	○	○	○	○	○	○	○
I think that I could easily become as attached to another organization as I am to this one	○	○	○	○	○	○	○

I do not feel like 'part of the family' at my organization.	○	○	○	○	○	○	○
I do not feel 'emotionally attached' to this organization.	○	○	○	○	○	○	○
I do not feel a strong sense of belonging to my organization	○	○	○	○	○	○	○

2. Continuance Commitment

Defined as the perceived costs associated with leaving the organization

*

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree
I am not afraid of what might happen if I quit my job without having another one lined up	○	○	○	○	○	○	○
It would be very hard for me to leave my organization right now, even if I wanted to	○	○	○	○	○	○	○
Too much in my life would be disrupted if I decide I want to leave my organization now	○	○	○	○	○	○	○
It would not be too costly for me to leave my organization now	○	○	○	○	○	○	○

Right now, staying with my organization is a matter of necessity as much as desire.	○	○	○	○	○	○	○
I feel that I have too few options to consider leaving this organization	○	○	○	○	○	○	○
One of the few serious consequences of leaving this organization would be the scarcity of available alternatives.	○	○	○	○	○	○	○
One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice — another organization may not match the overall benefits I have here.	○	○	○	○	○	○	○

3. Normative Commitment

Defined as a perceived obligation to remain in the organization

*

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree

3. Normative Commitment

Defined as a perceived obligation to remain in the organization

*

	1 Strongly disagree	2 Disagree	3 Somewhat disagree	4 Neither agree or disagree	5 Somewhat agree	6 Agree	7 Strongly agree
I think that people these days move from company to company too often.	○	○	○	○	○	○	○
I do not believe that a person must always be loyal to his or her organization.	○	○	○	○	○	○	○
Jumping from organization to organization does not seem at all unethical to me.	○	○	○	○	○	○	○
One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.	○	○	○	○	○	○	○

One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.	○	○	○	○	○	○	○
If I got another offer for a better job elsewhere I would not feel it was right to leave my organization.	○	○	○	○	○	○	○
I was taught to believe in the value of remaining loyal to one organization.	○	○	○	○	○	○	○
Things were better in the days when people stayed with one organization for most of their careers.	○	○	○	○	○	○	○
I do not think that wanting to be a 'company man' or 'company woman' is sensible anymore.	○	○	○	○	○	○	○

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Never submit passwords through Google Forms.

* Required

Demographics

1. Age *

- 1) 18–20
- 2) 21–30
- 3) 31–40
- 4) 41–50
- 5) 51–60
- 6) 61–70
- 7) 71 and over

2. Gender *

- 1) Male
- 2) Female

3. Level at the Organization *

- 1) Entery Level/staff
- 2) Supervisor
- 3) Middle Manager
- 4) Top Manager/Chief Officer
- 5) Academic/Higher Education

4. Education Level *

- ○ 1) High School
- ○ 2) Online courses
- ○ 3) Associate Degree
- ○ 4) Undergraduate
- ○ 5) Master
- ○ 6) Doctorate

5. Industry Type *

- ○ 1) Banking and Financial Institutions
- ○ 2) Construction
- ○ 3) Education/Higher Education
- ○ 4) Electronics
- ○ 5) Energy and Petroleum
- ○ 6) Government military
- ○ 7) Healthcare
- ○ 8) IT Services
- ○ 9) Insurance
- ○ 10) Professional Services
- ○ 11) Real Estate
- ○ 12) Retail
- ○ 13) Telecommunication

- ◯ 14) Transportation

6. Years of Experience Using the Internet *

- ◯ 1) Less than 1 year
- ◯ 2) 1 to 5 years
- ◯ 3) 6 to 10 years
- ◯ 4) 11 to 15 years
- ◯ 5) 16 to 20 years
- ◯ 6) 21 years or longer

7. Organization Type *

- ◯ 1) Public
- ◯ 2) Private

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