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ABSTRACT

FACTORS PREDICTING FACULTY MEMBERS’ INTENTION TO TEACH ONLINE IN THE KINGDOM OF SAUDI ARABIA

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Northern Illinois University, 2019
Dr. Hayley Mayall, Director

Despite the benefits online education provides, some faculty still consider online teaching less effective than traditional teaching and are not convinced they want to be involved in distance education (Blin & Munro, 2008; Bolliger & Wasilik, 2009; Chen & Chen, 2006). In the Kingdom of Saudi Arabia (KSA), the movement toward online education is slow and not promising due to several factors that may relate to faculty, learners, and institutions. The aim of this study was to investigate faculty members’ intentions to teach online at the University of Hail in KSA based on the Theory of Planned Behavior (TPB). Additionally, this study assessed the effect of demographic characteristics (age, gender, computer use, and years of experience) on attitude toward behavior, subjective norm and perceived behavioral control and whether these variables significantly moderate the relationship between faculty members’ 1) attitude toward behavior, subjective norm, perceived behavioral control and 2) their behavioral intention (BI) to teach online. This study employed a quantitative research methodology to address the research questions. The results of this study indicated that the combined TPB constructs (attitude, subjective norm, and perceived behavioral control) significantly predicted faculty members’ intention to teach online and approximately 39.1% of the variance in the faculty’s behavioral intention to teach online was explained by these three predictors. Specifically, the results
indicated that attitude ($\beta = 0.44, p < .001$) and subjective norm ($\beta = 0.38, p < .001$) were statistically significant determinants of behavioral intention. However, perceived behavioral control was not found to be a significant predictor. Also, the findings showed that none of the demographic or professional characteristics (age, gender, computer use, and years of experience) significantly predicted attitude or subjective norm. Whereas, regarding the outcome of perceived behavioral control, the results revealed that it was only predicted by age and computer use. 

Regarding the moderating role of age, gender, computer use, and years of experience, the results indicated that years of experience was found to be a significant moderator of the relationship between attitudes and intention ($\beta = 0.35, p = 0.04$) and the relationship between subjective norm and intention ($\beta = -0.64, p = 0.01$) on the other. The analysis showed that the relationship between attitude and behavioral intention increased as years of experience increased, while the relationship between subjective norm and behavioral intention decreased as years of experience increased.
FACTORS PREDICTING FACULTY MEMBERS’ INTENTION TO TEACH ONLINE
IN THE KINGDOM OF SAUDI ARABIA

BY

FAHAD OBAID T. ALENEZI
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A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE
DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL TECHNOLOGY, RESEARCH AND ASSESSMENT

Doctoral Director:
Hayley Mayall
ACKNOWLEDGEMENTS

In the Name of Allah, the Beneficent, the Merciful

First of all, praise, thanks, gratitude, and veneration are due to Almighty Allah (God), the Lord of the worlds, who has enabled and helped me to complete this humble work and to earn the Ph.D. Second, I would like to thank my parents for their unlimited support, inspiration, encouragement and supplications that have enabled me to complete this study. I would like also to express my appreciation and gratitude to my wife, Mona Alenezi, who stood beside me during my entire academic journey and my four children who provide unending inspiration. I would like to extend my appreciation and thanks to my dissertation committee members: Dr. Hayley Mayall (Dissertation Chair), Dr. Thomas Smith and Dr. Cindy York. This work would not have been done without their guidance and persistence. Thank you all for your valuable feedback, comments and suggestions.

Last but certainly not least, I would also like to thank my colleagues and friends for their valuable suggestions and constant encouragement throughout my study. I sincerely thank my brothers and my sisters for their encouragement, moral support, personal attention and care.

Finally, I wish to express my sincere gratitude to the government of the Kingdom of Saudi Arabia, the University of Hail, and Saudi Arabian Cultural Mission for their generous support throughout my academic career.
DEDICATION

I dedicate this work to my beloved mother and father: to my beloved wife, the source of my inspiration: and to my children – Yazeed, Basil, Waleed and Danah, the source of my happiness and optimism.
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CHAPTER 1
INTRODUCTION

Background of the Problem

One of the main factors that limits institutions from adopting online education is faculty members’ reluctance to teach online courses (Alruwaili, 2014; Castle & McGuire, 2010; Green, 2010). McIsaac and Gunawardena (1996) and Bendania (2011) claimed that the slow adoption of online education in higher education is mainly caused by faculty resistance to this form of education. This resistance to online education by faculty may impede institutions from offering online courses and limit online learning initiatives.

The term distance education was first introduced in 1840 by Isaac Pitman, who developed the shorthand system (Molenda, 2008; Williams, Nicholas, & Gunter, 2005), although some sources trace distance education as far back as the 1700s. Distance education has emerged as a response to the high demand for educational opportunities by those who were not able to attend regular face-to-face classes (Beldarrain, 2006). As technology has improved, the definition of distance education has been refined to refer to e-learning, online education, and online distance education (Maguire, 2005; Taylor, 2001; Unnisa, 2014). The current study focused on online teaching, which Chen and Chen (2006) define as “anywhere education and training that takes place via a variety of Internet-based computer-mediated technologies, and interactions amongst the instructor and learners, and is totally online without any face-to-face contact” (p. 683).
Literature (Chau, 2010; Moloney & Oakley, 2010) indicated online education provides a great opportunity for adult learners while becoming a major component of the higher education system. There are many reasons for the rapid growth and high demand for online education. One reason is that online education provides an opportunity for institutions to reach a multitude of students in different locations (Gieth & Vignare, 2008). Another reason is that online education allows working adults who cannot attend face-to-face classes due to limited time or finances to continue their learning and earn their degrees without time and place constraints (Gieth & Vignare, 2008). Flexibility, accessibility, and cost are other factors that have motivated institutions and students to use online learning (Chau, 2010). For example, a student can attend a course he/she is interested in from home at any time, which saves the time and expense of traveling to attend a regular class. The benefits of online education are not limited to students and learners. Online education also can improve faculty performance and productivity while increasing access to educational resources (Alodail, 2016; Meyer, 2012; Molenda & Pershing, 2008; Ziyadah, 2012).

The implementation of online education is not limited to the Western world. In the Arabic region, especially in the Kingdom of Saudi Arabia (KSA), there is presently a strong movement toward adopting online teaching in different sectors (Alharbi & Drew, 2014; Asiri, Mahmud, Abu-Bakar & Ayub, 2012; Unnisa, 2014). Higher education institutions have invested heavily in technology to improve their educational systems, and several universities and colleges have established and started offering online programs in recent years. Expanding distance learning may provide numerous benefits to Saudi Arabian universities due to the large and increasing annual population rate of the country. According to the Central Department of Statistics and Information (2016), the current Saudi population was 31,742,308 in 2016, with a
growth rate of 2.54. Therefore, adopting online education may address the limited capacity of Saudi universities to provide education for all students (Aljabre, 2012) and help students overcome the geographic distance in the country (Alshangeeti, Alsaghier, & Nguyen, 2009).

Factors Affecting Faculty Members’ Adoption of Online Education

Research has consistently shown the importance of the role of faculty in expanding online learning (Bunk, Li, Smidt, Bidetti, & Malize, 2015; Chen & Chen, 2006; Johnson, Meling, AndaVerdi, Galindo, Madrigal, & Kupczynski, 2011; Lee, 2002; Maguire, 2005; Moloney & Oakley, 2010; Smidt, McDyre, Bunk, Li, & Gatenby, 2014; Schifter, 2000). Instructors play an important role in teaching in an online environment by customizing and facilitating courses as well as grading and assessing students’ work. Bolliger and Wasilik (2009) posited that the success of an online education program mainly depends on faculty satisfaction. They further argued that students’ motivation, participation, and performance in the online environment are also directly affected by the level of faculty satisfaction.

Previous studies have investigated factors that promote, motivate, and inhibit faculty members’ participation in online education (Chen & Chen, 2006; Haber & Mills, 2008; Hung & Jeng, 2013; Stewart, Bachman, & Johnson, 2010) using different theories and models. One of these theories is the Theory of Planned Behavior (TPB), which explain individuals’ behavioral intentions and behaviors. For instance, Hung and Jeng (2013) investigated educational technologists’ intentions to teach online by applying TPB. Hung and Jeng’s (2013) findings indicated that attitudes and subjective norm significantly predict educational technologists’ intentions to participate in online courses in the future. A similar study conducted by Lee, Cerreto, and Lee (2010) applied TPB to examine Korean teachers’ intention to use computers to
create and deliver lessons. The results of their study revealed that the three predictors (attitude, subjective norm, and perceived control) of the TPB model explained 70% percent of the variance in teachers’ intentions. Those findings support the applicability of TPB to explain behavioral intention in an education context such as the one in the current study.

Those empirical studies have validated the strength of the TPB model to explain individual intention and confirmed the value of online education for learners and instructors (Cerreto & Lee, 2010; Hung & Jeng, 2013). For instance, Meyer (2012) conducted a qualitative study to explore the influence of online teaching on faculty productivity. The findings of the study indicated faculty members reported that online education provided them more flexibility, which increased their teaching productivity by enhancing their access to educational resources. The benefits of online education are not limited to faculty; online education can also improve the students’ learning and their ability to work independently (Meyer, 2012).

In the KSA context, Bendania (2011) conducted a study to explore instructors’ and learners’ attitudes toward teaching and learning online at the King Fahad University of Petroleum and Minerals (KFUPM). The finding of that study indicated that faculty members had a positive attitude toward teaching online. However, they still preferred teaching face-to-face, which was not explained by the author. Alharbi and Drew (2014) investigated the intention of faculty members to use a learning management system (LMS) at Shaqra University, a public university in Saudi Arabia. A finding from their study indicated that almost half of the participants did not use an LMS in their teaching. Additionally, Alharbi and Drew (2009) suggested the need for further research that focuses on general technology adoption for teaching and learning. Similarly, Aljabre (2012) stated that more scholarly research must be conducted regarding the implementation of online teaching in KSA. Such issues related to faculty readiness
and adoption of online teaching are crucial and worthy of consideration for implementing technology in education (Inan & Lowther, 2010; O’Neill, Scott, & Conboy, 2011; Thompson & Lynch, 2003).

Blin and Munro (2008) conducted a similar study and found only five percent of the academic staff used e-learning, while some believed traditional lecture was the most effective way for students to achieve more. As long as faculty members are reluctant to teach online, institutions might have a lack of qualified faculty members who can teach online, which can affect the implementation of online education (Blin & Munro, 2008). Further study that investigates factors that predict faculty members’ intention to teach online may help universities and institutions engage instructors in online education and delineate additional factors that might influence the adoption of online education.

Problem Statement

Despite the benefits online education provides, some faculty still consider online teaching less effective than traditional teaching and are not convinced they want to be involved in distance education (Blin & Munro, 2008; Bolliger & Wasilik, 2009; Chen & Chen, 2006). In KSA, the movement toward online education is slow and not promising due to several factors that may relate to faculty, learners, and institutions. The results of previous studies conducted in the KSA show a low level of technology adoption and a reluctance to adopt among faculty members (Alruwaili, 2014; Alharbi & Drew, 2014; Bendania, 2011). Faculty members’ willingness plays a critical role in expanding online learning and successfully integrating innovations into education. The use of technologies in education have been examined extensively in Western countries; however, the findings of those studies might not be applicable to developing countries such as
Several differences between the KSA context and developed countries can be identified. For example, in KSA men and women are physically separated in public school and in higher education as well. In addition to that, there are remarkable differences between Middle Eastern and Western nations in terms of social and cultural characteristics such as language, religion and values (Baker et al., 2007). Hence, factors that influence faculty members’ intention to participate in online education in KSA should be investigated using a theoretical framework such as TPB. Conducting such a study could help KSA educational organizations prepare faculty members to meet the growing demand for online education and identify additional factors that might influence its successful adoption.

Purpose of the Study

In response to the gap in the literature, the purpose of this study was to investigate the factors that predict the intention of faculty members to teach online courses in the future. The significant predictors of the faculty members’ intention to teach online courses were investigated using the Theory of Planned Behavior. The TPB assesses the strength of attitudes toward the behavior (AB), subjective norm (SN), and perceived behavioral control (PBC) as factors that predict individuals’ intentions to perform a specific action. For the current study, intention to teach online was defined as the willingness of faculty members in KSA to teach online courses in the future. Additionally, this study assessed the effect of demographic characteristics (i.e., age, gender, computer use, and years of experience) on attitude toward behavior, subjective norm, and perceived behavioral control. Also, this study examined the moderating effects of age, gender, computer use, and years of experience on the relationship between faculty members’ 1)
attitude toward behavior, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online.

Research Questions

The following research questions guided the current study:

1. To what extent do the TPB factors (Attitude, Subjective Norm, and Perceived Behavioral Control) predict faculty members’ intention to teach online courses?
2. To what extent do demographic and professional characteristics (age, gender, computer use, and years of experience) predict faculty members’ attitude toward behavior, subjective norm and perceived behavioral control?
3. To what extent do demographic and professional characteristics (age, gender, computer use, and years of experience) moderate the relationship between faculty members’ 1) attitude toward behavior, subjective norm, perceived behavioral control, and 2) Behavioral Intention (BI) to teach online?

Theoretical Framework and Constructs

Several potential factors that predict faculty adoption of technology along with their intention to participate in distance education have been examined (Aljuaid et al., 2014; Chen & Chen, 2006; Hung & Jeng, 2013; Lee, Cerreto, & Lee, 2010; Mtebe & Raisamo, 2014) by applying different theories and models, such as the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), the Innovation Diffusion Theory (IDT), and the Unified Theory of Acceptance and Use of Technology (UTAUT). However, this study focused on the TPB because previous research assessing the
theoretical efficacy of the TPB has concluded the theory worked well for predicting teachers’ and faculty members’ intention to use technology in education (Hung & Jeng, 2013; Lee, Cerreto, & Lee, 2010). According to the results from Hung and Jeng (2013) and Lee et al. (2010), TPB measures explained 68% to 70% of the variance in teachers’ and faculty members’ intent to teach online. As this study applied the Theory of Planned Behavior (TPB), TPB will be discussed in detail in the next section.

TPB (see Figure 1) is an extension of the Theory of Reasoned Action (TRA) developed by Ajzen (1985) that utilizes perceived behavior control, attitude toward behavior, and subjective norm to predict intention (Ajzen, 1991). The TPB assumes the decision to perform an action in the future is mostly predicted by the behavioral intention factor (Ajzen, 1991). According to Ajzen (1991), “Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior” (p. 181). Ajzen (1991) also contended the TPB assumes three conceptually independent factors that lead to behavioral intention (BI). The behavior of an individual can be predicted by attitude toward the behavior and refers to

the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” and the subjective norm, which refers to “the perceived social pressure to perform or not to perform the behavior” and the perceived behavioral control, which refers to “the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles. (p. 187)
Figure 1: Theory of planned behavior, Ajzen, 2006.

TPB has been applied to predict and explain and individual’s intention by many researchers (Hung & Jeng, 2013; Lee et al., 2010; Yusop, 2015). In the educational context, Lee et al. (2010) applied TPB to examine Korean teachers’ intention to use computers to create and deliver lessons, and Hung and Jeng (2013) investigated future educational technologists’ intentions to teach online. Lee et al. (2010) stated TPB was successfully used in many studies to understand human behavior. Cullen and Greene (2011) used TPB to examine preservice teachers in relation to their plans to integrate technology into their future teaching. The results of their study posited that TPB can be used in future studies that relate to individuals’ intentions to adopt technology.
Significance of the Study

A study that investigates the factors that predict faculty members’ intentions to teach online courses may contribute to the field of instructional technology in different areas. As the current study applied TPB, it is one of the first studies that sought to investigate faculty members’ intention to teach online courses in KSA. This study examined TPB’s sufficiency by examining the intention for online teaching and validated this theory in the Arab world. The results of the study contribute to growing knowledge about utilizing psychological theories to understand users’ behavioral intentions. Additionally, the current study provided important information about the factors that facilitate or impede faculty members’ teaching of online courses. This information is vital for interested researchers and policymakers at universities, colleges, and institutions. The findings of this research may help institutions to prepare faculty members to meet the growing demand for online education and identify additional factors that might influence its successful adoption. In addition, the findings of this study may pave the way for future studies on online teaching and learning and inform practice for faculty working in similar higher educational systems.

University of Hail

The University of Hail started as a community college, called Hail Community College (HCC), in September 1998. The college was under the sponsorship of the King Fahd University of Petroleum & Minerals (KFUPM). HCC was the first community college to open in a planned expansion of educational opportunities for Saudi Arabian high school graduates. HCC started by offering three-year associate degree programs in business administration, computer systems, and
electronics engineering and instrumentation. Later, HCC offered three bachelor’s degree programs in applied electrical engineering, computer science, and management information systems (University of Ha’il, 2005a). The university was officially established by Royal Decree in 2005 (University of Ha’il, 2005a) and consists of 15 colleges including, but not limited to, the College of Medicine and Medical Sciences, the College of Sciences, the College of Engineering, the College of Computer Science & Engineering, and the Community College.

Definition of Terms

**Attitude** is defined as “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991, p. 188).

**Behavioral intention (BI)** is defined as the individual’s level of readiness to perform a behavior and is assumed to be an immediate antecedent of the behavior (Ajzen, 2002).

**e-Learning** is “instruction delivered on a digital device (such as desktop computer, laptop computer, tablet or smart phone) intended to support learning” (Clark & Mayer, 2016, p. 8).

**Online teaching** is defined as “anywhere education and training take place via a variety of internet-based computer-mediated technologies, and interactions among the instructor and learners are totally online without any face-to-face contact” (Chen & Chen, 2006, p. 683).

**Perceived behavior control** is defined as “the perceived ease or difficulty of performing the behavior and is assumed to reflect experience as well as anticipated impediments and obstacles” (Ajzen, 1991, p. 188).

**Subjective norm (SN)** is defined as “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188).
Chapter Summary

This chapter provided background about the topic of the study, which is faculty members’ intentions to teach online in KSA. This chapter presented the problem statement, the purpose of the study, research questions, and the theoretical framework, which included a brief introduction to the Theory of Planned Behavior (TPB). In addition, this chapter presented the significance of the study, a short introduction about the University of Hail, and definitions of terms relevant to this study.
CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

This chapter presents a review of the literature related to this study. The first section provides an overview of the status of e-learning in higher education in the Kingdom of Saudi Arabia (KSA). The second section reviews literature on the factors that affect faculty’s intention, including study using different theories and models: Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB) and the Unified Theory of Acceptance and Use of Technology (UTAUT). This chapter also discusses the sufficiency of the TPB as the theoretical framework. Furthermore, the demographic and professional factors related to the topic of the study are addressed in this chapter.

e-Learning in Higher Education in KSA

The Ministry of Higher Education in KSA has launched several projects and initiatives to handle the national strategic plan for e-learning. The Ministry of Higher Education has established the National Centre for E-Learning and Distance Education (NCEL) with the following vision: “We believe in the establishment of a holistic educational system based on the best applications and techniques of e-Learning, as well as the achievement of progress and excellence in both learning and teaching. We seek to become a prominent think tank and a national reference for e-Learning” (NCEL, 2017, p. 1).
The NCEL (2009b) has initiated several ambitious projects in relation to ICT integration in higher education. These projects include the Saudi Digital Library to support the digital curricula with sources and resources important to both learners and teachers. The library contains approximately 90,000 titles of digital books and resources from leading publishing houses. ©Jusur is another initiative was launched as a learning management system (NCEL, 2009b). ©Jusur is a free venue for faculty members in Saudi Arabian universities to deliver their courses.

In 2011 a new University was established called Saudi Electronic University SEU by a royal decree issued by King Abdullah Bin Abdulaziz as a governmental educational institution to support the high demand for e-learning in KSA. The university includes the College of Administration and Finance Sciences, the College of Computer and Informatics, and the College of Health Sciences. SEU adopted blended learning as the teaching and learning approach in which face to face and online learning are combined. E-learning refers to the instruction delivered by utilizing devices such as computers and laptops, while online learning refers to the instruction delivered entirely online through different learning management systems such as Blackboard™, Moodle™, and Canvas™.

In the context of KSA, several studies have examined different topics of online learning and teaching (Alharbi, 2011; Asiri et al., 2012; Bendania, 2011; Alharbi & Drew, 2014; Aljabre, 2012; Zouhair). Regarding the faculty members’ adoption of online teaching – which was the scope of this research, Asiri et al. (2012) surveyed 454 faculty members to determine their attitudes toward and level of utilization of the ©Jusur LMS in Saudi Arabia. The result of Asiri et al.’s study indicated that faculty members used the ©Jusur LMS an average of twice a month for less than one hour, but regarding the faculty members’ attitudes, they reported that they had positive attitudes toward the use of ©Jusur LMS. Additionally, Asiri et al.’s study examined
whether the utilization of ©Jusur was affected by attitude, computer experience, and age. They reported that attitudes and computer experience are significantly related to the utilization of ©Jusur LMS.

Factors that Predict Faculty’ Intention

Several potential factors that may affect faculty adoption of technology and intention to participate in distance education have been examined in previous studies (Aljuaid, et al.,2014; Chen & Chen, 2006; Hung & Jeng, 2013; Lee et al., 2010; Mtebe & Raisamo, 2014) through theories and models such as the Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), Innovation Diffusion Theory (IDT), and the Unified Theory of Acceptance and Use of Technology (UTAUT).

TAM mainly measures intention to use as well as the beliefs and attitudes of users toward new technology (MacCallum, Jeffrey, & Kinshuk, 2014). According to TAM, intention to use new technology can be determined by two factors: perceived usefulness and perceived ease of use. Aljuaid et al. (2014) applied TAM in their study to investigate factors that affected college lecturers’ intention to use mobile technologies in teaching. The results of that study indicated that perceived ease of use and usefulness significantly predicted lecturers’ intention, which is similar to what Davis (1989) and Kim (2008) reported in their studies.

Theory of Reasoned Action (TRA) was developed by Ajzen and Fishbein (1980) to predict individual behavior with two factors: attitudes and subjective norm. Chen and Chen (2006) applied that theory in their study to understand the participants’ decisions to teach online courses. Chen and Chen (2006) noted that online education remained new to faculty members, which may have affected their decisions to participate in adopting online teaching. The focus of
their study was to explore the factors that affected human resources (HR) university faculty’s attitudes toward teaching online.

The results of Chen and Chen’s (2006) study showed that the TRA model is an appropriate model to understand the faculty members’ attitudes in a research context. Furthermore, the results of the study confirmed that attitudes and subjective norm, also recognized as social attitudes, were identified as a predictor of behavioral intention of the participants to teach online courses. Chen and Chen (2006) stated that based on the TRA model, “It is suggested that a certain belief has influence on the specific attitude, such as the impacts of normative beliefs on subjective norm and behavioral beliefs on attitudes, respectively” (p. 691). The results of their study found that behavioral and normative beliefs affected the behavioral attitudes and the subjective norm at the same time. Furthermore, their study revealed that the faculty’s intention to teach online courses was related to specific behavioral and normative beliefs. They concluded that further study that concentrates on faculty’s decisions to participate needs to be conducted in a different higher education context.

Unified theory of acceptance and use of technology (UTAUT) was developed by Venkatesh et al. (2003) to examine the performance expectancy (PE), effort expectancy (EE), social influence (SI) and facilitating conditions (FC) that affect individual intention. In addition, UTAUT suggests the role of background factors as moderators, namely gender, age, experience, and voluntariness of use. Teo and Noyes (2014) used the model to investigate pre-service teachers’ intentions to use technology. The study surveyed 254 pre-service teachers at the National Institute of Education in Singapore. The results showed that three variables (performance expectancy, effort expectancy, and social influence) significantly predicted the participants’ behavioral intention to use technology. That finding was inconsistent with the
findings of Mtebe and Raisamo (2014), who found performance expectancy, social influence and facilitating conditions were not significant predictors of instructors’ intention to adopt open educational resources (OER) in higher education in Tanzania. The only significant predictor of the instructors’ intention was effort expectancy.

The TPB considers individual intention through three factors: attitudes toward the behavior, subjective norm, and perceived behavioral control (Ajzen, 1991). Lee et al. (2010) applied TPB to examine Korean teachers’ intention to use computers to create and deliver lessons. The researchers noticed that previous studies resulted in inconsistent findings. That inconsistency may have been because the target behavior was not clearly defined (Lee et al., 2010). As a result, their study focused on attitudes toward the behavior (AB), subjective norm (SN), and perceived behavioral control (PBC). To collect the data, the researchers applied purposive sampling study to represent different subjects, grade levels, experience, and technology skill. Thirty-four middle and high school teachers in Korea were asked to answer open-ended questions about their use of computers to prepare and present lessons. The researchers found that all three factors (AB, SN, PBC) were significant predictors of the teachers’ intention to use computers in teaching. However, the attitudes factor was two times greater in influencing the teachers’ actual use of technology. The results suggest that the target behavior should be clearly and precisely defined, which could lead to a meaningful conclusion. The findings of that study provide contradictory results to previous research (Ajjan & Hartshorne, 2008; Salleh & Albion, 2004; Sugar, Crawley, & Fine, 2004). For example, Sugar et al. (2004) found the only predictor of behavioral intention was the factor of attitude toward the behavior.
A similar study conducted by Hung and Jeng (2013) investigated future educational technologists’ intention to teach online. That study applied Ajzen’s (1991) TPB as a theoretical framework. Hung and Jeng (2013) contended previous studies provided recommendations for faculty and instructors on how to deliver an effective online learning environment and noted a concern about whether future educational technologists are prepared and willing to incorporate and apply those recommendations when they teach. Understanding the factors that affect intentions to teach online could be helpful for faculty and administrators in developing pedagogies (Hung & Jeng, 2013), so the authors surveyed 199 future educational technologists via a self-administered online questionnaire. Hung and Jeng (2013) applied quantitative analysis using hierarchical multiple regression to analyze the data.

Hung and Jeng’s (2013) study indicated that among the four constructs, attitudes and subjective norm significantly impacted prediction of future educational technologists’ intentions to participate in online teaching. A similar finding was reported by Chen and Chen (2006), who applied TRA as framework for their study. The findings of their study indicated that attitudes and subjective norm were significant predictors of faculty’ intention to teach online.

In KSA, Baker et al. (2007) conducted a study using TPB to examine the effect of gender, age and level of education on new technology implementation by the Saudi workforce; 1,088 Saudi workers participated in this study. The results indicated that the TPB model fit well in Saudi Arabia (37 % of the variance in behavioral intention was explained by TPB model). The results also indicated the TPB constructs (attitude, subjective norm, and perceived behavioral control) significantly predicted the Saudi workforce’s intention to use technology. Regarding the moderation effect of gender, age and level of education, the results revealed that only level of
education had a significant moderation effect on the relationship between perceived behavioral control and behavioral intention.

Sufficiency of the Theory of Planned Behavior

Since the TPB was developed three and a half decades ago (Ajzen, 1985), it has been an influential model for predicting human social behavior (Hung & Jeng, 2013; Lee et al., 2010; Robinson & Doverspike, 2006; Teo & Lee, 2010). Because of its popular use, it has been subjected to critique, with some researchers rejecting it outright, claiming it is an inadequate explanation of human social behavior. Those critics ignore the significance of consciousness as an instrumental agent and assume that much of human social behavior is driven by unconscious mental processes and implicit attitudes (Aarts & Dijksterhuis, 2000; Bargh & Chartrand, 1999; Uhlmann & Swanson, 2004).

In TPB, particular details about the features of behavior are found in one’s normative, behavioral and control beliefs. TPB cannot specifically point out the origin of these beliefs; it merely indicates an array of potential background aspects that could influence people’s beliefs (Manning & Bettencourt, 2011). Those factors include personal attributes: for instance, broad life values and personality, exposure to sources of information and media, and demographic issues such as gender, age, income, and education (Manning & Bettencourt, 2011). Such factors indirectly influence behavior and intentions through their effect on the proximal determinants of the theory.

TPB emphasizes the controlled factors of decision making and information processing (Ajzen, 2011). That emphasis has been mistakenly interpreted to mean that TPB works for a rational and impassionate actor who uses all obtainable information in an unprejudiced manner
to reach a behavioral decision (Ajzen, 2011). However, the picture drawn from the theory is more nuanced and complex. There are no assumptions in TPB that normative, behavioral, and control beliefs originate in an unbiased and rational manner (Ajzen, 2011). Beliefs demonstrate the information people possess relating to performance of a specific behavior, but this knowledge is mostly incomplete and inaccurate as it may be based on irrational or faulty premises or be influenced by emotions such as anger and fear or self-serving motives. Evidently, this is far from a rational actor (Geraerts et al., 2008).

However, regardless of how one attains control, behavioral, and normative beliefs, their perception of behavioral control and attitudes toward the behavior and subjective norm follow consistently and automatically from their own beliefs (Geraerts et al., 2008). Therefore, it is only by this approach that behavior is said to be planned or reasoned. Even though those beliefs may be biased, inaccurate, or irrational, they still produce intentions and behaviors that are consistent with these beliefs (Geraerts et al., 2008).

Researchers, in assessing the theoretical efficacy of the TPB, have conducted many studies, and most scholars have concluded that the theory worked well according to their meta-analysis (Armitage & Conner, 2001; Godin & Kok, 1996; Hausenblas, Carron, & Mack, 1997). The meta-analytic review by Armitage and Conner (2001) is an example of studies that support the theory. These scholars conducted and analyzed about 185 studies based on the TPB and found a correlation of 0.63 for the prediction of behavioral intention. They also found that self-predictions and intentions were stronger predictors of actual behavior when compared to subjective norm, perceived behavioral control, and attitude.

A meta-analysis by Godin and Kok (1996) also advocated for use of TPB. By looking at 56 studies, Godin and Kok established that perceived behavioral control and attitude were
eminently important aspects for describing intention and were the most significant forecasters of behavior in all their studies.

The meta-analysis by Hausenblas, Carron, and Mack (1997) examined the efficacy of the TPB. The analysis was limited to exercise behavior. Hausenblas et al. (1997) found the following relationships had a large effect size: attitude and behavior, intention and attitude, behavior and intention, perceived behavioral control and exercise, and intention and perceived behavioral control. Intention and subjective norm had a modest effect size, while subjective norm and behavior showed zero order. Those results suggest that TPB was more important than the Theory of Reasoned Action in studies in which exercise behaviors were involved. Sutton (1998) also evaluated the ability of the models to predict and describe behaviors and intentions. He found that the TPB explained approximately 19-38% of the deviation in behavior and 40-50% of deviation in intention.

The numerous studies described above concern the measurement of TPB variables (Armitage & Conner, 1998; Sheeran, Gollwitzer, & Bargh, 2013; Sniehotta, Presseau, & Araújo-Soares, 2014) and calls for the need to properly operationalize and conceptualize the variables as demonstrated by Ajzen (2002). However, theorists and researchers have failed to follow the model as prescribed by Ajzen, leading to inaccurate and unreliable results as well as complications in comparing various studies that used the theory (Armitage & Conner, 2001). Those who followed the conceptualization and operationalization as advocated by Ajzen had reduced measurement problems, and the theory’s predictability capability was elevated (Armitage & Conner, 2001). TPB is feasible and appropriate for the current research due to the support it draws from the work of other researchers and the compelling conclusions made from
critiquing the theory. It captures a unique variance in intention and behavior and offers a platform for obtaining relevant data to achieve the desired end of the research.

Demographic and Professional Factors

Several demographic and professional factors that can affect individual acceptance of innovation have been investigated in different studies. In this context, previous studies have investigated the influence of background factors in the adoption and integration of technologies in education such as age, gender, and years of experience (Al-Fadhli, 2009; Li & Lindner, 2007; Mital & Luthra, 2006; Morris, Venkatesh, & Ackerman, 2005; Tabata & Johnsrud, 2008; Yuen & Ma, 2002). However, the results of these studies revealed mixed findings. The literature indicated that investigating demographic and professional factors associated with faculty members’ attitudinal factors would deepen researchers’ understanding of a behavioral determinant (Ajzen & Fishbein, 2005).

Age

Age is a demographic characteristic that has been investigated in numerous research studies that relate to the adoption and integration of technology among teachers and faculty (Al-Fadhli, 2009; Panda & Mishra, 2007; Tabata & Johnsrud, 2008). Most of the studies found age was significant in influencing the adoption and the intention to use technology (Al-Fadhli, 2009). However, Mital and Luthra (2006) indicated there was no relationship between age and acceptance, attitudes, and intention to use technology. Tabata and Johnsrud (2008) adopted the diffusion of innovation theory to explore faculty’s perceptions and attitudes toward technology and distance education. The target of that population was full- and part-time faculty, lecturers,
and graduate assistants who were working at the 10 largest public universities in the United States. Part of that study discussed the demographic characteristic of age and its relation to the participants’ perceptions and attitudes toward distance education. Surprisingly, the results of the study revealed that older faculty members showed a greater interest in participating in distance education than younger faculty did. That result suggested older faculty are more likely to teach online courses than their younger counterparts. That study contradicted previous findings, such as Al-Fadhli’s (2009) study that indicated older instructors (45 years and above) showed less willingness to teach an online course.

On the other hand, some scholars have argued there is no association between age and attitudes toward the use of technology (Glasgow & Keim, 2005; Li & Lindner, 2007; Mathews & Guarino, 2000). For instance, Panda and Mishra (2007) surveyed (n=80) faculty members at the Indira Gandhi National Open University (IGNOU) to examine their attitudes toward e-learning and whether there was a relationship between their demographic, technological and professional backgrounds and those attitudes. Regarding the age variable, the results of the study indicated there was no significant relationship between age and the faculty attitudes toward e-learning.

Gender

Gender is another demographic factor that has been examined in that it relates to the adoption of technology in education. Studies have showed varied results (Ahmad et al., 2010; Harrison, & Handley, 2000; Kotrlik, Redmann, Li & Lindner, 2007; Morris, Venkatesh, & Ackerman, 2005; Panda & Mishra, 2007; Redmann, Harrison, & Handley, 2000; Sahin & Thompson, 2007; Yuen & Ma, 2002; Zhou & Xu 2007). One result was that there is a difference between men and women in their adoption of new technology in their work (Morris, Venkatesh,
& Ackerman, 2005; Yuen & Ma, 2002; Zhou & Xu, 2007). In contrast, other researchers found no relationship between gender and the adoption of technology (Ahmad et al., 2010; Kotrlik, Redmann, Harrison, & Handley, 2000; Li & Lindner, 2007; Panda & Mishra, 2007; Sahin & Thompson, 2007). Wichadee (2015) collected data about the factors that related to attitudes toward LMSs and adoption of them from 62 faculty members from a private university in Thailand. Wichadee (2015) hypothesized that “gender has an effect on attitudes towards LMS” (p. 55). The results of the study indicated no significant differences between males and females in their attitudes toward LMS.

Zhou and Xu (2007) conducted a study to determine if faculty at one of the large Canadian universities differed in their adoption of technology. The results of the study revealed males were more likely to adopt technology in their teaching than were females. That difference between males and females in adopting and using technology in teaching was supported by previous studies (Bowman, & Mertz, 1997; Morris, Venkatesh, & Ackerman, 2005; Yuen & Ma, 2002).

Years of Teaching Experience

Years of teaching experience is another demographic factor that has been examined in previous studies as a predictor of faculty and teacher decisions to adopt technology in their teaching (Li & Lindner, 2007; Sahin & Thompson, 2007). Previous research showed mixed findings about years of teaching experience potentially influencing decisions to adopt new technology in teaching (Bebell, Russell, & O’Dwyer, 2007; Li & Lindner, 2007; Panda & Mishra, 2007; Pierce & Ball, 2009; Sahin & Thompson, 2007).
Li and Lindner (2007) conducted a quantitative study to investigate faculty members’ adoption of Web-based Distance Education (WBDE). Rogers’ (2003) model of five stages in the innovation-decision process was adopted as a theoretical framework for this study. Part of that study examined the association between years of experience and the current stage in the innovation-decision process regarding the WBDE. The results of the study indicated faculty who have fewer years of teaching experience tended to be in the early stages of the innovation-decision process, while faculty with more years of teaching experience tended to be in the later stages. That suggested faculty with more years of teaching experience are more likely to adopt WBDE compared to those who have fewer years of experience.

Another study by Sahin and Thompson (2007) investigated the College of Education’s adoption of instructional technology at a large Midwestern university in the United States. Specifically, the study aimed to determine if the adoption level of educational technology can be predicted by “a) participant demographics, b) computer experience, c) instructional hardware used in teaching, and d) methods of learning about technology” (p. 168). This study applied the Learning/Acceptance Trajectory Model as its theoretical framework. Regarding the relationship between the faculty members’ years of experience and their level of use of instructional technology, the results showed that years of experience in higher education was not a significant predictor of the level of use of educational technology. This result is supported by prior studies (Bebell, Russell, & O’Dwyer, 2007; Panda & Mishra, 2007; Pierce & Ball, 2009).

Chapter Summary

This literature review provided an overview of e-learning in higher education. There is clear interest on the part of the government of KSA to implement e-learning in higher education
institutions. However, the literature showed a low level of technology adoption and a reluctance to it among faculty members in the KSA. It seems there is a lack of empirical studies on factors that predict faculty members’ intention to teach online in the KSA. Hence, conducting a study that investigates factors that predict faculty members’ intention to teach online may help educational institutions prepare faculty members to meet the growing demand for online education and delineate additional factors that might influence its successful adoption. The chapter reviewed studies related to factors that predict faculty members’ intentions, including demographic and professional factors. Sufficiency of the Theory of Planned Behavior was discussed by reviewing studies that applied TPB as a theoretical framework. It can be concluded that TPB is feasible and appropriate for future studies that relate to individuals’ intention to adopt technology.
CHAPTER 3
METHODOLOGY

The purpose of this section is to describe methods used in the current study. This section addresses the study design, instrumentation, description of the study’s participants, and data collection methods. It also offers an overview of the data analysis procedures.

Research Design

The purpose of the current study was to investigate the factors that predict faculty members’ intentions to teach online in the KSA by adopting the Theory of Planned Behavior (TPB). The TPB helps researchers to understand the strength of attitudes toward the behavior (AB), subjective norm (SN), and perceived behavioral control (PBC) as factors that predict individual intentions to perform a specific action. For this study, TPB was used to identify the faculty members’ beliefs about teaching online courses in KSA in the future. Additionally, this study assessed the association of demographic and professional characteristics (age, gender, computer use and years of experience) and the variables attitude toward behavior, subjective norm and perceived behavioral control. Finally, this study examined the moderating effects of age, gender, computer use, and years of experience on the relationship between faculty members’ 1) attitude toward behavior, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online.
Research Questions

The following questions guided this study:

1. To what extent do the TPB factors (Attitude, Subjective Norm, and Perceived Behavioral Control) predict faculty members’ intention to teach online courses?

2. To what extent do demographic and professional characteristics (age, gender, computer use and years of experience) predict faculty members’ attitude toward behavior, subjective norm and perceived behavioral control?

3. To what extent do demographic and professional characteristics (age, gender, computer use, and years of experience) moderate the relationship between faculty members’ 1) attitude toward behavior, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online?

This study employed a quantitative research methodology to address the stated research questions. According to Gay, Mills, and Airasian (2009), a quantitative research method in natural science and social science is the systematic empirical investigation of phenomena of interest via collecting and analyzing numerical data. In specific, a non-experimental correlational study was conducted to assess factors that predict faculty members’ intention to teach online courses in the future. According to Creswell (2002), a correlational design is a non-experimental design used to determine the relationship between or among variables. There are two types of correlational design, namely explanatory design and prediction design (Creswell, 2007). Correlational designs are used to “describe and measure the degree of association (or relationship) between two or more variables or sets of scores” (Creswell, 2012, p. 338). Creswell (2012) defined the explanatory research design as “a correlational design in which the researcher
is interested in the extent to which two variables (or more) co-vary, that is, where changes in one variable are reflected in changes in the other” (p. 340). Hence, the first type of correlational design, explanatory design, was used because it suited the aim of this study and the nature of the research questions.

Instrumentation

The researcher used a questionnaire instrument to collect the data. Creswell (2005) defines a questionnaire as “a form used in a survey design that participants in a study complete and return to the researcher” (p. 382). Due to the large number of faculty members at the University of Hail and the extensive use of the internet by individuals, the researcher used an online survey to collect the data because it provides various benefits. It is worthwhile to use an online survey because it saves researchers time and travel expenses and allows collection of extensive data in a short time. Moreover, due to the gender-segregated higher education system in KSA, an online survey was appropriate tool to collect the data because it provided the researcher with easy access to both males and females. Another benefit is that the participants could complete the survey at their convenience.

The researcher adopted a survey instrument used in a previous study by Hung and Jeng (2013; see Appendices A and B). The researcher obtained the authors’ permission to use this survey (see Appendix C). The original purpose of this self-administered online questionnaire was to investigate educational technologists’ intentions to teach online. Hung and Jeng’s (2013) instrument was developed based on the Theory of Planned Behavior constructs (attitude, subjective norm, perceived control and intention) based on the nature of online education, which made this instrument appropriate for the current study. The instrument has two parts, with a total
of 44 items. The first part includes four descriptive items related to background information (age, gender, computer use and online teaching experience) and the second part includes four scales that align to the TPB constructs (Attitude, Subjective Norm, and Perceived Behavioral Control).

For the current study, the first section of the instrument had eight descriptive items to elicit demographic and professional data about the participants. This demographic data included gender, age, nationality, experience in higher education, academic rank, academic field, computer use, and online teaching experience. The second part included four scales with 35 items that assessed the constructs (attitude, subjective norm, perceived behavioral control, and intention). The items related to the TPB constructs (Attitude, Subjective Norm, and Perceived Behavioral Control) were adapted without any changes. For the intention construct, the researcher used only two items from Hung and Jeng’s (2013) survey, which was “the possibility of online teaching for you in the future is” and “you would like to receive more training on online teaching.” In addition, the researcher adapted three original items to measure the intention construct (Ajzen, 2002) to suit the purpose of the study.

**Scale 1: Faculty Attitudes**

The first predictor variable in the current study was the attitude toward the behavior, which refers to “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991, p. 188). Research has found that attitudes are significantly associated with individuals’ intentions (Hung & Jeng, 2013; Lee et al., 2010; Sugar, Crawley & Fine, 2004). In the current study, attitude toward the behavior was expected to be significantly associated with the faculty members’ intention to teach online. For instance, if faculty members had positive attitudes toward online teaching, they were more likely to teach
online. An example of the adapted items Hung and Jeng (2013) used to measure the variable attitudes was “compared with traditional courses, in your opinion, online courses are more convenient for you to teach” (Hung & Jeng, 2013, p. 262) (see Appendices A and B). In the current study, faculty’s attitudes were measured by a scale of 10 positively and negatively worded items concerning faculty members’ attitudes toward teaching online. Positively and negatively worded items were used in this instrument to reduce the potential impact of response acquiescence bias. Faculty responses to these items were measured using a 5-point Likert response options: 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, and 5 = strongly agree), where a higher score indicates a positive attitude. Response options pertaining to negatively worded items were reverse-coded before the data analysis.

**Scale2: Subjective Norm (SN)**

Subjective norm (SN) is defined as “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188). It refers to individuals’ beliefs about whether others important to them such as friends, colleagues and family members would like them to perform or not perform a specific behavior. Research has found that a subjective norm is significantly associated with individuals’ behavioral intentions (Chen & Chen, 2006; Hung & Jeng, 2013; Lee et al., 2010). In the current study, subjective beliefs or normative beliefs were expected to be significantly associated with faculty members’ intention to teach online. For example, if faculty members believe their colleagues and others important to them want them to teach online, they will be more likely to teach online. In this study, subjective norm was measured by the adapted scale that has 10 positively and negatively worded items to elicit the faculty’s normative beliefs toward teaching online. An example of the adapted items Hung and Jeng (2013) used to measure
the variable subjective norm was “most of your colleagues would support online teaching” (Hung & Jeng, 2013, p. 262) (see Appendices A and B). The Likert response options of this scale were the same as used in the attitudes scale.

**Scale 3: Perceived Behavior Control (BC)**

Perceived behavior control is defined as “the perceived ease or difficulty of performing the behavior and is assumed to reflect experience as well as anticipated impediments and obstacles” (Ajzen, 1991, p. 188). It refers to individuals’ beliefs about their abilities and skills to perform a behavior. Several studies have revealed that perceived behavior control is significantly associated with individuals’ intentions (Baker et al., 2007; Demire, 2010; Lee et al., 2010). In this study, perceived behavior control was expected to be significantly associated with faculty members’ intentions to teach online. For example, if faculty members believe they have the ability and required skills to teach online, they are more likely to teach online. In the current study, perceived behavior control was measured by the adapted scale that has 10 positively and negatively worded items to elicit the faculty’s perceived behavior controls toward teaching online. These ten items are related to self-efficacy and ability to control something. An example of the adapted items Hung and Jeng (2013) used to measure the variable perceived behavior control was “you are capable of designing and developing an online course” (Hung & Jeng, 2013, p. 262) (see Appendix A). The Likert response options of this scale were the same as the attitudes scale.
Behavioral intention is the outcome variable in TPB. According to Ajzen (1991), “intentions are assumed to capture the motivational factors that influence behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior” (p. 181). An individual’s intention is determined by the three predictor variables of TPB: Attitude, Subjective Norm, and Perceived Behavioral Control. In the context of the current study, the behavioral intention was a faculty member’s intent to teach online in the future. In this study, the behavioral intention was measured by the adopted items, which were five items to elicit the faculty members’ intentions to teach online in the future (Ajzen, 2002; Hung & Jeng, 2013). To increase reliability, different types of items were used. For example, four items used different 5-point Likert response options and one item used multiple choice. An example of the adopted items that used to measure faculty intention was “the possibility of online teaching for you in the future is” (Hung & Jeng, 2013, p. 262) (see Appendix A).

Reliability of Scores

Reliability refers to whether the scores from an instrument are internally consistent, stable over time, and free from random measurement error (Creswell, 2012). In other words, scores from an instrument are considered reliable when the same results are obtained by administering the same instrument to the same group two or more times over a period. Hung and Jeng (2013) assessed the internal consistency reliability of their instrument using Cronbach’s alpha. Specifically, they found that the value of alpha for the attitude construct items scale was
.88, alpha for the subjective norm construct was .80, alpha for the perceived control construct was .78, and alpha for the intention construct was .83. Because the instrument items were translated from English to Arabic, the researcher assessed the reliability of the instrument by administering the instrument to a pilot sample from the real target population (30 responses). Using SPSS®, the researcher calculated Cronbach’s alpha for data collected from each subscale (attitudes, subjective norm and perceived behavioral control and intention). The results indicated that Cronbach’s alpha coefficient for attitude was .88, alpha for the subjective norm was .77, alpha for perceived behavioral control was .79, and alpha for intention was .91. These results suggest that there was adequate consistency among the construct items.

Validity of Scores

Creswell (2012) stated that in addition to the reliability, the researcher needs to examine whether the scores from the instrument are valid. Creswell (2012) indicated that the scores from a test or instrument are valid when “the intended test interpretation matches the proposed purpose of the test” (p. 630). Another definition of validity was presented by Fresy (2006), who defined validity as “the extent to which something measures whatever it is expected to measure” (p. 136). According to Fresy (2006), validity relies on different types of evidence: content-based arguments, criterion-based arguments, construct-based arguments, and consequences-based arguments. Meanwhile, Creswell (2012) identified five sources of validity evidence: test content, responses to processes, internal structure, relations to other variables, and the consequences of testing.

The original instrument has been validated by Hung and Jeng (2013). To increase the reliability and the validity of the resulting scores from the instrument, the researchers developed
their instrument in two phases. In the first phase, the researchers initially generated a set of items for each construct of TPB based on the features of online teaching and the review of the literature. In the second phase, the researchers made a revision based on the pilot test of the instrument with a total of 42 items retained. In this study, because most of the faculty members at the University of Hail were native Arabic speakers, the researcher translated the instrument into Arabic language. According to Creswell (2012), the validity of the instrument can be ascertained by experts to identify whether the items are valid. To ensure the high validity of the instrument, the researcher used the back-translation method suggested by Brislin (1970). First, the researcher translated the survey from the original language into Arabic. After translating the instrument, the researcher established a panel of three bilingual experts (who fluently speak English and Arabic) in the field of instructional technology and asked them to translate the draft questionnaire from English to Arabic and compared these translation versions. In addition to that, the experts were asked to review the structure of the instrument items and the accuracy of the translation to verify that overall the items were readable and understandable, the instructions were clear, and simple terms containing unambiguous wording were used. Finally, the researcher used their feedback to modify the final translated instrument.

Data Collection (Procedures)

Before conducting this study, the researcher applied for and received Institutional Review Board (IRB) permission to conduct the study from Northern Illinois University (see Appendix D). After that, the researcher sent a request to Hail University to conduct the study along with the required documents, which included a short description of the study, a copy of the survey, a letter of support from the dissertation chairperson, and other related documents (see Appendix
After the researcher obtained the required permission from the University of Hail, the researcher started the process of collecting the data. Survey research requires a high response rate from the participants to confidently generalize the results to the population (Creswell, 2012). Thus, the researcher used Dillman’s (2011) Tailored Design Method strategy to increase the response rate. First, using the translated instrument, an online survey was generated using NIU Qualtrics. The researcher sent an initial email to potential participants along with the survey web link. This email contained a brief description of the study and a consent form that made it clear participation in this study was voluntary and participants were under no obligation to be involved with the research effort (see Appendices F and G). The survey was available to participants for eight weeks. During this time, the researcher sent several reminders to encourage faculty members to participate.

Participants

The target population of this study consisted of all faculty members who were teaching at universities in KSA; however, the researcher utilized a convenience sampling method to recruit desired participants who represent the identified population (Creswell, 2005). In this study, the researcher selected one of the higher education organizations with which he is associated, the University of Hail, a public university in KSA because these individuals were available to the researcher and he could obtain the required permission to conduct his study from the site due to inherent cooperation. The University of Hail was officially established by Royal Decree in 2005 (University of Hail, 2005a). The University consists of 11 colleges: The College of Medicine and Medical Sciences, the College of Sciences, the College of Engineering, the College of Computer Science & Engineering, the Community College, College of Business Administration, College of
Dentistry, College of Nursing, College of Public Health, College of Pharmacy, College of Shariah and Law. The sample of the current study included male and female professors, associate professors, assistant professors, lecturers, and teaching assistants from all departments at the University.

Prior to data collection, the researcher conducted “a priori planning” power analysis using G*Power to determine the appropriate number of participants required to participate in this study. Assuming .80 power, a medium effect size of .15, and a .05 as a level of significance, and 7 predictor variables, the results of this analysis indicated that 103 participants ($N = 103$) were needed for this study (See Figures 2 and 3).

![Figure 2. The distribution-based prior planning: Linear multiple regression for this study.](image)

![Figure 3. The distribution-based prior planning: Linear multiple regression for this study.](image)
Data Analysis

For the purpose of analyzing data gathered in this study, the researcher used SPSS® software. The researcher used various statistical methods based on the data that were analyzed. The researcher applied data screening to check for missing data, normality, and outliers. Tables (frequency distribution) and graphs (bar charts and histograms) were used to present the participants’ age, gender, years of experience, and computer use. TPB construct scales used 5-point Likert items with response options from 1 = strongly disagree to 5 = strongly agree. So, the mean composite scores for each subscale (attitudes, subjective norm, perceived behavioral control and intention) were calculated. Each of the TPB constructs (attitude, subjective norm, and perceived behavioral control) were measured by a scale of 10 items. After the negatively worded items were reverse coded, composite scores for each subscale were calculated as the mean of the items. Descriptive statistics were used to analyze demographic and TPB construct data to provide an overview of the sample distribution and identify trends in the data as well as to understand the collected scores and simplify group characteristics comparisons (Creswell 2012).

The second statistical analysis involved inferential statistics to make predictions and inferences about the target population of the study based on the data collected from the sample (Creswell, 2012). Because this was a correlational study that included more than one predictor variable, the researcher carried out a multiple regression analysis to answer the research questions.

The researcher carried out three multiple regression analyses. First, multiple regression analysis was applied to investigate if the three constructs of TPB (attitude, subjective norm, and perceived behavioral control) significantly predicted faculty members’ intentions to teach online.
Then the same analysis was used to identify the effect of background characteristics (age, gender, computer use and years of experience) on attitude toward behavior, subjective norm, and perceived behavioral control. Additionally, multiple regression analysis was used to examine the moderation effects of age, gender, computer use, and years of experience on the relationships between faculty members’ 1) attitude toward behavior, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online. Regression outliers, normality of residuals, homoscedasticity, and influential values were each assessed.

Chapter Summary

The aim of this study was to investigate the factors that predict faculty members’ intentions to teach online in the KSA by utilizing TPB as a theoretical framework. This chapter presented the design of this research as well as the instrument used in this study and its reliability and validity. In addition, data collection procedures, and data analysis were presented.
CHAPTER 4

FINDINGS

The purpose of this study was to investigate factors that predict the intentions of faculty members to teach online courses at the University of Hail in Saudi Arabia. This chapter consists of the following sections: introduction, description of the population and sampling, a demographics description, reliability analyses, results presented by research question, and chapter summary. The following research questions guided this study:

1. To what extent do the factors of the TPB model (Attitude, Subjective Norm, and Perceived Behavioral Control) predict faculty members’ intention to teach online courses?

2. To what extent do demographic and professional characteristics (age, gender, computer use, and years of experience) predict faculty members’ attitude toward behavior, subjective norm, and perceived behavioral control?

3. To what extent do demographic and professional characteristics (age, gender, computer use, and years of experience) moderate the relationship between faculty members’ 1) attitude toward behavior, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online courses?

Description of Population and Sampling

The survey link was sent via emails and WhatsApp messages to 2,300 faculty members at the University of Hail in Saudi Arabia. A total of 211 faculty members responded to the survey,
constituting a response rate of 9.1%. Using SPSS®, the data were first screened for missing values, and this process showed that 19 participants did not respond to any items and their participation was recorded only because they clicked the “agree” button. Thus, these cases were deleted. The result also showed that 17 respondents had more than 12.5% of data values missing. For these missing values, Little’s test (1988) was carried out to check if the data were missing completely at random (MCAR). The result of the test ($p = .335$) indicated no evidence against the assumption of MCAR. So, these cases were also deleted. The remaining 175 participants had no missing values. The survey included some demographic items including gender, age, nationality, experience in higher education, academic rank, and experience with online teaching as described in the following section.

**Gender Distribution of Participants**

The participants in this study were males and females at the University of Hail. As shown in Table 1, 118 (67.4%) of the participants were male and 57 (32.6%) were female.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>118</td>
<td>67.4%</td>
</tr>
<tr>
<td>Female</td>
<td>57</td>
<td>32.6%</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Age Distribution**

Almost half of the participants were 31-40 years old (49.1%), followed by participants aged 41-50 (27.4%), and (15.4%) were 26-30 years old. The least common age groups were
participants who were above 50 years old (6.9%), followed by those who were less than 25 years old (1.1%; see Table 2).

Table 2
Age Distribution

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25 years old</td>
<td>2</td>
<td>1.1%</td>
</tr>
<tr>
<td>26-30</td>
<td>27</td>
<td>15.4%</td>
</tr>
<tr>
<td>31-40</td>
<td>86</td>
<td>49.1%</td>
</tr>
<tr>
<td>41-50</td>
<td>48</td>
<td>27.4%</td>
</tr>
<tr>
<td>Above 50</td>
<td>12</td>
<td>6.9%</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Nationality Distribution

As shown in Table 3, the majority of the faculty members (96; 54.9%) were Saudi Arabian, followed by 29 (16.6%) Jordanian faculty members, 18 (10.3%) Egyptian, 10 (5.7%) Sudanese, 2 (1.1%) Algerian, 6 (3.4%) Tunisian, 2 (1.1%) Indian, 4 (2.3%) Pakistani, and 8 (4.6%) were from other countries, which included South Africa, Sri Lanka, and Canada.

Demographic Statistics for Experience in Higher Education

Regarding the faculty’s experience in higher education, the majority of them, specifically 133 (76%), had six or more years of experience, followed by 33 (18.9%) faculty members who had 2 to 5 years of experience, while only 9 (5.1%) had one year or less working in higher education (Table 4).
Table 3

Nationality Distribution

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi</td>
<td>96</td>
<td>54.9%</td>
</tr>
<tr>
<td>Egypt</td>
<td>18</td>
<td>10.3%</td>
</tr>
<tr>
<td>Jordan</td>
<td>29</td>
<td>16.6%</td>
</tr>
<tr>
<td>Sudan</td>
<td>10</td>
<td>5.7%</td>
</tr>
<tr>
<td>Algeria</td>
<td>2</td>
<td>1.1%</td>
</tr>
<tr>
<td>Tunisia</td>
<td>6</td>
<td>3.4%</td>
</tr>
<tr>
<td>Indian</td>
<td>2</td>
<td>1.1%</td>
</tr>
<tr>
<td>Pakistan</td>
<td>4</td>
<td>2.3%</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>4.6%</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 4

Experience in Higher Education Distribution

<table>
<thead>
<tr>
<th>Experience</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>One year or less</td>
<td>9</td>
<td>5.1%</td>
</tr>
<tr>
<td>From 2 to 5 years</td>
<td>33</td>
<td>18.9%</td>
</tr>
<tr>
<td>6 years or more</td>
<td>133</td>
<td>76.0%</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Distribution of Participants’ Academic Rank

The survey included an item pertinent to the academic rank of the faculty members. The collected information showed that 71 (40.6%) of the participants were working as lecturers at the University of Hail, 61 (34.9%) were assistant professors, 23 (13.1%) were instructors, 14 (8%) were associate professors, and 6 (3.4%) were full professors (Table 5).
Table 5

Academic Rank Distribution

<table>
<thead>
<tr>
<th>Academic Rank</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>6</td>
<td>3.4%</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>14</td>
<td>8.0%</td>
</tr>
<tr>
<td>Assistance Professor</td>
<td>61</td>
<td>34.9%</td>
</tr>
<tr>
<td>Lecturer</td>
<td>71</td>
<td>40.6%</td>
</tr>
<tr>
<td>Instructor</td>
<td>23</td>
<td>13.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>175</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Distribution of Participants’ Academic Field

As shown in Table 6, the participants in this study were working in five different fields. The majority of them, 108 (61.7%), were employed in Humanities and Social Sciences, 37 (21.1%) in Applied Sciences (e.g. engineering, computer & IT), and 15 (8.6%) in both Medical and Health Sciences.

Table 6

Academic Field Distribution

<table>
<thead>
<tr>
<th>Academic Field</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities &amp; Social Sciences</td>
<td>108</td>
<td>61.7%</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>15</td>
<td>8.6%</td>
</tr>
<tr>
<td>Applied Sciences (engineering, computer &amp; IT)</td>
<td>37</td>
<td>21.1%</td>
</tr>
<tr>
<td>Medical &amp; Health Sciences</td>
<td>15</td>
<td>8.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>175</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>
Distribution of Participants’ Experience with Online Teaching

The participants in this study were asked if they had experience teaching online. The results showed that an overwhelming majority of the participants, 134 (76.6%), did not have experience with online teaching, while 41 (23.4%) of the participants had online teaching experience (Table 7).

Table 7

Distribution of Experience with Online Teaching

<table>
<thead>
<tr>
<th>Experience with Online Teaching</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>41</td>
<td>23.4%</td>
</tr>
<tr>
<td>No</td>
<td>134</td>
<td>76.6%</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Descriptive Statistics for the TPB Constructs

The three primary constructs in this study: attitudes, subjective norm, and perceived behavioral control were measured using Likert scales consisting of 10 items for each scale using 5-point response options: 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, and 5 = strongly agree. As positively and negatively worded items were used in this instrument to reduce the potential impact of response acquiescence bias, the negatively worded items were reverse-coded as shown in Table 8. The fourth construct “intention” was measured using a scale of 5 items. Four items used the 5-point Likert response options as follows: 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, and 5 = strongly agree. For the fifth construct (intention), five Likert-type response options were used as
follows: 1 = very unlikely, 2 = somewhat unlikely, 3 = not sure, 4 = somewhat likely, 5 = very likely.

Table 8
Reverse Coded Items

<table>
<thead>
<tr>
<th>TPB constructs</th>
<th>Items</th>
<th>Reverse coded items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>1-10</td>
<td>4,9</td>
</tr>
<tr>
<td>Subjective norm</td>
<td>11-20</td>
<td>12,16,18,19</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>21-30</td>
<td>23,24,25,26,27,28,29,30</td>
</tr>
<tr>
<td>Intention</td>
<td>31-35</td>
<td>None</td>
</tr>
</tbody>
</table>

Descriptive statistics for the scores from each subscale (attitudes, subjective norm, perceived behavioral control, and intention) are shown in Table 9. The attitude subscale had a mean score of $M = 3.42$ with $SD = 0.79$. As shown in Figure 5, the shape of the attitude distribution was slightly negatively skewed (-0.62) with slight positive kurtosis (0.31). The subjective norm subscale had a mean score of $M = 3.23$ with $SD = 0.58$. As shown in Figure 5, the shape of the subjective norm distribution was slightly negatively skewed (-0.05) with slight positive kurtosis (0.55). The perceived behavioral control subscale had a mean score of $M = 3.01$ with $SD = 0.66$. As shown in Figure 5, the shape of the perceived behavioral control distribution was slightly positively skewed (0.58) with slight positive kurtosis (0.26). The intention subscale had a mean score of $M = 4.08$ with $SD = 0.82$. As shown in Figure 5, the shape of the intention distribution was negatively skewed (-1.17) with positive kurtosis (1.17). Boxplots (Figure 4) were used to assess the distributions and the presence of outliers. The boxplots showed that each TPB construct had several outliers. However, these outliers were not extreme in value. As a result, these values were retained.
### Table 9

Descriptive Statistics for the TPB Constructs (Subscales)

<table>
<thead>
<tr>
<th>TPB constructs</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>175</td>
<td>3.42</td>
<td>0.79</td>
<td>-0.62</td>
<td>0.31</td>
</tr>
<tr>
<td>Subjective norm</td>
<td>175</td>
<td>3.26</td>
<td>0.54</td>
<td>-0.05</td>
<td>0.55</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>175</td>
<td>3.01</td>
<td>0.66</td>
<td>0.58</td>
<td>0.26</td>
</tr>
<tr>
<td>Intention</td>
<td>175</td>
<td>4.08</td>
<td>0.82</td>
<td>-1.17</td>
<td>1.17</td>
</tr>
</tbody>
</table>

![Boxplots of the TPB subscale scores](image)

**Figure 4**: Boxplots of the TPB subscale scores.
Figure 5: Histograms of the TPB subscale scores.

Reliability Analysis

To evaluate the reliability of scores from the instrument used in this study, the researcher calculated Cronbach’s alpha for direct measures (attitudes, subjective norm, perceived behavioral control, and intention) to ensure adequate internal consistency among the questionnaire items. Cronbach’s alpha was computed separately for each construct. As shown
in Table 10, the reliability values ranged from 0.77 to 0.91, which suggests good reliability in that a high alpha coefficient indicates that scores from the items are internally consistent.

Table 10
Instrument Cronbach’s Alpha Coefficient

<table>
<thead>
<tr>
<th>Scale/Subscale</th>
<th>Number of Questionnaire Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>10</td>
<td>.88</td>
</tr>
<tr>
<td>Subjective norm</td>
<td>10</td>
<td>.77</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>10</td>
<td>.79</td>
</tr>
<tr>
<td>Intention</td>
<td>5</td>
<td>.91</td>
</tr>
<tr>
<td>Overall</td>
<td>35</td>
<td>.85</td>
</tr>
</tbody>
</table>

Findings of Research Questions

Research Question 1 Results

The first research question was “To what extent do the factors of the TPB model (Attitude, Subjective Norm, Perceived Behavioral Control) predict faculty members’ intention to teach online courses?” This question assessed the factors that predict faculty members’ intentions to teach online courses based on TPB constructs. Multiple linear regression analysis was conducted to test if attitude, subjective norm, perceived behavioral control predicted faculty members’ behavioral intentions to teach online courses.

The assumptions of multiple regression were assessed before proceeding with the research results. A histogram was generated to check if the model residuals were normally distributed. Visual inspection of the histogram (Figure 6) indicated that the assumption of
normality of residuals was met. Homoscedasticity is another assumption of multiple linear regression, so a scatter plot of the residuals on the predicted values was generated to check this assumption. The scatterplot (Figure 7) showed that residuals were randomly scattered around the horizontal line at zero, which indicated that the homoscedasticity was met in this model. Multicollinearity, which refers to high correlations among the predictor variables, was assessed by examining the variance inflation factor (VIF) and tolerance methods (Table 11). Results showed that no values of VIF for each predictor exceeded 10 and all tolerance values were greater than 0.10, which indicated there were no issues with multicollinearity. The Durbin-Watson statistic was used to check for the presence of correlation between the residuals. The Durbin-Watson statistic was 0.29, which indicated that the residuals were uncorrelated.

Figure 6: Histogram of the residuals.
Cook’s distance statistics were used to check for influential values. The cut-off value for influential outliers was a value of 1.0 or greater. The results showed that the mean value of Cook’s distance was .006 with a maximum value of .07, which indicated there were no influential values of the regression model. Also, the results showed one standardized residual

Table 11

ANOVA Summary for Regression Predicting Behavioral Intention from Attitude, Subjective Norm, and Perceived Behavioral Control

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>46.13</td>
<td>3</td>
<td>15.37</td>
<td>36.58</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Residual</td>
<td>71.88</td>
<td>171</td>
<td>0.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>118.01</td>
<td>174</td>
<td>0.42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
that was less than 3 standard deviations below its predicted value \((z = -3.4)\). Multiple regression analysis was conducted again without this case, and the results did not change markedly.

The results from the multiple regression analysis indicated the overall regression model containing the three TPB constructs (Attitude, Subjective Norm, and Perceived Behavioral Control) was a statistically significant predictor of the behavioral intention to teach online \([F(3,175) = 36.58, p < .001; \text{ see Table 11}]\). The model summary showed that approximately 39.1% of the variance in the faculty’s behavioral intention to teach online was explained by their attitudes, subjective norm, and perceived behavioral control \((R^2 = .39, R^2_{adj} = .38)\). Examining each predictor separately, the results indicated that attitude \((\beta = .44, p < .001)\) and subjective norm \((\beta = 0.38, p < .001)\) were statistically significant positive predictors of behavioral intention (see Table 12). The regression results showed that perceived behavioral control \((\beta = 0.03, p = .604)\) did not statistically significantly predict behavioral intention.

As there were two significant predictors in this model, the Pratt Index was used to compare the predictive power of the predictors. Results indicated that attitude was the most important predictor (Pratt Index = 0.24) followed by subjective norm (Pratt Index = 0.12).
<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>p</th>
<th>Zero-order</th>
<th>Partial</th>
<th>Part</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.21</td>
<td>0.36</td>
<td>3.36</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>0.44</td>
<td>0.08</td>
<td>0.42</td>
<td>5.01</td>
<td>&lt;.001</td>
<td>0.59</td>
<td>0.35</td>
<td>0.29</td>
<td>0.49</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>0.38</td>
<td>0.12</td>
<td>0.24</td>
<td>2.94</td>
<td>.004</td>
<td>0.54</td>
<td>0.22</td>
<td>0.17</td>
<td>0.49</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>0.03</td>
<td>0.07</td>
<td>0.03</td>
<td>0.52</td>
<td>.604</td>
<td>0.02</td>
<td>0.04</td>
<td>0.03</td>
<td>0.97</td>
</tr>
</tbody>
</table>
Research Question 2 Results

The second research question was “To what extent do demographic and professional characteristics (age, gender, computer use, and years of experience) predict faculty members’ attitude toward teaching, subjective norm and perceived behavioral control?” Multiple linear regression was conducted to assess the extent to which demographic and professional characteristics (age, gender, computer use, and years of experience) predicted faculty members’ attitudes toward behavior, subjective norm and perceived behavioral control. Before proceeding with the test, a dummy variable was created for gender, coded as 0 = male and 1 = female.

Multiple Linear Regression 1

The multiple regression assumptions were checked before proceeding with the analysis results. The histogram of the residuals indicated the residuals were normally distributed (Figure 8). A scatter plot of the residual values was generated to check the assumption of homoscedasticity (Figure 9). The scatter plot showed the homoscedasticity of the residuals’ assumption was met. In addition, variance inflation factor (VIF) and tolerance methods were examined to check the multicollinearity assumption in this model (Table 13). The results showed that no values of VIF for each predictor exceeded 10 and all tolerance values were greater than 0.10, which indicated that no evidence of excessive multicollinearity.
Figure 8: Histogram of the residuals.

Figure 9: Scatter plot of the residual values.
Table 13
ANOVA Summary for Regression Predicting Attitude from Age, Gender, Computer Use, and Years of Experience

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3.47</td>
<td>4</td>
<td>0.86</td>
<td>1.40</td>
<td>.234b</td>
</tr>
<tr>
<td>Residual</td>
<td>105.15</td>
<td>170</td>
<td>0.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>108.63</td>
<td>174</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cook’s distance statistics were used to check for influential values. The results showed that the mean value of Cook’s distance was .006 with a maximum value of .14, which indicated there were no influential values of the regression model. Durbin-Watson statistic was used to check for the presence of correlation between the residuals. Durbin-Watson statistic was 1.08, which indicated that the residuals were uncorrelated. Standardized residuals also were examined. Results showed that, there was no standardized residual more extreme than +/−3.00.

As shown in Tables 13 and 14, the results for the regression analysis predicting attitude from age, gender, computer use, and years of experience indicated that these set of predictors did not significantly predict attitude \( [F (4, 170) = 1.40, p = 0.234] \). Examining each predictor separately, the results showed that none of the individual predictors—age \( (\beta = 0.06, p = 0.43) \), gender \( (\beta = 0.10, p = 0.16) \), computer use \( (\beta = -0.01, p = 0.86) \), or years of experience \( (\beta = -0.12, p = 0.11) \)—significantly predicted attitude toward teaching online courses.
Multiple Linear Regression 2

Multiple linear regression was used to identify whether demographic and professional characteristics (age, gender, computer use, and years of experience) predict faculty members’ subjective norm. Multiple regression assumptions were checked before proceeding with the analysis results. The histogram of the residuals indicated the residuals were normally distributed (Figure 10). A scatter plot of the residual values was generated to check the assumption of homoscedasticity (Figure 11). The scatter plot showed the homoscedasticity of the residuals’ assumption was met. In addition, variance inflation factor (VIF) and tolerance methods were examined to check the multicollinearity assumption in this model (Table 15). The result showed that no values of VIF for each predictor exceeded 10 and all tolerance values were greater than 0.10, which indicated no evidence of excessive multicollinearity.

Cook’s distance statistics were used to check for influential values. The results showed that the mean value of Cook’s distance was .006 with a maximum value of .17, which indicated that there...
were no influential values of the regression model. Durbin-Watson statistic was used to check for the presence of correlation between the residuals. The Durbin-Watson statistic was 1.88, which indicated the residuals were uncorrelated. Standardized residuals were also examined. Results showed there was no standardized residual more extreme than +/-3.00.

![Histogram of the residuals.](image1.png)

**Figure 10:** A histogram of the residuals.

![Scatter plot of the residual values.](image2.png)

**Figure 11:** A scatter plot of the residual values.
The regression analysis predicting subjective norm from age, gender, computer use, and years of experience indicated that the full set of predictors did not significantly predict subjective norm \[ F(4, 170) = .70, p = 0.588; \text{ Table 15 and 16}. \] Examining each predictor separately, the results showed that none of the individual predictors—age \((\beta = 0.10, p = 0.17)\), gender \((\beta = 0.06, p = 0.42)\), computer use \((\beta = -0.02, p = 0.75)\), or years of experience \((\beta = -0.04, p = 0.59)\)— significantly predicted subjective norm.
Table 15

ANOVA Summary for Regression Predicting Subjective Norm from Age, Gender, Computer Use, and Years of Experience

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>.833</td>
<td>4</td>
<td>0.20</td>
<td>.70</td>
<td>.588b</td>
</tr>
<tr>
<td>Residual</td>
<td>50.03</td>
<td>170</td>
<td>0.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50.87</td>
<td>174</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 16

Summary of Multiple Regression Analysis Predicting Subjective Norm from Age, Gender, Computer Use, and Years of Experience

<table>
<thead>
<tr>
<th>Effect</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>β</td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.14</td>
<td>0.27</td>
<td>0</td>
</tr>
<tr>
<td>Age</td>
<td>0.06</td>
<td>0.05</td>
<td>0.10</td>
</tr>
<tr>
<td>Gender</td>
<td>0.07</td>
<td>0.08</td>
<td>0.06</td>
</tr>
<tr>
<td>Computer Use</td>
<td>-0.00</td>
<td>0.01</td>
<td>-0.02</td>
</tr>
<tr>
<td>Years of Experience</td>
<td>-0.02</td>
<td>0.05</td>
<td>-0.04</td>
</tr>
</tbody>
</table>
Multiple Linear Regression

Multiple linear regression was used to identify the extent to which demographic and professional characteristics (age, gender, computer use, and years of experience) predict the faculty members’ perceived behavioral control. Multiple regression assumptions were checked before proceeding with the analysis results. The histogram of the residuals indicated the distribution of residuals was close to normal (Figure 12). A scatter plot of the residual values was generated to check the assumption of homoscedasticity (Figure 13). The scatter plot showed the homoscedasticity of the residuals’ assumption was met. In addition, variance inflation factor (VIF) and tolerance statistics were examined to check the multicollinearity assumption in this model (Table 17). Results showed that no values of VIF for each predictor exceeded 10 and all tolerance values were greater than 0.10, which indicated no evidence of excessive multicollinearity.

Cook’s distance statistics were computed to check for influential values. Results showed that the mean value of Cook’s distance was .005 with a maximum value of .04, which indicated that there were no influential values of the regression model. The Durbin-Watson statistic was computed to check for the presence of correlation between the residuals. The Durbin-Watson statistic was 2.04, which indicated that the residuals were uncorrelated. Standardized residuals outliers were also examined. Results showed that there was no standardized residual more extreme than +/-3.00.
Multiple regression analysis indicated the overall regression model containing the four predictors (age, gender, computer use, and years of experience) significantly predicted faculty members’ perceived behavioral control: $F(4,170) = 7.01, p < .001$ (Table 17). The model summary showed that 14.21% of the total variability of the outcome variable (perceived behavioral control) was explained by the full set of predictors ($R^2 = .14$, $R_{adj}^2 = .12$). Examining each predictor separately, the results showed that age ($\beta = 0.20, p = 0.007$) and computer use ($\beta$
= 0.28, \( p < .001 \) were statistically significant positive predictors of perceived behavioral control (Table 18). However, the regression results suggested that gender (\( \beta = -0.06, \ p = 0.37 \)) and years of experience (\( \beta = 0.01, \ p = 0.82 \)) did not statistically significant predict perceived behavioral control.

As there were two significant predictors in this model, the Pratt Index was computed to compare the predictive power of the variables. Results indicated that computer use was the most important predictor (Pratt Index = 0.08) followed by age (Pratt Index = 0.05).
Table 17

ANOVA Summary for Regression Predicting Perceived Behavioral Control from Age, Gender, Computer Use, and Years of Experience

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10.990</td>
<td>4</td>
<td>2.74</td>
<td>7.01</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Residual</td>
<td>66.624</td>
<td>170</td>
<td>0.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>77.613</td>
<td>174</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 18

Summary of Multiple Regression Analysis Predicting Perceived Behavioral Control from Age, Gender, Computer Use, and Years of Experience

<table>
<thead>
<tr>
<th>Effect</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>B</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.79</td>
<td>0.31</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.16</td>
<td>0.05</td>
<td>0.20</td>
</tr>
<tr>
<td>Gender</td>
<td>0.09</td>
<td>0.10</td>
<td>-0.06</td>
</tr>
<tr>
<td>Computer Use</td>
<td>0.05</td>
<td>0.01</td>
<td>0.28</td>
</tr>
<tr>
<td>Years of Experience</td>
<td>0.01</td>
<td>0.06</td>
<td>0.01</td>
</tr>
</tbody>
</table>
Research Question 3 Results

The third research question was “To what extent do demographic and professional characteristics (age, gender, computer use, and years of experience) moderate the relationship between faculty 1) members’ attitude toward behavior, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online course?” For better interpretation and to reduce potential variance inflation, the predictor variables (age, computer use, years of experience, attitude, subjective norm, and perceived behavioral control) were mean centered. Interaction terms then were created between the demographic characteristics and each of the TPB model constructs.

Before proceeding with interpreting results, multiple linear regression assumptions were examined. A histogram was generated to determine whether the model residuals are normally distributed (Figure 14). Visual inspection of the histogram indicated the shape of the standardized residual values was normally distributed. A scatter plot of the residual values was generated to check the assumption of homoscedasticity (Figure 15). The scatter plot showed the residuals were randomly scattered around the horizontal line at zero, which indicated the homoscedasticity assumption had not been violated. In addition, variance inflation factor (VIF) and tolerance methods were examined to check the multicollinearity assumption in this model (Table 19). The results showed that no values of VIF for each predictor exceeded 10 and all tolerance values were greater than 0.10, which indicated that there were no issues with multicollinearity.

Cook’s distance statistics were used to check for influential values. The results showed that the mean value of Cook’s distance was .007 with a maximum value of .17, which indicated
there were no influential values of the regression model. Regarding the standardized residual outliers, results showed that there was one standardized residual regression outlier that was less than -3 standard deviations below its predicted value. The Durbin-Watson statistic was used to check for the presence of correlation between the residuals. The Durbin-Watson statistic was 1.84, which indicated that the residuals were uncorrelated.

Figure 14: Histogram of the residuals.

Figure 15: Scatter plot of the residual values.
Results from the regression (Table 19) indicated the overall regression model significantly predicted the behavioral intention to teach online \(F(19, 155) = 7.73, \ p < .001\). A total of 48.7\% of the outcome variable intention was explained by the full set of the predictors \(R^2 = 0.48, R^2_{adj} = 0.42\). Tests for moderation effects of age, gender, computer use, and years of experience indicated that years of experience was found to be a significant moderator of the relationship between attitudes and intention \(\beta = 0.35, \ p = 0.04\) and the relationship between subjective norm and intention \(\beta = -0.64, \ p = 0.01\). Plots were generated of these significant interaction effects (see Figures 16 and 17). As can be seen, the relationship between attitude and behavioral intention increased as years of experience increased, while the relationship between subjective norm and behavioral intention decreased as years of experience increased. The variables age, gender, and computer use showed no significant moderation effect on the relationship between faculty 1) members’ attitude toward behavior, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online course. Table 20 provides these effects.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>(df)</th>
<th>Mean Square</th>
<th>(F)</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>57.43</td>
<td>19</td>
<td>3.02</td>
<td>7.73</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Residual</td>
<td>60.58</td>
<td>155</td>
<td>0.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>118.01</td>
<td>174</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 20

Multiple Regression Analysis of Moderators of the Intention Relationship

<table>
<thead>
<tr>
<th>Effect</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>β</td>
</tr>
<tr>
<td>(Constant)</td>
<td>4.06</td>
<td>0.06</td>
<td>63.63</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.05</td>
<td>0.11</td>
<td>-0.03</td>
</tr>
<tr>
<td>Age</td>
<td>0.01</td>
<td>0.06</td>
<td>0.00</td>
</tr>
<tr>
<td>Computer Use</td>
<td>0.09</td>
<td>0.03</td>
<td>0.18</td>
</tr>
<tr>
<td>Experience</td>
<td>0.16</td>
<td>0.10</td>
<td>0.11</td>
</tr>
<tr>
<td>Attitude</td>
<td>0.44</td>
<td>0.11</td>
<td>0.42</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>0.41</td>
<td>0.18</td>
<td>0.27</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>-0.11</td>
<td>0.10</td>
<td>-0.09</td>
</tr>
<tr>
<td>Attitude × Gender</td>
<td>0.04</td>
<td>0.19</td>
<td>0.01</td>
</tr>
<tr>
<td>Subjective Norm × Gender</td>
<td>0.01</td>
<td>0.26</td>
<td>0.00</td>
</tr>
<tr>
<td>Perceived Behavioral Control × Gender</td>
<td>0.02</td>
<td>0.16</td>
<td>0.01</td>
</tr>
<tr>
<td>Attitude × Age</td>
<td>-0.12</td>
<td>0.11</td>
<td>-0.09</td>
</tr>
<tr>
<td>Subjective Norm × Age</td>
<td>0.08</td>
<td>0.18</td>
<td>0.04</td>
</tr>
</tbody>
</table>

Table continued on next page
Table cont. from previous page

<table>
<thead>
<tr>
<th>Factor</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
<th>Value 5</th>
<th>Value 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Behavioral Control x Age</td>
<td>-0.15</td>
<td>0.18</td>
<td>-0.05</td>
<td>-0.83</td>
<td>.40</td>
<td>0.86</td>
</tr>
<tr>
<td>Attitude × Computer Use</td>
<td>-0.00</td>
<td>0.06</td>
<td>0.00</td>
<td>-0.05</td>
<td>.95</td>
<td>0.35</td>
</tr>
<tr>
<td>Subjective Norm × Computer Use</td>
<td>-0.16</td>
<td>0.10</td>
<td>-0.15</td>
<td>-1.53</td>
<td>.12</td>
<td>0.34</td>
</tr>
<tr>
<td>Perceived Behavioral Control x Computer Use</td>
<td>0.07</td>
<td>0.06</td>
<td>0.08</td>
<td>1.24</td>
<td>.21</td>
<td>0.65</td>
</tr>
<tr>
<td>Attitude × Experience</td>
<td>0.35</td>
<td>0.17</td>
<td>0.21</td>
<td>2.06</td>
<td>.04</td>
<td>0.29</td>
</tr>
<tr>
<td>Subjective Norm × Experience</td>
<td>-0.64</td>
<td>0.24</td>
<td>-0.26</td>
<td>-2.60</td>
<td>.01</td>
<td>0.32</td>
</tr>
<tr>
<td>Perceived Behavioral Control × Experience</td>
<td>0.14</td>
<td>0.18</td>
<td>0.05</td>
<td>0.81</td>
<td>.41</td>
<td>0.68</td>
</tr>
</tbody>
</table>
Figure 16: Plot of the moderation effect of experience on the relationship between attitude and behavioral intention.

Figure 17: Plot of the moderation effect of experience on the relationship between subjective norm and the behavioral intention.
Summary

This chapter presented the results of the statistical analyses. First, descriptions of population and sampling were presented, which included a description of the data screening procedures and a description of selected demographic variables of the participants (gender, age, nationality, experience in higher education, academic rank, academic field, and experience with online education). Additionally, the descriptive statics for the TPB constructs and the reliability analyses were presented. Finally, the findings of the research questions results were presented, respectively.
CHAPTER 5
DISCUSSION, LIMITATIONS, IMPLICATIONS, AND RECOMMENDATION FOR FUTURE STUDIES

The main purpose of this study was to investigate faculty members’ intentions to teach online at the University of Hail in Saudi Arabia based on the Theory of Planned Behavior (TPB) to assess the strength of attitudes toward the behavior (AB), subjective norm (SN), and perceived behavioral control (PBC) as factors that predict individual intentions to perform a specific action. Additionally, the study examined the moderation effects of (age, gender, computer use, and years of experience) on the relationship between faculty members’ 1) attitude toward teaching online, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online. The following research questions guided this study:

1. To what extent do the factors of the TPB model (Attitude, Subjective Norm, Perceived Behavioral Control) predict faculty members’ intention to teach online?

2. To what extent do demographic and professional characteristics (age, gender, computer use, and years of experience) predict faculty members’ attitude toward behavior, subjective norm, and perceived behavioral control?

3. To what extent do demographic and professional characteristics (age, gender, computer use, and years of experience) moderate the relationship between faculty members’ 1) attitude toward behavior, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online?
The participants of this study were 175 (118 males and 57 females) faculty members who were teaching at the University of Hail in Saudi Arabia. The participants responded to an online survey sent to them via email and WhatsApp messages. The instrument had two parts with a total of 44 items. The first part included seven descriptive items related to background information and the second part included four scales that align to the TPB constructs.

Research Question 1

According to TPB, Attitude, Subjective Norm, and Perceived Behavioral Control are three conceptually independent factors that lead to behavioral intention. The first question in this study assessed the strength of the factors that predict faculty members’ intention to teach online based on TPB using multiple linear regression analyses. Overall, the results of the analyses indicated that the combined TPB constructs (Attitude, Subjective Norm, and Perceived Behavioral Control) significantly predicted faculty members’ intention to teach online. The study looked at what constructs made a significant contribution to the prediction of faculty members’ intention to teach online. The results indicated that attitude and subjective norm were statistically significant positive determinants of behavioral intention. However, perceived behavioral control was not found to be a significant predictor of the faculty members’ intention. Results related to each construct are discussed below.

Attitude refers to “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991, p. 188). In this study, attitude toward teaching online was expected to be significantly associated with the faculty members’ intention to teach online. The findings of this question confirmed that attitude was a statistically significant positive predictor of faculty members’ intention to teach online. This result suggests
that faculty members who have positive attitudes about teaching online are more likely to teach online in the future. The present findings are consistent with the majority of studies that applied TPB (AlGahtani, & Hubona, 2007; Baker et al., 2007; Hung & Jeng, 2013; Lee et al. 2010; Salleh & Albion, 2004; Sugar et al., 2004; Teo & Tan, 2012), although the strengths and power of these factors in predicting behavioral intention varied across TPB studies. In this study, the results indicated attitude appeared to be the most important and strongest predictor of behavioral intention, which was aligned with prior research (Lee et al. 2010; Sugar et al., 2004; Teo & Tan, 2012). These findings suggest faculty members’ attitudes play an important role in determining online teaching intentions. Hence, it is highly recommended that higher education institutions such as universities should pay more attention to their faculty members’ attitudes and work to enhance these attitudes to improve the intention to teach online. University officials should work closely with their faculty members through workshops or training that introduce the various benefits of teaching online and how this teaching style would provide faculty with more flexibility thus increasing their teaching productivity. In addition, to increase the awareness about the benefits of teaching online, the success stories of faculty members who teach online courses can be integrated into the workshop agenda.

As mentioned above, this study assessed the importance of subjective norm for predicting faculty members’ intentions to teach online. Subjective norm is defined as “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188), which refers to individuals’ beliefs about whether others who are important to them, such as friends, colleagues and family members, would like them to perform a specific behavior. When tested for subjective norm, the results of the current study confirmed subjective norm was a statistically significant positive predictor of faculty members’ intentions to teach online. The findings of the current
study were consistent with those of Baker et al. (2007), Hung and Jeng (2013), Lee et al. (2010), Salleh and Albion (2004), and Teo and Tan (2012). However, the findings of this study do not support the meta-analysis by Armitage and Conner (2001). Armitage and Conner (2001) reviewed 185 studies that used TPB as a theoretical framework. Their study indicated that the subjective norm construct was a weak predictor of intentions. There are several possible explanations for this result. For example, the researchers attributed that finding to a poor measurement and the need for expansion of the normative component. Another possible explanation for this inconsistency might be due to the social and cultural differences of Arab nations compared to Western countries. Baker et al. (2007) argued that in a culture with strong social pressure such as Saudi Arabia’s, subjective norm would have a significant impact on behavioral intention. Based on the results of the current study, it is clear that faculty members are influenced by others when it comes to their intention to teach online. Thus, universities should take into account this factor when working with the faculty members to motivate them to teach online. It would be beneficial for university administrators to collaborate with key stakeholders in academia (e.g., college deans, department chairs) to enhance faculty members’ awareness about the potential benefits of teaching online.

Perceived behavior control is defined as “the perceived ease or difficulty of performing the behavior and is assumed to reflect experience as well as anticipated impediments and obstacles” (Ajzen, 1991, p. 188). It refers to individuals’ beliefs about their abilities and skills to perform a behavior. This finding is somewhat surprising in that perceived behavior control did not significantly predict the faculty members’ intentions to teach online. This result is consistent with prior research conducted by Hung and Jeng (2013), Salleh and Albion (2004), and Sugar et al. (2004), who found perceived behavior control did not significantly predict behavioral
intentions. However, this result contradicts Lee, Cerreto and Lee’s (2010) study, which indicated that all TPB constructs (Attitude, Subjective Norm, and Perceived Behavioral Control) were significant predictors of teachers’ intentions to use computers in teaching. A possible explanation for these results may be due to the inaccurate definition of the target behavior. The target behavior in the current study was teaching online, which is a general term that could include both the use of different technologies and different ways of utilizing them. Lee et al. (2010) argued the conflicting findings among studies may have been because the target behavior was not clearly defined. According to Ajzen (2006), who proposed TPB, the target behavior must be clearly and appropriately defined to allow useful generalization. Another possible explanation of this inconsistency is that the items used in the instrument might were not be adequate for measuring the perceived behavior control.

Research Question 2

The second research question of this study aimed to identify whether the factors of age, gender, computer use, and years of experience significantly predict the three constructs of TPB (Attitude, Subjective Norm, and Perceived Behavioral Control). According to Ajzen and Fishbein (2005), investigating demographic and professional factors associated with attitude toward behavior, subjective norm, and perceived behavioral control will deepen researchers’ understanding of behavioral elements.

Multiple regression analyses were conducted to answer this research question. The findings showed that none of these demographics and professional characteristics significantly predicted attitude or subjective norm. Whereas, regarding the construct perceived behavioral control, the results revealed age and computer use were statistically significant positive
predictors of perceived behavioral control. Further analysis was conducted to compare the predictive power of these two predictors, and the results showed that computer use was the most important predictor of perceived behavioral control followed by age. This positive significant result suggests that with an increase in age and computer use, faculty members are more confident to teach online and show less concern about the required skills and knowledge to be online teachers. It was expected that, with the increase of computer use, faculty members would have more competency in teaching online. For this reason, it was expected that online teaching would be less appealing to older faculty members. It was also expected that younger faculty especially who have been brought up with technology would be more comfortable and express less concerns when it comes to use computers and internet. Regardless of age, all faculty members state that they have some competency, if not more, in teaching online. This assertion can be explained by the cultural phenomenon in Saudi Arabia which requires the conformity to the expectations of others.

This result is contradictory to a similar study conducted by Hung and Jeng (2013). Their study applied Ajzen’s (1991) TPB as a theoretical framework to investigate factors predicting future educational technologists’ intentions to teach online. Part of Hung and Jeng’s (2013) study examined if age, gender, computer use, and online teaching experience significantly predict the three constructs of TPB (Attitude, Subjective Norm, and Perceived Behavioral Control). Hung and Jeng’s (2013) reported that attitude and subjective norm were significantly predicted by online teaching experience and age, while in the current study none of these constructs were significantly predicted by these factors. Regarding the construct perceived behavioral control, both studies Hung and Jeng’s (2013) and the current study indicated that perceived behavioral control was significantly predicted by age and computer use. In Hung and Jeng’s (2013) study,
teaching experience was a significant predictor of perceived behavioral control which was not significant in the current study. It seems possible that this inconsistency with the current findings is due to differences in the characteristics of the participants in the two studies. The participants of the current study were faculty members at the University of Hail who differed in multiple characteristics: discipline, age, experience and level of education, and technology proficiency. However, the participants in Hung and Jeng’s (2013) study were all doctoral students who were studying Educational Technology. Because of their doctoral major, those participants were more likely to have resources, knowledge, and skills related to online teaching compared to the participants of the current study whose beliefs might be affected by differences in teaching disciplines.

In conclusion, both the current study and the study conducted by Hung and Jeng (2013) are in agreement that age and computer use were important factors in affecting faculty members’ beliefs about their abilities and skills to teach online. This agreement provided more information about how these two factors related to the faculty members’ attitudes, subjective norm and perceived behavior control. For example, if faculty members used technology more frequently, they were more likely to consider online teaching as an easy task and to intend to participate in this teaching approach. Taken together, these results suggest that universities should emphasize these two factors (age and computer use) when preparing to offer online courses. Given the limited existing research on the relationship between demographic and professional variables and TPB constructs and based on the results of this study, it is suggested that further research should be conducted to investigate demographic and professional variables and their relationship with TPB constructs.
Research Question 3

One of the aims of this study was to investigate the moderating role of age, gender, computer use, and years of experience on the relationships among the predictor variables (Attitude, Subjective Norm and Perceived Behavioral Control) and the outcome variable (behavioral intention to teach online). Tests for moderation effects of age, gender, computer use, and years of experience indicated that only years of experience was found to be a significant moderator of the relationship between attitudes and intention and the relationship between subjective norm and intention. The analysis showed that the relationship between attitude and behavioral intention increased as years of experience increased, while the relationship between subjective norm and behavioral intention decreased as years of experience increased. The variables of age, gender, and computer use showed no significant moderation effect on the relationship between members’ attitudes toward behavior, subjective norm, perceived behavioral control and behavioral intention to teach online.

The current study examined the moderating effects of age and gender on the relationships between the predictors (Attitude, Subjective Norm and Perceived Behavioral Control) and the outcome variable (behavioral intention to teach online). The findings of this study indicated that age and gender were not significant moderators of the relationships among the TPB constructs. These findings are consistent with similar research conducted in Saudi Arabia by Baker et al. (2007), who investigated the effect of gender and age on new technology implementation by the Saudi workforce. The results of their study indicated age and gender did not significantly influence the TPB construct relationships. However, those results differ from prior research conducted in Western nations by Morris et al. (2005), who found age and gender significantly
moderated the relationships between TPB constructs. This inconsistency may be attributed to the
cultural differences between the contexts in the two studies, so the current study may be more
consistent with the Saudi Arabian study that shares the same context. This argument is supported
by Hong and Kang (2011), who examined how the relationships of the constructs in the Unified
Theory of Technology Acceptance and Use UTAUT model are affected by culture when
comparing data from Korea and the USA.

The moderating effect of years of experience was also examined in this study. The
analysis confirms that years of experience significantly moderated the relationship between the
predictors (attitudes and subjective norm) and the outcome variable (behavioral intention to teach
online). The analysis showed that the relationship between attitude and behavioral intention
increased as years of experience increased, while the relationship between subjective norm and
behavioral intention diminished as years of experience increased. Overall, the literature showed a
lack of studies that examined the moderating effects of demographics such as years of experience
through the application of TPB. Due to this lack, the findings of this study had to be compared
with prior research using similar models such as the UTAUT. For instance, Dulle and Minishi-
Majanja (2011) examined the moderating effects of age, awareness, experience, gender and
position on the relationships between UTAUT constructs when studying the adoption of open
access among Tanzanian universities’ faculty members. Regarding the moderating effect of
experience, the results showed a significant moderation effect of years of experience on the
relationships between (effort expectancy and behavioral intention) and the relationship between
(social influence towards open access usage). Social influence in the UTAUT model refers to the
influence of others on individual’s intentions, which is similar to the subjective norm construct in
TPB. This finding supports the role of years of experience as a moderator of the relationships
among TPB and UTAUT constructs. Therefore, universities should pay more attention to this factor when offering online courses to ensure successful implementation. Also, these findings suggest that it is viable to include years of experience as a moderator in future research about technology adoption in education.

The current study also examined the effects of computer use as a moderating variable. According to the analyses, this study did not find the significant moderating effects of computer usage on the relationship between the predictors of attitude, subjective norm and perceived behavioral control and the outcome variable behavioral intention to teach online. Literature showed that computer usage plays an important role in integrating technology in education (Al-Khaldi & Al-Jabri, 1998; Teo & Tan, 2012; van-Braak, 2001). For example, Teo and Tan (2012) investigated pre-service teachers’ acceptance of technology use and found that providing teachers with opportunities to master the use of computers is an important element of technology integration in education. Also, Gilakjani (2013) argued that computer use is one of the most important factors that encourages teachers to integrate technology into their teaching. To the best of my knowledge, there are no studies related to the moderation effect of computer usage in the field. Therefore, it is recommended that future studies should be conducted to further examine the moderation effect of computer usage using the TPB model with faculty members to confirm the findings of this study.

Limitations and Delimitations of the Study

The current study has some limitations related to internal and external validity that may have affected the outcomes. These limitations could be associated with the sample design, the study design, and the research instrument. Since the researcher used a non-probability
convenience sampling technique for the current study, the sample might not be representative of the target population. In this kind of sampling, the participants were selected because they were available to the researcher and were willing to participate (Creswell, 2012). Another possible limitation of this study is related to the study design. Because this is a correlational study, causation cannot be determined as the variables cannot be controlled, which can lead to weak external validity. Because the instrument used to collect the data was an online survey (questionnaire), the participants provided self-reported data. Some limitations in this regard must be considered, such as acquiescence (i.e., tendency to choose agree responses), social desirability, and respondent knowledge. Despite the confidentiality and anonymity, the survey provided, using an online survey may be biased toward the individual who uses technology. In addition, having the original instrument translated from English to the Arabic language may have caused a potential error in translation either linguistically or culturally, which may have affected the participants’ understanding of the survey items. Another limitation was that of the 28 universities in KSA, the researcher conducted this research study at only the University of Hail, which may limit the generalizability of the study to other universities.

Implications

The aim of the current study was to investigate the factors that significantly predicted faculty members’ intentions to teach online at the University of Hail in Saudi Arabia based on TPB. The findings of this study suggest that TPB is a valid model for explaining faculty members’ intentions to teach online in the Arab world. This study contributed to growing knowledge about utilizing psychological theories to understand the users’ behavioral intentions in an education context. Also, the findings of this study indicate attitude and subjective norm are
statistically significant predictors of the faculty member’s intentions to teach online. According to these findings, faculty members’ intentions at the University of Hail are based more on their evaluations of the benefits of teaching online and the opinions of their colleagues, friends, and relatives regarding online teaching. Therefore, decision makers at the University of Hail should work closely with faculty members to enhance their beliefs and develop positive attitudes about teaching online. This can be achieved by establishing a faculty development center that provides faculty members with support and resources and helps them be adequately equipped with skills and knowledge to teach online. Also building a faculty learning community is highly recommended. This community would allow them to collaborate, share their successful experiences, and provide recommendations for successful online teaching implementation.

Another finding of this study was that age and computer usage were significant predictors of the perceived behavior control construct. Therefore, it might be ideal for universities to provide their faculty members with professional development that prepares them to use technology and keeps them updated about new emerging technologies and their uses.

The current study also examined the moderation effects of age, gender, computer use, and years of experience on the interrelationships between the predictor variables (attitude toward online teaching, subjective norm, perceived behavioral control) and the outcome variable (behavioral intention to teach online). The findings of this study suggest that years of experience significantly moderated the relationship between the predictors (attitudes and subjective norm) and the outcome variable (behavioral intention to teach online). The analysis showed there is a positive relationship between attitude and behavioral intention, whereas the relationship between subjective norm and behavioral intention was a negative one. This finding is a unique contribution to the field about the moderation effects of these two variables in the Arab world.
using TPB. Also, such a finding provides insight into the role of these two variables and their effect on the implementation of online teaching.

Suggestions for Future Research

Based on the findings and limitations of this study, several suggestions for future research are recommended. This study was limited in terms of population. The sample of this study only included faculty members of one university in Saudi Arabia (University of Hail). Therefore, it would be useful to expand this study to include more universities so the results can be generalized. Another recommendation is that future research could include students and administrators at University of Hail, which would allow comparative studies in behavioral intention regarding online learning and teaching to find out if there are any differences in behavioral intentions. Moreover, this research was conducted as a quantitative study, so the use of a mixed-methods design in future research would provide a more complete and comprehensive understanding of the topic.

Compared to previous research, the findings of the current study showed mixed results in terms of consistency regarding the role of demographic variables that moderate the relationship among TPB constructs. Therefore, it would be valuable to conduct more studies to provide further evidence of the role of these demographics factors in moderating the relationships in TPB constructs, especially in the Middle Eastern nations. Finally, the current study applied TPB as a theoretical framework. There are a variety of well-known models that have been tested and validated and can be used in future research on the same topic (e.g., UTAUT and TAM). Future research can use one or a combination of these models to investigate the online teaching trends in
Saudi Arabia, which would allow development of a more appropriate model for the Middle-eastern context.

Chapter Summary

The aim of this study was to investigate the factors that predict the intention of faculty members to teach online courses at the University of Hail in Saudi Arabia based on the Theory of Planned Behavior (TPB). In addition, the current study examined the effect of demographic characteristics (age, gender, computer use, and years of experience) on faculty members’ attitudes, subjective norm, and perceived behavioral control. Finally, the study investigated the moderation effects of age, gender, computer use, and years of experience on the relationship between faculty members’ 1) attitude toward teaching online, subjective norm, perceived behavioral control and 2) behavioral intention (BI) to teach online. This chapter discussed the findings of this study in relation to the existing literature. Also, the chapter presented the limitations and delimitations of the study, highlighted the potential implications of the major findings, and provided recommendations for future research.
REFERENCES


APPENDIX A

MODIFIED SURVEY (ENGLISH VERSION)
Online Survey

1. What is your gender?
   - Male
   - Female

2. Please specify your age range:
   - Less than 25 years old
   - 26-30 years old
   - 31-40 years old
   - 41-50 years old
   - above 50 years

3. Please choose your nationality:
   If you cannot see your nationality listed, please select "other" and type yours.
   If you prefer not to mention, choose "other" and proceed to the next question.
   - Saudi
   - Egyptian
   - Sudanese
   - Jordanian
   - Algerian
   - Tunisian
   - Indian
   - Pakistani
   - Other

----------------------------------------
4- Experience in higher education (In general, not only at your current University)
   - Less than 1 year
   - from 2 to 3 years
   - 4 years or more

5- Academic Rank
   Choose one of the following answers
   - Professor
   - Associate Professor
   - Assistance Professor
   - Lecturer
   - Instructor

6- Your academic field:
   Choose one of the following answers
   - Humanities & Social Sciences
   - Natural Sciences
   - Applied Sciences (e.g. engineering, computing & IT)
   - Medical & Health Sciences
7- The department you belong to:
Choose one of the following answers

- Computer Science & Information Systems
- Business Administration & Finance Management
- English
- Physics
- Mathematics
- Chemistry
- Biology
- Engineering related
- Pharmacology related
- Nursing & Medical Laboratory
- Preparation year
- Islamic study
- Arabic
- Economic
- Kindergarten
- Home Economic
- Psychology
- Accounting
- Human Resources
- Law
- Other ________________________________________________

8- How many hours per day do you work on a computer during weekdays?
1 hour or less
2 hours
3 hours
4 hours
5 hours
6 hours or more
9- Have you had experiences with online teaching:

○ Yes
○ No

10- Attitude
Compared with traditional courses, in your opinion, online courses are:

*Please indicate your extent to which you agree with the following statement:*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>More convenient for you to teach.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>More important to you to teach.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>More interesting to you to teach.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>More difficult to interact with students.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Providing students more control on learning.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Providing you more control over your teaching.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Enhancing teacher–student communication.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Encouraging students’ discussions/interaction.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Weakening teacher–student relationship.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Suitable for teaching and learning.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
## Subjective Norm

*Please indicate your extent to which you agree with the following statement:*

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online teaching makes education more accessible to the public.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Online teaching provides lower quality education to students.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Online teaching is important to new faculty.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Online teaching has more success stories than failures.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Most of your colleagues would support online teaching.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Not many faculty members involve in online teaching.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Participation in online teaching will enhance your career.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Online degrees are less valuable than traditional degrees.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Eventually online learning will fail.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Eventually online learning will revolutionize higher education.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
12. Perceived behavioral control

*Please indicate your extent to which you agree with the following statement:*

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>You are capable of designing and developing an online course.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>You are capable of teaching an online course.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Worry about lack of computer knowledge/skills</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Worry about lack of knowledge/skills of online teaching</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Worry about lack of support from your university/administrators</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Worry about lack of hardware/software availability/stability/reliability</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Worry about lack of instructional/technical supports</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Worry about lack of recognition for your efforts</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Worry about the ownership/protection of the copyright of your materials</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Worry about your online activities being overseen</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
13 - Intention to teach online courses:
Please indicate your extent to which you agree with the following statement:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I intend to teach online courses in the future.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will try to teach online courses in the future.</td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>I plan to teach online courses in the future.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would like to receive more training on online teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15- Which format, online format or traditional format, would you prefer to teach:

- Traditional Format
- Online Teaching Format
- No Preference

Open-ended questions:

16- What are the reasons if you prefer to teach online or not to teach online courses in the future?

17- Are there any suggestions, concerns, experiences or critiques about Web-based teaching and learning you would like to share?
APPENDIX B

SURVEY CONSENT FORM (ARABIC VERSION)
الالجزء الأول: المعلومات الشخصية والمهنية

الرجاء تحديد الجنس
1- ذكر
2- أنثى

العمر:
1- أقل من 25 سنة
2- من 26 إلى 30 سنة
3- من 31 إلى 40 سنة
4- من 41 إلى 50 سنة
5- أكثر من 50 سنة

الرجاء تحديد جنسيتك:
في حال عدم وجودها بالقائمة الرجاء اختيار أخرى ثم كتابة جنسيتك (أختر أخرى ثم اترك الحقل فارغًا إذا كنت تفضل عدم الإفصاح)
1- سعودي
2- مصري
3- سوداني
4- أردني
5- جزائري
6- تونسي
7- هندي
8- باكستاني
9- أخرى

سنوات الخبرة بالتعليم العالي بشكل عام بما فيها سنوات الخبرة بالجامعة التي تعمل بها حالياً
1- سنة أو أقل
2- من 2 إلى 5 سنوات
3- 6 سنوات أو أكثر
الرتبة العلمية:
اختر أحد الإجابات التالية:
1- أستاذ
2- أستاذ مشارك
3- أستاذ مساعد
4- محاضر
5- معيد
ما هو تخصص الأكاديمي:
اختر أحد الإجابات التالية
1- العلوم الإنسانية والاجتماعية
2- العلوم الطبيعية
3- العلوم التطبيقية (مثال الهندسة، علوم الحاسب وتقنية المعلومات)
4- العلوم الطبية والصحية
خلال أيام الأسبوع: كم ساعة تعمل على جهاز الكمبيوتر:
1- ساعة أو أقل
2- ساعتين
3- ثلاث ساعات
4- أربع ساعات
5- خمس ساعات
6- ست ساعات أو أكثر
هل سبق وأن قمت بتدريس مقررات إلكترونية (عبر الإنترنت):
1- نعم
2- لا
الجزء الثاني
المعتقدات السلوكية
مقارنة بالمقررات التقليدية، في رأيك المقررات الإلكترونية
يرجى الإشارة إلى مدى موافقتك على العبارات التالية
<table>
<thead>
<tr>
<th>العبارة</th>
<th>لا تتفق وبشدة</th>
<th>لا تتفق إلى حد ما</th>
<th>محايدين</th>
<th>تتفق إلى حد ما</th>
<th>تتفق وبشدة</th>
</tr>
</thead>
<tbody>
<tr>
<td>ملاءمة لك أكثر للتدريس</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>مهمة لك أكثر للتدريس</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>مثيرة للاهتمام لك</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>أكثر صعوبة للفصل مع الطلاب</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>توفر للمطالبة تحكم أكثر في التعلم</td>
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<tr>
<td>توفر لك تحكم أكثر خلال تدريبي</td>
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</tbody>
</table>
المعتقدات المعبرة حول تدريس المقرر الإلكترونية (عبر الإنترنت)

يرجى الإشارة إلى مدى موافتك على العبارات التالية

<table>
<thead>
<tr>
<th>العبارة</th>
<th>لا أتفق وبشدة</th>
<th>أتفق وبشدة</th>
<th>أتفق إلى حد ما</th>
<th>محايد</th>
<th>لا أتفق إلى حد ما</th>
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</thead>
<tbody>
<tr>
<td>التدريس الإلكتروني يجعل التعليم في متناول الجميع</td>
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<tr>
<td>التدريس الإلكتروني يوفر تعليم أقل جودة للطلاب</td>
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<tr>
<td>التدريس الإلكتروني مهم لأعضاء هيئة التدريس الجدد</td>
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<tr>
<td>هناك قصص نجاح أكثر من قصص الفشل للتدريس الإلكتروني</td>
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<td>أغلب زملائنا يدعمون التدريس الإلكتروني المشارك</td>
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<td>لا يشارك عدد كبير من أعضاء هيئة التدريس الإلكتروني المشارك</td>
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<td>الشهادات العلمية عبر الإنترنت أقل قيمة من الشهادات التقليدية</td>
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<td>سوف يحدث التعليم عبر الإنترنت ثورة في التعليم العالمي</td>
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</tbody>
</table>

معتقدات السيطرة (التحكم)

يرجى الإشارة إلى مدى موافتك على العبارات التالية

<table>
<thead>
<tr>
<th>العبارة</th>
<th>لا أتفق وبشدة</th>
<th>أتفق وبشدة</th>
<th>أتفق إلى حد ما</th>
<th>محايد</th>
<th>لا أتفق إلى حد ما</th>
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</thead>
<tbody>
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<td>أنت قادر على تصميم وتطوير مقرر إلكتروني</td>
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<td>أنت قادر على تدريس مقرر إلكتروني</td>
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<tr>
<td>قلق بشأن قلة المعرفة بالكمبيوتر ومهارات استخدامه</td>
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<td></td>
</tr>
</tbody>
</table>
الثنية نحو تدريس مقررات إلكترونية (عبر الإنترنت)
يرجى الإشارة إلى مدى موافتك على العبارات التالية

<table>
<thead>
<tr>
<th>العبارة</th>
<th>أنفق و بشدة</th>
<th>لا أنفق إلى حد ما</th>
<th>محايد</th>
<th>لا أنفق إلى حد ما</th>
<th>أنفق و بشدة</th>
</tr>
</thead>
<tbody>
<tr>
<td>لدى نية لتدريس مقررات إلكترونية في المستقبل</td>
<td>ممكن إلى حد كبير</td>
<td>ممكن إلى حد ما</td>
<td>ممكن إلى حد كبير</td>
<td>ممكن إلى حد كبير</td>
<td>أنفق و بشدة</td>
</tr>
<tr>
<td>سوف أحاول تدريس مقررات إلكترونية في المستقبل</td>
<td>ممكن إلى حد كبير</td>
<td>ممكن إلى حد ما</td>
<td>ممكن إلى حد كبير</td>
<td>ممكن إلى حد كبير</td>
<td>أنفق و بشدة</td>
</tr>
<tr>
<td>أنا أخطو لتدريس مقررات إلكترونية (عبر الإنترنت) في المستقبل</td>
<td>ممكن إلى حد كبير</td>
<td>ممكن إلى حد ما</td>
<td>ممكن إلى حد كبير</td>
<td>ممكن إلى حد كبير</td>
<td>أنفق و بشدة</td>
</tr>
<tr>
<td>أود الحصول على المزيد من التدريب في مجال التدريس الإلكتروني</td>
<td>ممكن إلى حد كبير</td>
<td>ممكن إلى حد ما</td>
<td>ممكن إلى حد كبير</td>
<td>ممكن إلى حد كبير</td>
<td>أنفق و بشدة</td>
</tr>
</tbody>
</table>

إمكانيات تدريس مقررات إلكترونية (عبر الإنترنت)
يرجى الإشارة إلى مدى موافتك على العبارات التالية

<table>
<thead>
<tr>
<th>العبارة</th>
<th>غير ممكن وبشكل كبير</th>
<th>البالغ ما غير ممكن</th>
<th>محيد</th>
<th>ممكن إلى حد ما</th>
<th>ممكن وبشكل كبير</th>
</tr>
</thead>
<tbody>
<tr>
<td>بالنسبة لك، إمكانيات تدريس مقررات إلكترونية (عبر الإنترنت) في المستقبل</td>
<td>ممكن وبشكل كبير</td>
<td>البالغ ما غير ممكن</td>
<td>محيد</td>
<td>ممكن إلى حد ما</td>
<td>غير ممكن وبشكل كبير</td>
</tr>
</tbody>
</table>

أي من الطرق التالية تفضل في عملية التدريس:
1- التدريس التقليدي
2- التدريس عبر الإنترنت
3- لا أفضل أي منهما على الآخر
الجزء الثالث

أسئلة عامة

1- ماهي الأسباب التي تجعلك تفضل أو لا تفضل تدريس مقررات إلكترونية (عبر الإنترنت) في المستقبل؟

2- هل لديك أي اقتراحات، مخاوف، خبرات أو انتقادات تود مشاركتها حول التعلم والتدريس القائم على الإنترنت؟
APPENDIX C

PERMISSION TO USE SURVEY
Permission to Use Survey items.

Wei-Chen Hung
Fri 6/30, 8:19 PM
Fahad Alenezi ✅

Hi Fahad,

Yes, you have my permission to use this instrument for your dissertation research. Feel free to let me know if you have any questions regarding this instrument.

Best luck on your research.
Wei-Chen

Wei-Chen Hung, Ph.D.
Department Chair & Professor of Instructional Technology
Educational Technology, Research and Assessment
Gabel 208
Northern Illinois University
P: 815 753-8175
F: 815 753-9388
etra.niu.edu

***
Your Initial Review submission was reviewed and approved under Expedited procedures by Institutional Review Board #1 on 24-Jan-2018. Please note the following information about your approved research protocol:

Protocol Approval period: 24-Jan-2018 - 23-Jan-2019

If your project will continue beyond that date, or if you intend to make modifications to the study, you will need additional approval and should contact the Office of Research Compliance and Integrity for assistance. Continuing review of the project, conducted at least annually, will be necessary until you no longer retain any identifiers that could link the subjects to the data collected. Please remember to use your protocol number (HS18-0015) on any documents or correspondence with the IRB concerning your research protocol.

Please note that the IRB has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

Unless you have been approved for a waiver of the written signature of informed consent, this notice includes a date-stamped copy of the approved consent form for your use. NIU policy requires that informed consent documents given to subjects participating in non-exempt research bear the approval stamp of the NIU IRB. This stamped document is the only consent form that may be photocopied for distribution to study participants.

It is important for you to note that as a research investigator involved with human subjects, you are responsible for ensuring that this project has current IRB approval at all times, and for retaining the signed consent forms obtained from your subjects for a minimum of three years after the study is concluded. If consent for the study is being given by proxy (guardian, etc.), it is your responsibility to document the authority of that person to consent for the subject. Also, the committee recommends that you include an acknowledgment by the subject, or the subject's representative, that he or she has received a copy of the consent form. In addition, you are required to promptly report to the IRB any injuries or other unanticipated problems or risks to subjects and others. The IRB extends best wishes for success in your research endeavors.
APPENDIX E

UNIVERSITY OF HAIL

PERMISSION TO CONDUCT THE STUDY
(إلى من يهمه الأمر)

السلام عليكم ورحمة الله وبركاته...

تقدم إليها الطالب، هيثم عبد المحسن رمز السجل المدني
Número: 1026486215 (الذي يدرس في الولايات المتحدة الأمريكية بطلب
استكمال بحثه في مرحلة الدكتوراه لإكمال دراسة ميدانية في معهد الجامعة.
تقبلكم (جامعة حائل) بأنه لا شك من قيام الطالب المذكور اسمه أصله
ليستينا بدراسة ميدانية في معهد الجامعة في حائل من تاريخ 03/06/2018م
إلى 01/06/2020م وتتلقى بحثه مرحلة الدكتوراه في جامعة
Northern Illinois University

هذا وقد تم إصدار هذا الخطاب بناءً على طلب مني دون تحمل أدنى
مسؤولية. وذلك تقتديه إلى المخزنة الثقافية السعودية في واشنطن
DC ولنكم تحياتنا وتقديرنا...

المشرف العام على الإدارة العامة للموارد البشرية
د. محمد عبد الوهاب الوهيب

www.uoh.edu.sa
APPENDIX F

SURVEY CONSENT FORM (ENGLISH VERSION)
Informed Consent Form

I agree to participate in the research project titled, "Factors Predicting Faculty Members’ Intention to teach online in the Kingdom of Saudi Arabia (KSA)" being conducted by Fahad Alenezi, a graduate student in the Department of Educational Technology, Research and Assessment at Northern Illinois University. I have been informed that the purpose of this study is to investigate the factors that predict the intentions of faculty members to teach online who are currently teaching at Hail University. I understand that if I agree to participate in this study, I will be asked to the following: Complete a survey consisting of items that pertain to Attitudes, Subjective norms, perceived behavioral control and intention towards online teaching. It would take approximately 20 to 30 minutes to finish.

I am aware that my participation is voluntary and may be withdrawn at any time without penalty or prejudice, and that if I have any additional questions relating to this study, I may contact Fahad Alenezi at falenezi1@niu.edu or (773) 470-7274 or contact the chair committee of this study Dr. Hayley Mayall at hmayall@niu.edu or (815) 753-4710.

I understand that if I need further information regarding my rights as a research subject, I may contact the Office of Research Compliance at Northern Illinois University at 815-753-8588.

I understand that the intended benefits of this study include an increase in knowledge about the factors that predicts faculty members’ intention to teach online. I have been informed that there are no potential risks and/or discomforts I could experience. I understand that all information gathered during this study will be kept confidential. I realize that Northern Illinois University policy does not provide compensation for, nor does the university carry insurance to cover injury or illness incurred as a result of participation in University sponsored research projects.

I understand that my consent to participate in this study does not constitute a waiver of any legal rights or redress I might have as a result of my participation. I acknowledge that I have received a copy of this consent form.

By clicking the "I Agree" button below, I am providing my informed consent to participate in this study.
APPENDIX G

SURVEY CONSENT FORM (ARABIC VERSION)
السلام عليكم ورحمة الله وبركاته

أخوك فهد العضو محترم جامعتي حافظ وبحبك في مجال تقييم التدريس. هذه الدراسة هي دراسة استكشافية وتحليلية حول نية أعضاء هيئة التدريس لتدريب مقررات إلكترونية (عبر الإنترنت). يهدف هذا البحث إلى التحقق من عوامل التبنت بنية أعضاء هيئة التدريس بمجال تدريس مقررات إلكترونية (عبر الإنترنت). نتائج هذا البحث قد تساهم في التحسين التعليمي على إعداد أعضاء هيئة التدريس لتأهيل الطلاب على التعلم الإلكتروني وتحديد العوامل التي قد تؤثر على نجاهم تبني هذا النوع من التعلم.

يرجى قراءة نموذج الموافقة على المشاركة في هذه الدراسة بعناية وطرح أي أسئلة قد تكون لديكم قبل الموافقة على المشاركة.

أوافق على المشاركة في المشروع البحثي بعنوان "عوامل التبنت بنية أعضاء هيئة التدريس تدريس مقررات إلكترونية في المملكة العربية السعودية" والذي يقوم به فهد العضو، وهو طالب دراسات العليا في قسم تقييم التعليم والبحث والتعليم في جامعة شمال اليمن. وقد أبلغت أن العرض من هذه الدراسة وهو التحقق من عوامل التبنت بنية أعضاء هيئة التدريس بمجال تدريس مقررات إلكترونية (عبر الإنترنت). أما مدركاتي في حال موافقي على المشاركة في هذه الدراسة سوف يطلب مني مايلي:

- الإجابة على استمالة تتكون من عناصر حول المتغيرات (المعطيات السلوكية، المعطيات المعشارية، معطيات التحكم) والناوايا نحو تدريس المقررات الإلكترونية. وستستغرق الإجابة على هذه الاستمالة حوالي عشر دقائق.

أدرك أن مشاركتي طوعية ويمكن الانسحاب في أي وقت دون أي تبعات، وإذا كانت لدي أي أسئلة إضافية تتعلق بهذه الدراسة يمكنني التواصل مع الباحث فهد العضو على الجوال أو البريد التالي:

Dr. Hayley Mayall at hmayall@niu.edu or +1(815) 687-7274
falenezi1@niu.edu or +1(773) 753-4470

أو مع المشرف الدراسي: +1(815) 753-4470

في حال وجود أي استفسار حول حقوق الأشخاص كفرد من عينة الدراسة يمكنني التواصل مع مكتب البحوث في جامعة شمال اليمن على الرقم 853-753-4470

أدرك تماماً بأن جميع البيانات التي تجمع من المشاركين سوف تحفظ بسرية نهائية ولا تستخدم لغير أغراض البحث وفقاً لن يكون هناك أي مخاطر محتملة من المشاركة في هذا الاستمالة.

من خلال النظر على أي عقول "أوافق" أدناه، فأنا أعطي موافقتى على المشاركة في هذه الدراسة.
APPENDIX H

PERMISSION TO USE DIAGRAM
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