Using UTUAT to Investigate Corporate Acceptance of Optional Online Training Programs in Saudi Arabia

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ABSTRACT

USING UTAUT TO INVESTIGATE CORPORATE ACCEPTANCE OF OPTIONAL ONLINE TRAINING PROGRAMS IN SAUDI ARABIA

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Northern Illinois University, 2023
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The pandemic and post pandemic job market showed the importance of online professional training for employees to improve professional skills necessary to acquire skills to adapt to the new environment and get promoted in their current professions, while contributing to organizations’ success. The present dissertation study utilized the Unified Theory of Acceptance and Use of Technology (UTUAT) as the theoretical lens to examine the effect of performance expectancy (PE), effort expectancy (EE), and social influence (SI) on the behavioral intention (BI) of Saudi Arabian corporate employees working at organizations and companies in Riyadh, Saudi Arabia, to use optional online training programs. This study also investigated whether gender moderated the relationship between Saudi corporate employees’ BI to utilize optional online professional development training programs and PE, EE, and SI. The results of the study indicated that performance expectancy, effort expectancy, and social influence significantly predicted the employees’ behavioral intention to use online training. The findings also indicated that gender had no moderating effect on the relationships between the predictive relationship of performance expectancy, effort expectancy, and social influence with behavioral intention to use optional online training.
USING UTAUT TO INVESTIGATE CORPORATE ACCEPTANCE OF OPTIONAL ONLINE TRAINING PROGRAMS IN SAUDI ARABIA

BY

ASMA ALBAHLI
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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:
Ying Xie
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DEDICATION

This work is dedicated to my husband, Dr.Ibrahim, whose patience, understanding, and encouragement sustained me through the long hours of research and writing. Your belief in my capabilities and your unwavering support have been my constant motivation.
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CHAPTER 1
INTRODUCTION

Many businesses and government organizations worldwide utilize online training programs to improve employees’ skills and sustain staff performance (Batalla-Busquets & Bernal, 2013; McCabe et al., 2021; McCutcheon et al., 2015; Wang et al., 2010; Wang & Shih, 2020). Online training is referred to as the use of technologies to develop materials and deliver instruction synchronously (in real time) and/or asynchronously (not in real time) to enhance individuals’ professional knowledge and performance (Feldman & Zucker, 2002; Fry, 2001; Tuffaha, 2020). Online training has gained popularity because it improves employees’ capacities, communication, organizational skills, satisfaction, and retention (Alshuwairekh, 2016; Franklin & Aguenza, 2016; Laing, 2021; Mohammadyari & Singh, 2015; Saleem et al., 2011; Wang & Shih, 2020), all of which have an impact on an organization’s success (Mohammadyari & Singh, 2015). Saleem et al. (2011) suggested that online training is a systematic expansion of the information, abilities, and attitudes essential for workers to perform productively in the supply process and operate in underlying conditions. Online training improves employees’ overall performance in their current positions as well as their knowledge and ability to succeed in future careers (Alshuwairekh, 2016; Laing, 2021).

Continual technological advances and the COVID-19 pandemic restrictions have pushed businesses and industry sectors to integrate online learning into their corporate training programs (Cook & Sonnenberg, 2014; Karaaslan, 2013; McCabe et al., 2021; Tuffaha, 2020; Wolor et al.,
This trend has the support of major corporations that recognize the need for continued implementation of online learning to have a positive effect on the various stages of the corporate learning value chain and, thus, an organization’s success (Berger, 2014; Cook & Sonnenberg, 2014; Oktem & Oztoprak, 2020; Qureshi, 2016). Research suggests that companies are increasingly incorporating online learning to develop critical abilities that will provide employees a competitive advantage in the marketplace (Berger et al., 2014; Market Research Future, 2017; Tools for Learning, 2018). Wang and Shih (2020) found that taking part in online training not only boosts employees’ confidence in and satisfaction with the workplace, but it also significantly reduces complaints, absenteeism, and turnover (Franklin & Aguenza, 2016). Organizations support employee retention (Wang & Shih, 2020) and avoid spending additional resources on training new employees (Alshuwairekh, 2019). Although research shows that online corporate training increases employees’ overall performance (Latif et al., 2022; Pinto & Allui, 2020; Tian et al., 2019; Tian et al., 2011), little attention has been given to employees’ perceptions of corporate training or the factors that influence their acceptance.

The unified theory of acceptance and use of technology (UTAUT) was created to help identify the use of, relevance to, and decisions involved in using technology for training due to rapid telecommunication and technological advances (Venkatesh et al., 2003). The UTUAT approach has recently been utilized in Saudi Arabia to better understand how individuals use online learning and how it impacts their behavior and performance expectations (Abbad, 2021). Furthermore, the application of the UTUAT has become more common in businesses because of increased investments in technology (Mensah et al., 2022; Henao-Ramrez & López-Zapata, 2021; Wang et al., 2022). Therefore, this dissertation study used UTAUT to investigate Saudi Arabian corporate employees’ perceptions and acceptance of optional online training programs.
Taking part in online training boosts employees’ confidence and satisfaction in the workplace, Wang & Shih (2020) suggest, and significantly reduces employee dissatisfaction, work stress, absenteeism, and turnover (Franklin & Aguenza, 2016). Job satisfaction can be demonstrated by a pleasant attitude and enthusiasm for one’s job by demonstrating high work morale, discipline, and performance (Bakhshi et al., 2021; Rafsanjani et al., 2019). Online training opportunities not only reduce absenteeism, but they increase employees’ commitment and satisfaction, which helps reduce turnover (Alshuwairekh, 2016; Atif et al. 2010; Franklin & Aguenza, 2016; Laing, 2021; Mohammadyari & Singh, 2015; Saleem et al., 2011; Wang & Shih, 2020).

Although research shows that online corporate training increases employees’ overall performance (Latif et al., 2022; Pinto & Allui, 2020; Tian et al., 2019; Tian et al., 2011), little attention has been given to employees’ perceptions of corporate training and the factors that influence their acceptance (Tian et al., 2019; Tian et al., 2011). Corporations can use employee’s perceptions to evaluate the strengths and shortcomings as well as the overall acceptance of an online training program (Abeba et al., 2015; Atieno, 2015; Franklin & Aguenza, 2016; Tian et al., 2019). Employees are the most significant stakeholders when it comes to modelling behavior to promote sustainable practices and are, thus, key to the success of the company (Al-mzary et al, 2015; Gangi et al., 2019; Tian et al., 2019). According to Venkatesh et al. (2003), employees are often resistant to change, especially technological change, which diminishes the effectiveness of a staff training program. Similarly, Hou et al. (2019) suggested that employees’ perceptions of corporate activities and investment in staff training and its impact on individual actions and
behaviors are in their early phases of development. Abeba et al. (2015) conducted a cross-sectional institutional-based quantitative study to determine the impact of training and development on employees’ performance and effectiveness at District Five Administration Office in Addis Ababa, Ethiopia. The study collected survey data from 100 individuals. The findings suggested that companies should collect and utilize employees’ perceptions to plan, implement, and evaluate training and development programs. Abeba et al. (2015) found that employees who felt their opinions were considered in training interventions showed high performance at work.

Furthermore, Atieno’s (2015) case study examined the factors influencing staff training and development decisions in state-owned hotels in Kenya. The findings indicated that employees are key to the success of training and professional development opportunities. The study suggested that employees who felt their opinions and needs were considered showed more engagement in the proposed online training opportunities. However, the literature also suggests that little attention has been given to the factors that influence corporate employees’ perceptions and acceptance of online training (Fatma & Rahman, 2015; Hofman & Newman, 2014; Hou et al., 2019; Tian et al., 2019; Wolor et al., 2020). Therefore, it was critical to shift attention toward factors that influence the adoption or acceptance of online training among corporate employees.

In recent decades, numerous theoretical models in the domains of psychology, ISs, and sociology have been developed to predict and explain user acceptance of technology. Some utilized the UTUAT to better understand individuals’ use and adoption of online platforms, e-learning, and social media and how they impacted their behavior and expectations (Abbad, 2021; Alshehri, 2012; Alzahrani & Goodwin, 2012; Humaid & Ibrahim, 2019). The following sections
outline the UTUAT that was used as the theoretical lens to examine Saudi corporate employees’ acceptance of optional online training and the factors that influence their acceptance.

Various studies emphasized the use of online training to support improved performance among corporate employees worldwide (Naima et al., 2021). Additionally, the COVID-19 pandemic exacerbated the need for and implementation of online training programs in corporate workplaces because it allows for quick, efficient, and effective employee training anywhere at any time (Tuffaha, 2020; Winters & Patel, 2021; Wolor et al., 2020). Research is clear that the effectiveness of the training provided depends on the employees’ acceptance (Davis et al., 1989; Venkatesh & Morris 2000). Various studies used UTAUT to explain factors influencing employee acceptance of training programs. The literature reviewed discussed how performance expectation (PE), effort expectancy (EE), and social influence (SI) could influence users’ behavioral intentions toward embracing the usage of new technology. Gender, age, and experience are some characteristics that determine behavioral intentions. However, the studies reviewed were limited to similar cultural and contextual characteristics, suggesting the need for research in countries like Saudi Arabia, which has strong corporate investment in technology and a gender segregated society. In addition, the literature reviewed suggested that little attention was given to the factors that influence Saudi corporate employees’ acceptance of online training (Fatma & Rahman, 2015; Hofman & Newman, 2014; Hou et al., 2019; Tian et al., 2019; Wolor et al., 2020). Furthermore, limited studies were conducted in Saudi Arabia in relation to the use of UTAUT to investigate the factors of employees’ acceptance of optional online training programs.

Given the gaps in the literature, this dissertation study utilized the UTUAT model as the theoretical lens to examine the effect of PE, EE, and SI on Saudi Arabian corporate employees’
behavioral intentions (BI) to use optional online training programs. This study connected PE, EE, and SI to determine how they predicted Saudi employees’ behavioral intentions to use optional online training. Additionally, the present research study provides deeper understanding of the topic by incorporating gender as moderating variable.

Theoretical Framework

The present dissertation study used the UTAUT, developed by Vankatesh et al. (2003). UTAUT is generally used to explain the factors affecting a training module within an organization as well as an employee’s degree of behavioral intention (or motivating factor) to accept a newly introduced training program (Ayaz et al., 2020; Chao, 2019; Venkatesh et al., 2003). Venkatesh et al. (2003) created this synthesized model to present a more complete picture of the acceptance process than was possible with any previous individual models. Eight models previously used in the IT field were merged into an integrated model, all of which had their origins in psychology, sociology, and communications. These models are the theory of reasoned action (TRA), theory of planned behavior (TPB), technology acceptance model (TAM, TAM2), the motivational model (MM), the model of PC utilization (MPCU), the diffusion of innovations theory (DOI), and the social cognitive theory (SCT; Odewumi et al., 2018). Each model attempts to predict and/or explain user behavior through a variety of independent variables. Venkatesh et al. (2003) created UTAUT based on the conceptual and empirical similarities across these eight models.
UTAUT Factors

UTAUT holds that four key factors – performance expectation (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) – are direct determinants of user behaviors (UB) and behavioral intentions (BI; Chao, 2019; Venkatesh et al., 2003). Performance expectancy (PE) is “the degree to which an individual believes that using the system will help him or her to attain gains in job performance” (Venkatesh et al. 2003, p. 447).

PE refers to the efficiency and effectiveness of retrieving information and learning online anytime and anywhere (Sultana, 2020). Effort expectancy refers to “the degree of ease associated with the use of the system” (Venkatesh et al., 2003, p. 447). In the context of online training, EE is determined by how easy the teaching staff perceives the application system is. Social influence (SI) is “the degree to which an individual perceives that important others believe he or she should use the new system” (Venkatesh et al. 2003, p. 451). SI is related to the likeness of peers and teachers and the subjective social circumstances that individuals are exposed to (Venkatesh et al., 2016). SI is a measure of how individuals can convince a person to embrace a new system or change their behavior (Venkatesh et al., 2003). Thus, including the social context is critical for investigating the degree of SI as a predictive factor of technology adoption (Utami et al., 2022).

Facilitating conditions (FC) refers to “the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system” (Venkatesh et al. 2003, p. 453).

BI refers to “the degree to which a person has formulated conscious plans to perform or not perform some specified future behavior” (Warshaw & Davis, 1985, p.214) and is defined as a person’s level of commitment to participating in an activity (Elbeltagi & Agag, 2016; Hurley &
Van Dyke, 2020; Venkatesh et al., 2016; Yang et al., 2019). According to Venkatesh et al. (2003), BI has a positive effect on the actual use of technology. Thus, BI is a significant predictor of employee embracement of new training programs, as it directly impacts technological adoption (Ajzen, 1991). Gender, age, experience, and voluntariness of use are posited to moderate the impact of the four key factors on BI and use behavior (Figure 1).

Figure 1. The UTAUT (Venkatesh et al., 2003).

To investigate the influence on adoption and usage, interventions ranging from general training to various forms of training can be applied (Venkatesh, 1999). Venkatesh et al. (2003) presented a comprehensive methodology for investigating interventions and their effects on technology adoption. Appropriate project management approaches can be crucial to attaining not
only the required project objectives, but also the desired personnel outcomes, especially when there is likely to be substantial uncertainty around the system’s workings (Morris & Venkatesh, 2010; Rai et al., 2009; Sykes & Venkatesh, 2017; Sykes et al., 2014). Additionally, individual traits may be able to alter the influence of one or more of the UTAUT predictors (e.g., performance expectancy) of intention or usage. Similarly, environmental factors might act as moderators. For example, a high tolerance for uncertainty may result in a circumstance in which poor performance expectancy may not have as much of an impact. A favorable atmosphere for invention may result in a higher effect of social influence on intention. Furthermore, these correlations may differ across cultures and time (Hoehle et al., 2015; Maruping et al., 2019; Thongpananl et al., 2018; Venkatesh et al., 2016). Therefore, examining characteristics specific to a particular technology and context is one of the most fruitful and essential paths for using UTAUT as a theoretical foundation (Venkatesh, et al., 2003).

Purpose of the Study

The present dissertation study utilized the UTUAT as the theoretical lens to examine the effect of performance expectation (PE), effort expectancy (EE), and social influence (SI) on the behavioral intention (BI) of Saudi Arabian corporate employees working at organizations and companies in Riyadh, Saudi Arabia, to use optional online training programs. This study also investigated whether gender moderated the relationship between Saudi corporate employees’ BI to utilize optional online professional development training programs and PE, EE, and SI.

Research Questions and Hypotheses

The following research questions guided this study:
1. What is the effect of (1) performance expectancy, effort expectancy, and social influence (2) on employees’ behavioral intention to use optional online professional development training that is not required?

   H1: Performance expectancy is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

   H2: Effort expectancy is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

   H3: Social influence is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

2. Does gender moderate the relationships between (1) performance expectancy, effort expectancy, social influence, and (2) employee’s behavioral intention to use optional online professional development training?

   H4: Gender moderates the relationships between performance expectancy and employees’ behavioral intentions to use optional online professional development training.

   H5: Gender moderates the relationships between effort expectancy and employees’ behavioral intentions to use optional online professional development training.

   H6: Gender moderates the relationships between social influence and employees’ behavioral intentions to use optional online professional development training.
Significance of the Study

This study serves as literature to support the development of effective corporate optional online training that gauge employee performance. The results of this study can guide the development and implementation of online training that enhances employees’ acceptance and adoption of their programs. Organizations may use this study’s findings to identify areas for improvement and build a favorable atmosphere around their technology use for both male and female employees. Traditional technology-related qualities, like computer self-efficacy and computer playfulness, may have an impact on UTAUT predictions such as performance expectancy, effort expectancy, and enabling situations (Venkatesh 2000; Davis & Venkatesh, 1996). Furthermore, this study findings inform how Saudi employees address difficulties with online training and company implementation of online training programs.

Numerous scholars have adopted and expanded Venkatesh et al. (2003)’s UTAUT, which is a condensed and robust model of technology acceptance based on the unification of several preceding models and theories. UTAUT has been used to anticipate parameters that influence web-based and e-learning systems (Chen, 2011; Cheng et al., 2011; Paola Torres Maldonado et al., 2011; Alrawashdeh et al., 2012; Yoo & Huang, 2012). However, most of this research focused on student acceptance of e-learning systems, and only a few examined UTAUT in the context of workplace e-learning (Cheng et al., 2011). This study was an effort to close that research gap. This study’s goal was to assess UTAUT to learn more about the factors that impact workers’ choices to adopt and utilize an online learning system. The study findings also serve as literature for the use and application of UTAUT in a study context with strong corporate investment in technology and a gender-segregated society. In addition, the study findings
contribute to bridge the gap in existing literature addressing the factors that influence Saudi corporate employees’ acceptance of optional online training.

Research Assumptions

I assumed that the participating study site, organizations and companies in Riyadh, Saudi Arabia, provided all their employees (male and female) at least one optional online training session to help them improve their job performance or technological competencies. I also assumed that employees chose to take optional online training sessions and knew how to use technology at work before answering the survey. The survey was adopted by Venkatesh et al. (2003) and translated to Arabic because I assumed that participants spoke Arabic as their first language. Additionally, I assumed that all participants would have provided honest and unbiased responses.

Definition of Key Terms

The following terms are defined for the purpose of this study:

Performance expectancy (PE). “The degree to which an individual believes that using the system will help him or her to attain gains in job performance” (Venkatesh et al. 2003, p. 447).

Behavioral intention. “The degree to which a person has formulated conscious plans to perform or not perform some specified future behavior” (Warshaw & Davis, 1985, p.214).

Effort expectancy. “The degree of ease associated with the use of the system” (Venkatesh et al., 2003, p.447).

Social influence. “The degree to which an individual perceives that important others believe he or she should use the new system” (Venkatesh et al. 2003, p. 451).
Facilitating conditions. “The degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system” (Venkatesh et al. 2003, p. 453).

Online training. The use of technologies to develop materials and deliver instruction synchronously (in real time) and/or asynchronously (not in real time) to enhance individuals’ professional knowledge and performance (Feldman & Zucker, 2015; Fry, 2001; Tuffaha, 2020).

Unified theory of acceptance and use of technology (UTAUT). A technology paradigm developed by Venkatesh et al. (2003) to explain users’ perceptions of technology and acceptance behaviors.

Structure of the Study

Chapter 1 provided an overview of the background of the study, research problem, theoretical framework, significance of the study, key terms, and a brief description of the data collection methods. Chapter 2 provides an explanation, analysis, and discussion of research related to the factors that influence employees’ behavioral intention to use optional online training programs in firms worldwide. Chapter 3 addresses the research design, including the methodology for data collection and data analysis to conduct the study. Chapter 4 and Chapter 5 present and discuss the research findings, limitations, implications, and recommendations for future research.
CHAPTER 2
LITERATURE REVIEW

This literature review addresses the importance of optional online training for corporate employees, the use of UTAUT to better understand employees’ perceptions of optional online training, and an overview of the main factors that affect employees’ acceptance of optional online training programs. It also identifies gaps in previous studies.

Importance of Online Training for Corporate Employees

Continual technological advances and the COVID-19 pandemic restrictions pushed businesses and industry sectors to integrate online learning into their corporate training programs (Cook & Sonnenberg, 2014; Karaaslan, 2013; Tuffaha, 2020; Winters & Patel, 2021; Wolor et al., 2020; World Economic Forum, 2022). This trend has the support of major corporations that recognize the need for continued implementation of online learning to have a positive effect on the various stages of the corporate learning value chain and, thus, an organization’s success (Berger, 2014; Cook & Sonnenberg, 2014; Oktem et al., 2020; Qureshi, 2016). Research suggests that companies are increasingly incorporating online learning to develop critical abilities that provide employees with a competitive advantage in the marketplace (Berger, 2014; Market Research Future, 2017; Tools for Learning, 2018). The literature suggests three main areas of improvement for corporate employees when engaging in online training: improved staff skills, increased performance, and employee job satisfaction.
Improved Staff Skills

The literature reviewed suggests that corporations utilize online training as a strategy to increase their staff’s skills, performance, and career opportunities (Al-Nuseirat & Biygautan, 2014; Amadi, 2014; Ofobruku & Yusuf, 2016; Onyango & Wanyoike, 2014; Qureshi, 2016; Wang & Shih, 2019). Wolor et al.’s (2020) quantitative study collected survey data from 200 Honda employees in Jakarta, Indonesia, to investigate the effectiveness of online training on millennial employees’ performance during the COVID-19 pandemic. The results of the study showed that corporate online training helped sustain optimal employee performance and productivity as the employees were able to access training resources online worldwide.

Additionally, Amadi (2014) conducted a quantitative case study by collecting data from 340 employees at the call center to examine the effect of training and development on employee performance. Findings indicated that improved staff communication inside the firm, the development of employees’ capabilities, and their ability to keep current with technical changes are all advantages of online training. The employees’ skills are established via training, allowing them to carry out job-related tasks efficiently and meet business goals. Githinji (2014) conducted a study in Kenya that found training had a beneficial impact on employee engagement, which in turn leads to greater innovation, modification of work processes, and the improvement of overall performance. Wang and Shih (2019) claimed that online training programs allow employees to improve their work skills and performance by reducing possible time and location constraints. Similarly, Tuffaha (2020) suggested that online training is an efficient online intervention program because it enhances professional development while reducing costs and employees’ time constraints.
Furthermore, online training enhanced employees’ overall performance in their present positions as well as their abilities and knowledge for future careers (Alshuwairekh, 2016; Laing, 2021). Qureshi (2016) identified that online training increased the likelihood of individuals advancing in their careers as a result of the additional skills they gained through the training, which is also advantageous to businesses because they are able to maintain a highly skilled staff (Onyango & Wanyoike, 2014).

**Increased Performance**

Training is vital for ensuring that employees are competent and capable of assisting the business in achieving its vision, purpose, and objectives (Al-Nuseirat & Biygautan, 2014; Mohamud, 2014; Yusuf & Ofobruku, 2016; Qureshi, 2016). Al-Nuseirat and Biygautan (2014) suggested that to remain competitive, organizations must provide their employees with the skills necessary to contribute to the overall success of the organization and the delivery of excellent service. Effective training is beneficial to the organization since it reduces the amount of time spent fixing problems and redoing a given activity, which in turn results in the organization saving much-needed resources.

According to Njeru (2014), firms’ investments in online training activities have increased all over the world in recent years, particularly in the United States, because corporations have recognized the need to ensure training results in the desired outcomes such as employee increased performance. Thus, online training is often used to increase knowledge within the organization, develop its capabilities, and assist the firm in attaining a competitive advantage in the market (Onyango & Wanyoike, 2014; Qureshi, 2016; Yusuf & Ofobruku, 2016). Bocquet
and Mothe’s (2011) case studies found that both large and small businesses produce value from their strategic employee perceptions of corporate training investments.

Nidumolu et al. (2009) explained that companies that promote online training activities are more likely to have a significantly favorable impact on the staff performance. Additionally, Luo and Jia’s (2017) longitudinal study exploring the relationship among corporate social responsibility risk, social networks, and firm performance in the Chinese context indicated that corporate online training increased staff performance when the training addressed employees’ perceptions of the knowledge and resources necessary. Mahmood and Bashir (2020) suggested that the use of more advanced technologies is required to establish a positive brand image that demonstrates corporate understanding of contextual, environmental, and sociocultural elements.

**Employees’ Job Satisfaction**

Job satisfaction refers to an employee’s attitude toward the activities and obligations assigned by management, and it can be influenced by a variety of factors such as salary, opportunities for career advancement, interpersonal relationships, job placement, and supervision that supports or does not support employees’ working conditions (Nuryadi et al., 2021; Tanti et al., 2020). Job satisfaction is a latent variable, which means that the variables under investigation cannot be observed directly. The measurement of the latent variable of job satisfaction is accomplished through the use of indicators that are representative of the concept of job satisfaction such as the amount of money earned, the promotion system in place, the work environment and coworkers, the sort of work performed, and the level of communication in the workplace (Tanti et al., 2020). Essentially, the level of job satisfaction varies from person to person, with each individual experiencing a varied level of satisfaction.
Job satisfaction fosters greater levels of dedication, excitement, positive attitudes, and connections to the company as well as increased productivity, motivation, and readiness to take risks and achieve better outcomes (Abelha et al., 2018; Ismail & Razak, 2016; Judge et al., 2001; Taba, 2018). Research suggests that individuals who are stressed will feel uncomfortable and have negative or unpleasant feelings and perceptions about their jobs, which can lead to a decrease in their job satisfaction (Arivazhagan & Umarhathab, 2021; Tanti et al., 2020; Wang & Shih, 2019; Yang & Kim, 2018). Companies that demonstrate positive employee perceptions of corporate investments can improve employee satisfaction and reduce employee turnover (Crişan-Mitra et al., 2020). Ali et al. (2018) examined how the employee-relations climate mediates the relationship between strategic human resource management practices and organizational performance in Chinese banks. Their study findings showed that job satisfaction fosters high employee engagement and a positive work environment. Baqir et al. (2020) conducted a quantitative study collecting data from 108 bank employees in Pakistan to examine the impact of reward and recognition and perceived supervisor support on employee engagement. Their findings indicated increased employee engagement and better performance among employees with higher job satisfaction. Research has also showed that employee job satisfaction is high in companies with solid image enhancement, ethical/moral commitment, consumer needs, and risk management (Bugis et al., 2021; Pinto & Allui, 2020; Yang & Kim, 2018).

Current literature suggests that taking part in online training boosts employees’ confidence and satisfaction in the workplace (Wang & Shih, 2019) and significantly reduces employee dissatisfaction, work stress, absenteeism, and turnover (Franklin & Aguenza, 2016). Job satisfaction can be defined by a pleasant attitude and enthusiasm for one’s job by demonstrating high work morale, discipline, and performance (Bakhshi et al., 2021; Rafsanjani
et al., 2019). Online training opportunities not only reduce absenteeism, but they increase employees’ commitment and satisfaction, which helps reduce turnover (Alshuwairekh, 2016; Atif et al. 2010; Franklin & Aguenza, 2016; Laing, 2021; Mohammadyari & Singh, 2015; Saleem & Mehwish, 2011; Wang & Shih, 2019). Franklin and Aguenza (2018) found that online training provided employees with a sense of success and enjoyment as they felt they were improving their abilities and task competency. Similarly, Yang and Kim (2018) found that employees’ perceptions of online training opportunities and investment influenced their satisfaction and commitment to their company, thus affecting employees’ performance and efficiency. Although research shows that online corporate training increases employees’ overall performance (Latif et al., 2022; Pinto & Allui, 2020; Tian et al., 2019; Tian et al., 2011), little attention has been given to employees’ perceptions of corporate training and the factors that influence their acceptance.

Employees’ Perceptions of Corporate Training

Corporations can use employee’s perceptions to evaluate the strengths and shortcomings as well as the overall acceptance of an online training program (Abeba et al., 2015; Atieno, 2015; Franklin & Aguenza, 2016; Tian et al., 2019). Employees are the most significant stakeholders when it comes to modelling behavior to promote sustainable practices and are, therefore, key to the success of the company (Al-mzary et al, 2015; Gangi et al., 2019; Tian et al., 2019). According to Venkatesh et al. (2003), employees are often resistant to change, especially technological change, which diminishes the effectiveness of a staff training program. Similarly, Hou et al. (2019) suggested that employees’ perceptions of corporate activities and investment in staff training and its impact on individual actions and behaviors are in their early phases of
Abeba et al. (2015) conducted a cross-sectional institutional-based quantitative study to determine the impact of training and development on employees’ performance and effectiveness at District Five Administration Office in Addis Ababa, Ethiopia. The study collected survey data from 100 individuals. The findings suggested that companies should collect and utilize employees’ perceptions to plan, implement, and evaluate training and development programs. Abeba et al. (2015) found that employees who felt their opinions were considered in training interventions showed high performance at work. Furthermore, Atieno’s (2015) case study examined the factors influencing staff training and development decisions in state-owned hotels in Kenya. The findings indicated that employees are key to the success of training and professional development opportunities. The study suggested that employees who felt their opinions and needs were considered showed more engagement in the proposed online-training opportunities. However, the literature also suggests that little attention has been given to the factors that influence corporate employees’ perceptions and acceptance of online training (Fatma & Rahman, 2015; Hofman & Newman, 2014; Hou et al., 2019; Tian et al., 2019; Wolor et al., 2020). Therefore, it is critical to shift attention toward factors that influence the adoption or acceptance of online training among corporate employees.

In recent decades, numerous theoretical models in the domains of psychology, information services, and sociology have been developed to predict and explain user acceptance of technology. Some have utilized UTUAT to better understand individuals’ use and adoption of online platforms, e-learning and social media, and how they impact their behavior and expectations (Abbad, 2021; Alshehri, 2012; Alzahrani & Goodwin, 2012; Humaid & Ibrahim, 2019). The following sections outline the UTUAT model and propose it as the theoretical lens to
examine Saudi corporate employees’ acceptance of online training and the factors that influence their acceptance.

Unified Theory of Acceptance and Use of Technology

The UTAUT is a technology paradigm developed by Vankatesh et al. (2003) to explain users’ perceptions of technology and acceptance behaviors. UTAUT is generally used to explain the factors affecting a training module within an organization. In this case, UTAUT explains an employee’s degree of behavioral intention (or motivating factor) to accept a newly introduced training program (Ayaz et al., 2020; Chao, 2019; Venkatesh et al., 2003). Venkatesh et al. (2003) created this synthesized model to present a more complete picture of the acceptance process than was possible with any previous individual models. Eight models previously used in the IT field were merged in an integrated model, all of which had their origins in psychology, sociology, and communications. These models are the theory of reasoned action (TRA), theory of planned behavior (TPB), technology acceptance model (TAM, TAM2), the motivational model (MM), the model of PC utilization (MPCU), the diffusion of innovations theory (DOI), and the social cognitive theory (SCT; Odewumi et al., 2018). Each model attempts to predict and/or explain user behavior through a variety of independent variables. Venkatesh et al. (2003) created UTAUT based on the conceptual and empirical similarities across these eight models. The theory holds that four key factors (performance expectation [PE], effort expectancy [EE], social factors [SF], and facilitating conditions [FC]) are direct determinants of user behaviors (UB) and behavioral intentions (BI; Chao, 2019; Venkatesh et al., 2003). Gender, age, experience, and voluntariness of use are posited to moderate the impact of the four key factors on usage intention and behavior (see Figure 1).
As mentioned earlier, this study adapted Venkatesh et al.’s (2003) model that proposed four main constructs (effort expectancy, performance expectancy, facilitating conditions, and social influence), two outcome variables (behavioral intention and use behavior), and four moderators (experience, voluntariness, gender, and age). This study excluded the facilitating conditions construct and the use behavior variable because they do not contribute to predicting intention. This study also excluded three moderators and focused on examining gender as a moderating variable.

Examining characteristics specific to a particular technology is one of the most fruitful and essential paths for using UTAUT as a theoretical foundation (Venkatesh et al., 2003). Individual characteristics (e.g., personality), technology characteristics (e.g., quality), environmental characteristics including employees’ perceptions (e.g., culture of innovation), and interventions (e.g., training) are all included in a general framework adapted from Thong (1999), Venkatesh et al. (2007), Venkatesh and Bala (2008), and Venkatesh et al. (2016). Traditional technology-related qualities like computer self-efficacy and computer playfulness may also play a role (Venkatesh 2000; Venkatesh & Davis, 1996). These characteristics can have an impact on UTAUT predictions such as performance expectancy, effort expectancy, and enabling situations. These particular attributes, taken together, can influence how employees deal with difficulties with online training and/or general obstacles. Organizations can then use this information to identify people who can help build a favorable atmosphere around the technology.

To investigate the influence on adoption and usage, interventions ranging from general training to various forms of training to creative techniques incorporating gamification can be applied (Venkatesh, 1999). Venkatesh and Bala (2008) presented a comprehensive methodology for investigating interventions and their effects on technology adoption. Appropriate project
management approaches can be crucial to attaining not only the required project objectives, but also the desired personnel outcomes, especially when there is likely to be substantial uncertainty around the system’s workings (Morris & Venkatesh, 2010; Rai et al., 2009; Sykes & Venkatesh, 2017; Sykes et al., 2014).

Individual traits may be able to mitigate the influence of one or more of the UTAUT predictors (e.g., performance expectancy) of intention or usage. Similarly, environmental factors might act as moderators. For example, a high tolerance for uncertainty may result in a circumstance in which poor performance expectancy may not have as much of an impact. A favorable atmosphere for invention, for example, may result in a higher effect of social influence on intention. Furthermore, these correlations may differ across cultures and time (Hoehle et al., 2015; Maruping et al., 2019; Thongpananl et al., 2018; Venkatesh et al., 2016).

About the UTAUT

The UTAUT (Venkatesh et al., 2003) was developed by integrating four constructs (performance expectancy, effort expectancy, social influence, and facilitating condition) for identifying users’ behavioral intentions in relation to utilizing technologies. UTAUT posits that age, gender, experience, and voluntariness moderate relationships between core constructs of the model (i.e., performance expectancy, effort expectancy, social influence, and facilitating conditions). However, as Venkatesh et al. underscore, the four constructs of UTAUT remain as significant factors when determining one’s acceptance and usage behavior of new technologies.

Much research (e.g., Hur & Im 2013; Kijsanayotin et al., 2009; Venkatesh et al., 2003; Williams et al., 2009; Yoo & Han 2013) that have applied UTAUT to determine users’ behavioral intention and actual usage of new technologies reported that UTAUT could predict up
to 70% of variance in the behavioral intention to using new technology. Based on the results of their study, Kijsanayotin et al.’s (2009) study confirmed the relationships between performance expectancy, effort expectancy, social influence, and intention to use technologies as UTAUT suggested. The findings of their study also demonstrated that UTAUT was a valid conceptual framework for examining healthcare employees’ intentions toward using new technology for training purposes.

UTAUT, as a reliable measurement model, is applied to many studies with different sample sizes and work settings, such as academic and corporate workplace. Different statistical analyses were applied in the studies that have utilized UTAUT (e.g., AlAwadhi & Morris, 2008; Al-Gahtani et al., 2007; Dečman, 2015; Gupta et al., 2008; Khechine et al., 2014; Kijsanayotin et al., 2009; Wang, 2016; Yoo & Han, 2013). It worth mentioning that in the aforementioned studies (e.g., Kijsanayotin et al., 2009; Yoo & Han, 2013), all constructs showed internal consistency reliability because the Cronbach’s alpha was greater than .70.

Although several studies (e.g., AlAwadhi & Morris, 2008; Al-Gahtani et al., 2007; Dečman, 2015) examined employees’ behavioral intention to use online learning in corporate settings, there is a scarcity of research in the context of the Saudi Arabian corporate workplaces. Since the relevant studies (e.g., Kijsanayotin et al., 2009; Yoo & Han, 2013) recommended measuring individuals’ behavioral intention to determine their acceptance and use of new technology prior to implementing new technologies, the research questions and hypotheses for this study were framed based on the literature discussed above. Moreover, these studies highlighted the importance of conducting research in corporate workplace settings across different cultures and regions with larger sample sizes.
In sum, the findings from the studies that utilized UTAUT were helpful in explaining overall variance of users and demonstrating that performance expectancy, effort expectancy, and social influence were the most significant factors in predicting the overall behavioral intention of individuals to use online professional development. Moreover, the findings of studies (e.g., Kijsanayotin et al., 2009; Yoo & Han, 2013; Yoo & Huang, 2016) that have utilized UTAUT confirmed that the model was a valid research framework for examining employees’ behavioral intentions when accepting new technology for work or training purposes.

**UTAUT Factors in Corporate Online Training**

Venkatesh et al. (2003) developed the UTUAT theory to depict the degree and perception of a user’s adoption of an information systems technology through four factors: PE, EE, SI, and FC. Since then, various studies have utilized UTAUT to investigate the effect of BI on these factors, as described above and in Chapter 3. The following sections provide a summary of the literature on BI and each of the four factors identified in UTAUT in relation to corporate online training.

**Behavioral Intention**

Applied research regarding UTAUT and the factors that influence individual’s behavioral intention (BI) to use technology has been extensive (Sumak & Sorgo, 2016; Sumak et al., 2017). BI refers to “the degree to which a person has formulated conscious plans to perform or not perform some specified future behavior” (Warshaw & Davis, 1985, p.214). Behavioral intention is defined as a person’s level of commitment to participating in an activity (Elbeltagi & Agag, 2016; Hurley & Dyke, 2020; Venkatesh et al., 2016; Yang et al., 2019). According to Venkatesh
et al. (2003), BI has a positive effect on the actual use of technology. BI is the significant predictor of employee embracement of new training programs, as it directly impacts technological adoption (Ajzen, 1991). Furthermore, research has also found a positive effect of job satisfaction on BI and actual use of technology (Abu-AlAish & Love, 2013; Al-Adwan et al., 2018; Gomez, 2017; Venkatesh & Davis, 2000; Venkatesh et al., 2003). Gomez (2017) collected survey data from 89 government employees from a southwestern metropolitan area in the United States to examine the effects of job satisfaction on the acceptance and use of technology among local government employees. The results revealed employees’ perceptions of job satisfaction have a positive effect on their acceptance of technology acceptance in the workplace.

Performance Expectancy and Users’ Behavioral Intention

Performance expectancy (PE) is “the degree to which an individual believes that using the system will help him or her to attain gains in job performance” (Venkatesh et al. 2003, p. 447). PE refers to the efficiency and effectiveness of retrieving information and learning online anytime and anywhere (Sultana, 2020). The literature indicates that employees’ perceptions of the potential of new technology to meet their expectations heavily impacted their BI to utilize it (Azhar et al., 2021; Chen & Liu, 2013; Ghalandari, 2012; Heo & Han, 2003; Mohammadyari & Singh, 2015; Wang et al., 2009). Alrawashdeh (2012) used UTAUT to examine the flexibility of web-based training systems, system interactivity, and system enjoyment to examine the employees’ BI to use web-based training systems. The researcher conducted a quantitative survey to determine what factors impacted public sector employees’ use of online training. The study employed a 43-item Likert scale questionnaire to collect data from 290 public employees. The survey gathered the respondents’ demographic data (gender, personal computer, age,
internet access, and expertise with e-learning). The results showed that PE, FC, SI, and system flexibility have a direct effect on employees’ BI to use an online training system. Alrawashdeh et al. (2012) also found a positive relationship between employees’ PE and satisfaction with the system and their BI to use online training. Chatzoglou et al. (2009) and Abbad et al.’s (2009) studies also found a statistically significant relationship among PE, EE, and BI. Carlsson (2006) conducted a study and highlighted that PE had a direct positive effect on behavior intention (BI) toward the use of mobile devices.

Other studies found a significant positive effect of PE on BI (Saade & Bahli 2005; Sultana, 2020; Venkatesh et al., 2003). Abubakar and Ahmad (2013) conducted a systematic review to propose technology awareness as a moderator between the UTAUT factors (PE, EE, SI, and FC) and employees’ BI to use technology. Their review revealed that PE influenced employees’ BI to adopt technology in the Nigerian context. Furthermore, Heo and Han (2003) suggested that the reliability, response speed, content, and accessibility of information systems as well as other factors of system and information quality all had an impact on employees’ use of online learning. Service quality and system utilization are increasingly important variables that define usefulness (Wang et al., 2007), and serviceability and system supportability are two characteristics that determine a system’s usefulness (Chen & Liu, 2013). Raza et al. (2020) found that physical exercise had a direct impact on employees’ BI when using an online-training program. Azhar et al. (2021) examined the UTAUT factors that affect acceptance of online learning among the urban poor in Malaysia. The study employed a 43-item Likert scale online questionnaire to collect data from 293 participants from the Klang Valley area of Malaysia. The questionnaire was used to define the factors affecting the acceptance and use of BI in online learning platforms. The researchers found that PE was a key factor influencing the BI of
employees to use online learning, as the employees believed participating in online learning helped them improve their careers and income.

Effort Expectancy and Users’ Behavioral Intention

Effort expectancy (EE) refers to “the degree of ease associated with the use of the system” (Venkatesh et al., 2003, p. 447). In several studies, EE was found to be a predictive factor that can influence BI of using e-learning (Abu-Al-Aish & Love, 2013; Sultana, 2020; Venkatesh et al., 2003). In the context of online training, EE is determined by how easy the teaching staff perceives the application system is. Several studies have shown that EE is a predictive factor that can influence the efficiency of e-learning and a fundamental component of UTAUT, as it represents the amount of effort a person feels they need to commit to using a technology (Decman, 2015; Raza et al., 2020; Yoo & Huang, 2012).

Numerous studies have shown a strong relationship between EE and BI toward online learning among corporate employees (Ayaz and Yanartas, 2020; Alrawashdeh, 2012; Azhar et al., 2021; Lee et al., 2019). Venkatesh (2000) found that the relationship between EE and BI weakens with time, but Gruzd et al. (2012) discovered that EE is negatively related to BI. Ayaz and Yanartas (2020) discovered that EE influenced the employees’ behavior to utilize an electronic document management system. Quantitative survey data were collected from 270 academic and administrative staff members from Bartin University who used an electronic document management system. Findings revealed that the employees’ EE had no favorable effect on electronic document management system BI. Similarly, Azhar et al. (2021) found that EE negatively influenced employees’ BI toward online training.
Furthermore, Raman and Don (2013) found a considerably favorable influence of EE on BI regarding preschool teachers’ adoption of a learning management system. Lee et al. (2019) investigated the use of mobile payment methods by South Korean employees and found a strong relationship between employees’ EE and their BI to embrace new technologies. Alrawashdeh et al. (2012) utilized to investigate 290 employees’ intention to use an online-training system and found that EE, system enjoyment, and system interactivity have an indirect effect on employees’ BI to use online training system. Similarly, Yoo and Han (2013) applied UTAUT to investigate employees’ attitudes to e-learning in the workplace. This study collected quantitative data from 261 employees in a food service company in South Korea. The company used e-learning programs for staff training and development. The findings indicated that employees’ attitudes regarding technology to EE, PE, and SI had a significant and direct effect on their BI to use e-learning in the workplace. The study was important for framing the current research evaluating employees’ attitudes to a training program.

Social Influence and Users’ Behavioral Intention

Social influence (SI) refers to the “the degree to which an individual perceives that important others believe he or she should use the new system” (Venkatesh et al. 2003, p. 451). Social influence (SI) is related to the likeness of peers and teachers and the subjective social circumstances that individuals are exposed to (Venkatesh et al., 2016). SI is a measure of how individuals can convince a person to embrace a new system or change their behavior (Venkatesh et al., 2003). Thus, including the social context is critical for investigating the degree of SI as a predictive factor of technology adoption (Utami et al., 2022).
The literature suggested that SI influences the BI of corporate employees to accept and use online training (Azhar et al., 2021; Chen & Liu, 2013; Lee et al., 2019; Lynne et al., 1995; Raza et al., 2020). Roca and Gagne’s (2008) study examined the effects of motivational factors (perceived usefulness, perceived playfulness, and perceived ease of use of technology) of the technology acceptance model in the context of e-learning service. Roca and Gagne found a significant relationship between SI and the BI to use the online-training technologies. According to Venkatesh et al. (2003), SI becomes a significant predictor when the use of a new system or technology is mandatory rather than being implemented in a voluntary setting, paralleling previous studies that also found SI had a statistically significant effect on BI (Harrison et al., 1997; Venkatesh & Davis, 2000). Deployment of employee online learning was discovered to have a positive relationship with SI (Law et al., 2010). Additionally, Delgado et al. (2000) suggested that positive reinforcement as an element of SI may lead to increased BI among employees as increased motivation is connected to incentives (Grant, 1989). Employees’ willingness to engage in e-learning has been scientifically demonstrated and introducing incentives and rewards may help enhance participation rates (Rosenberg & Foshay, 2001). Promotions that involve rewards and praise are the most successful (Law et al., 2010). When appropriate rewards and praise are employed in tandem, they may serve as a powerful motivator for learning (Jenkins, 2001).

Existing literature indicated SI has a considerable impact on employees’ BI to adopt new technology (Alrawashdeh et al., 2012; Deman, 2015; Nassar & Othman, 2019; Yoo & Han, 2013). Deman (2015) conducted a study to examine whether employees have the BI required to use technology in an e-learning context. It has been shown that the social impact of new learning techniques is an important component in an employee’s behavioral intention to adopt the
technique. Alrawashdeh et al. (2012) did similar research to evaluate the factors that impact users’ BIs to use a learning management system. According to Arafat and colleagues (2019), SI has a statistically significant effect on individuals’ choice to use a learning management system.

Facilitating Conditions

Facilitating conditions (FC) refers to “the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system” (Venkatesh et al. 2003, p. 453). FC includes the organizational support provided to all staff to facilitate remote access to resources, platform training, and overcoming challenges regarding the use of technology. Previous studies have found that FC has a positive effect on BI (Cheong et al., 2004; Venkatesh et al., 2003). Alrawashdeh (2012) also found a statistically significant effect of FC on employees’ BI to use an online training system as did Abubakar and Ahmad’s (2013) systematic review of UTAUT factors, including FC. Additionally, Chao (2019) conducted a cross-sectional study collecting online survey data from 1,562 respondents and found that FC had a statistically significant effect on user satisfaction and the user BI to use technology.

Overall, the literature reviewed showed that PE, EE, SI and FC are independent variables that help explain the BI (dependent variable) of employees toward online-training programs. However, Venkatesh et al. (2003) added that age and gender are moderating factors in the relationship between BI and the four UTAUT factors (PE, EE, SI, and FC). The following section expands on the role of gender as moderator variable of employees’ BI to accept optional online training.
Gender as Moderator Variable

Relevant research (e.g., Chauhan & Jaiswal, 2016; Gefen & Straub, 1997; Tarhini et al., 2017; Venkatesh et al., 2003) suggests that gender is an important moderator of the relationship between consumers’ attitudes about technology and their inclination to use technology. Venkatesh et al. (2003) investigated the moderating effects of gender and age on the relationships among the independent factors and the dependent variable using UTAUT in mobile learning. Findings indicated that younger males had a stronger relationship between PE and BI, while older females had a stronger relationship between EE and social effect on BI. Additionally, Venkatesh et al. (2012) investigated the moderating effect of gender and age on the relationship between hedonic motivation (the pleasure involved in using technology), price value, and habit through the use of UTAUT. The findings indicated that gender and age impacted the relationships among BI and PE, EE, SI, and FC. The researchers found a stronger relationship between men’s hedonic motivation and behavioral intention compared to women. Moreover, the findings showed a stronger relationship between FC and BI among women, as they showed an emphasis on external support factors when considering the use of new technology compared to men. Collecting data from 324 students who took software training, Chauhan and Jaiswal’s (2016) study concluded that gender moderated the effects of convenience from online access and effort expectancy on behavioral intention to use the technology.

Several other studies (AlAwadhi & Morris, 2008; Al-Gahtani et al., 2007; Karaaslan, 2013; Venkatesh et al., 2003) considered gender as a moderator of the relationship between the UTAUT’s constructs (e.g., between PE and BI to use technology or EE and BI to use technology) and reported that gender did not moderate the effects of the UTAUT’s constructs.
For instance, AlAwadhi and Morris (2008) used the PE, EE, peer influence, and their interactions with gender to predict 880 students’ behavioral intentions to use e-government services in Kuwait. Based on the results of their study, the researchers reported that no significant gender influence was revealed on the relationship between PE, EE, and peer influence and BIs to use e-government services. In their study, Al-Gahtani et al. (2007) used responses collected from 722 knowledge workers using desktop computer applications on a voluntary basis in Saudi Arabia. They investigated whether gender would influence PE and EE effects on BI to use computers. Based on their results, Al-Gahtani et al. reported that gender did not reveal any significant interactions with the latent predictor (i.e., PE and EE). Al-Gahtani et al.’s (2007) study findings were consistent with AlAwadhi and Morris’s (2008) findings in that in both studies gender had no moderation effect on the relationship between the independent variables and dependent variable. Therefore, gender was included in the current study to investigate its effects on the relationship between PE, EE, SI, and BI to use optional online professional development.

Online Training in Saudi Arabia

The literature reviewed suggested that job satisfaction, PE, EE, SI and FC significantly influenced behavioral intention. The literature also showed that age and gender have a moderating role in the relationship between BI and the four UTAUT factors. However, all the studies shared similar cultural and contextual characteristics, which limited the generalization of findings to countries like Saudi Arabia that have a strong investment in technological infrastructure in the workplace and a gender segregated society. A few studies have utilized the UUTAAT to better understand individuals’ use and adoption of online platforms, e-learning and social media in Saudi Arabia as well as and how they impact behavior and expectations (Abbad,
Humaid and Ibrahim (2019) conducted a quantitative survey study to examine the adoption of social media among small businesses in Saudi Arabia. Their study utilized the UTAUT to assess the factors that affect Saudi business entrepreneurs’ adoption of technology. The findings revealed that all four UTAUT factors (PE, EE, SI and FC) have a statistically significant effect on Saudi business entrepreneurs’ BI to use technology. More specifically, their study examined age, gender, and experience as moderators. The results indicated that gender significantly moderates the effect of EE on BI, while age, gender, and experience did not show a significant moderating effect on the effects of PE, FC, and SI on BI. However, the researchers suggested that further research is needed to better understand the adoption of technology in the Saudi business field.

Naima et al. (2020) analyzed Iraqi employees’ BI to adopt online training utilizing UTAUT. The findings revealed that PE, EE, SI, and FC had a significantly positive impact on employees’ BI to use online training. However, Naima et al. (2020) explained that results cannot be generalized to other contexts due the Iraqi culture and corporate working environment, mainly related to the existing limitation of time and resources in Iraq as well as the existing job disparities between female and male workers. Therefore, the researchers expressed the need for further research in similar contexts to increase understanding of the factors that affect employees’ BI to adopt online training.

Summary

The literature reviewed provided an explanation, analysis, and discussion of research related to the factors that influence employees’ acceptance of optional online training programs
in firms worldwide. Various studies emphasized the use of online training to support improved performance among corporate employees worldwide (Naima et al., 2020). Additionally, the COVID-19 pandemic exacerbated the need for and implementation of online-training programs in corporate workplaces because it allowed for quick, efficient, and effective employee training anywhere at any time (Tuffaha, 2020; Winters & Patel, 2021; Wolor et al., 2020). Research was clear that the effectiveness of the training provided depends on the employees’ acceptance (Davis, 1989; Venkatesh & Morris 2000). Various studies used UTAUT to explain factors influencing employee acceptance of training programs. This literature discussed how PE, EE, and SI could influence users’ behavioral intentions toward embracing the usage of new technology. Gender, age, and experience are some of the characteristics that determine behavioral intentions. However, the studies reviewed were limited to similar cultural and contextual characteristics, suggesting the need for research in countries like Saudi Arabia, which has strong corporate investment in technology and a gender segregated society. In addition, the literature reviewed suggested that little attention was given to the factors that influence Saudi corporate employees’ acceptance of online training (Fatma & Rahman, 2015; Hofman & Newman, 2014; Hou et al., 2019; Tian et al., 2019; Wolor et al., 2020). Limited studies were conducted in Saudi Arabia in relation to the use of UTAUT to investigate the factors of employees’ acceptance of online training programs.

Given the gaps in the literature, this study utilized the UTUAT as the theoretical lens to examine the effect of PE, EE, and SI on Saudi Arabian corporate employees’ BI to use optional online-training programs. This study connected PE, EE, and SI to determine how they affect Saudi employees’ acceptance of optional online training. Additionally, the study provides deeper understanding of the topic by incorporating gender as moderating variable. This study serves as
evidence to support the development of effective corporate online training that gauges employee performance. The results of the present study can guide the development and implementation of optional online training that enhances employees’ acceptance and adoption of their programs.
CHAPTER 3

METHODOLOGY

This chapter provides a description of the methodology for this research study. This section addresses the study purpose, research questions, data collection and data analysis procedures.

Purpose of the Study

The development of electronic learning alternatives to conventional forms of training systems has demanded a significant investment of time and money by enterprises to produce a highly trained and educated workforce (Lee et al., 2011; Pappas, 2015). However, some prospective users opt not to utilize them or at least not productively enough, showing a lack of employee uptake (Cheng et al., 2012; Karaali et al., 2011; Pappas, 2015). As a result, it was critical to investigate and comprehend the underlying elements that influence the adoption of web-based learning systems inside firms (Karaali et al., 2011). Many theories and models were utilized in previous research on the adoption and use of electronic learning systems to examine a wide variety of aspects at the organizational and individual levels. This study utilized the UTUAT as the theoretical lens to examine the effect of PE, EE, and SI on the BI of Saudi Arabian corporate employees working at organizations and companies in Riyadh, Saudi Arabia, to use optional online-training programs. This study also investigated whether gender moderated
the relationship between Saudi corporate employees’ BI to utilize optional online training programs and PE, EE, and SI.

Research Questions and Hypotheses

The following research questions and hypotheses guided the study:

1. What is the effect of (1) performance expectancy, effort expectancy, and social influence (2) on employees’ behavioral intention to use optional online professional development training that is not required?

H1: Performance expectancy is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

H2: Effort expectancy is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

H3: Social influence is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

2. Does gender moderate the relationships between (1) performance expectancy, effort expectancy, social influence, and (2) employee’s behavioral intention to use optional online professional development training?

H4: Gender moderates the relationships between performance expectancy and employees’ behavioral intentions to use optional online professional development training.
H5: Gender moderates the relationships between effort expectancy and employees’ behavioral intentions to use optional online professional development training.

H6: Gender moderates the relationships between social influence and employees’ behavioral intentions to use optional online professional development training.

The research questions addressed how people embrace technology (Ashraf et. al, 2016) and how such technology impacts elements of learning essential for successful e-learning adoption (Al Mulhem, 2020). UTAUT, developed by Venkatesh et al. (2003, 2012) was deemed the most appropriate for the context of this research because it has been validated and extensively applied to investigate the acceptance of information and communication technologies as well as e-learning systems (Chen & Hwang, 2019; Gitau, 2016; Gupta et al., 2008; Karulkar et al., 2019; Liao et al., 2004; Padhi, 2018; Pynoo et al., 2011; Zeng, 2005). Additionally, Dwivedi et al. (2019) suggested the use of gender as modifier in UTAUT to improve its prediction value and distinguish UTAUT from other acceptance models. Therefore, this study included gender as moderator in the relationship between (1) PE, EE, and SI and (2) employee’s BI to use optional online professional development training.

Research Design

This quantitative correlational study used a survey tool to examine UTAUT and the impact of various elements on optional online training in Saudi corporate organizations and companies from employees’ perspectives to assess workers’ attitudes toward and acceptance of optional online-training programs in a corporate firm. Venkatesh et al. (2003) created and experimentally verified UTAUT, which was then evaluated by De Ruyter et al. (2004) and
Heerink et al. (2009) strives to analyze and explain users’ attitudes toward information technology used for e-learning and the variables that impact such attitudes (Kayali & Alaaraj, 2020). UTAUT, developed by Venkatesh et al. (2003) includes four variables (PE, EE, SF, and FC) and four moderating variables (gender, age, experience, and voluntariness). The current study used PE, EE, and SI as independent variables and BI as the dependent variable or outcome variable in the context of online learning services in the said model. Additionally, gender was utilized as the moderating variable.

I first examined how the UTAUT components (PE, EE, and SI) explain workers’ BI to utilize optional online professional development at a Saudi corporate organizations and companies (see Figure 1). Second, I investigated whether gender moderate the relationship between the UTAUT components and behavioral intentions to utilize optional online professional development. According to Creswell (2015), the quantitative correlational method was most suited to this study because it allowed the researcher to associate an outcome or criterion with one or more quantifiable predictors.

According to Venkatesh et al. (2003), PE is the degree to which a person believes that new information technology may assist them in enhancing their work performance. PE was explored in the framework of this research to discover to what extent Saudi Arabian corporate personnel working in a range of sectors believe that online professional development would enhance their job performance and competencies. Venkatesh et al. (2003) defined EE as the degree of difficulty associated with using a system. This study looked at EE to examine how workers viewed the ease of use of online professional development. Venkatesh et al. (2003) defined social influence as to how other people (such as co-workers or friends) might affect a participant’s choice to utilize new information technology. This study explored SI to see how
employees were affected by their co-workers and friends. Finally, the BI construct describes "the extent to which a person has formed conscious intentions to conduct or not perform some specific future behavior" (Warshaw & Davis, 1985, p. 214). The dependent variable in this research study was BI, which was used to determine workers’ behavioral intention to utilize optional online professional development based on the three predictors (PE, EE, and SI).

Participants

The study participants were male and female Saudi Arabian corporate employees who worked at organization and companies in Riyadh, Saudi Arabia during the study. A convenience sampling technique was used to recruit participants. Convenience sampling means that the "researcher selects individuals because they are available, convenient, and represent some characteristic the investigator seeks to study" (Creswell, 2015, p. 145). Regarding the number of participants, power analysis was run and indicated that 85 participants were required to detect a moderate effect size ($f^2 = 0.15$) in the population with 80% power using a multiple linear regression analysis (with $\alpha = .05$, Figure 2).

Survey Instrument

For this quantitative study, it was crucial to review the existing literature to identify a suitable survey instrument with evidence of validity. For this reason, this study utilized the same survey instrument developed by Venkatesh et al. (2003) when they developed a model to examine factors that affect users’ acceptance of new technology innovations. The model was called the UTAUT and had two main constructs. The first construct includes six main variables: performance expectancy, effort expectancy, social influence, facilitating condition, behavioral
intention, and use behavior. However, performance expectancy, effort expectancy, and social influence were applied to determine users’ intention, while facilitating condition and behavioral

Figure 2. Power analysis results.

intention was considered for the use behavior. The second construct related to the moderator variables, such as gender, experience, age, and voluntariness of use (Venkatesh et al., 2003). Previous studies have shown that 70% or more of the variability in users’ BI can be explained by using UTAUT (Venkatesh et al., 2012; Williams et al., 2015; Yoo & Han 2013). More details are provided in the Validity and Reliability section. Table 1 presents the constructs of UTAUT that
were used in this study. Finally, permission to use the instrument survey was received from the author via email (Appendix A).
Table 1

Survey Constructs of the UTAUT

<table>
<thead>
<tr>
<th>Survey Construct</th>
<th>Definition</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>“The degree to which an individual believes that using the system will help him or her to attain gains in job performance” (Venkatesh et al. 2003, p. 447).</td>
<td>This construct explores employees’ perceptions about how optional online professional development training helps them improve their job performance.</td>
</tr>
<tr>
<td>Expectancy</td>
<td>“The degree of ease associated with the use of the system” (Venkatesh et al., 2003, p.447).</td>
<td>This construct measures how simple and flexible optional online professional development training is perceived by employees.</td>
</tr>
<tr>
<td>Social Influence</td>
<td>“The degree to which an individual perceives that important others believe he or she should use the new system” (Venkatesh et al. 2003, p. 451).</td>
<td>This construct examines how an employee believes their co-workers or employers will support and encourage them to participate in optional online professional development training.</td>
</tr>
<tr>
<td>Behavioral Intention</td>
<td>“The degree to which a person has formulated conscious plans to perform or not perform some specified future behavior” (Warshaw &amp; Davis, 1985, p.214).</td>
<td>This construct provides insight into employees’ intentions to utilize optional online professional development training in the future.</td>
</tr>
</tbody>
</table>

Instrument Modification

Many previous studies utilized the UTAUT instrument, and some of these studies modified the UTAUT instrument’s items to create a measurement tool that contains the model constructs (AlAwadhi & Morris, 2008; Venkatesh et al., 2012; Wang & Shih, 2009; Williams et
This study included two sections. The first section collected participants’ demographic information, which included six items: gender, age, nationality, years of experience, educational level, and online training experience (Appendix B). The second section included 15 items that were adopted and modified by following the original UTAUT instrument. The study’s instrument included four constructs: performance expectancy (4 items), effort expectancy (4 items), social influence (4 items), and behavioral intention (3 items). These constructs identified factors that impacted optional online training usage. Performance expectancy, effort expectancy, and social influence were three constructs that were used by Venkatesh et al. (2003) to determine predictors of users’ behavioral intention in UTAUT. Since the present study evaluated users’ behavioral intentions to use optional online training, this study eliminated the construct of facilitating conditions because it related to the use behavior. The construct of intention was used as a dependent variable in the study.

I modified the survey to address the context of this study. First, the word “system” was replaced by the words “optional online professional development training” throughout the survey to make it more appropriate for the study’s context. Second, the phrase “district” was replaced with “business.” The last change was to add the word “company” beside the word “organization” to be clear to the participants (Appendix C). The two sections of the survey had a total of 21 items. Table 2 shows the four constructs of UTAUT with the 15 modified survey items adopted from the original Venkatesh et al. (2003) study.
Table 2
Modified UTAUT Survey Items

<table>
<thead>
<tr>
<th>Construct</th>
<th>Purpose</th>
<th>Items</th>
<th>Number of Items</th>
</tr>
</thead>
</table>
| Performance Expectancy | This construct explores employees’ perceptions about how adopting optional online professional development training helps them improve their job performance. | 1. I would find optional online professional development training useful in my job.  
2. Using optional online professional development training enables me to accomplish tasks more quickly.  
3. Using the optional online professional development training increases my productivity.  
4. If I use the optional online professional development training, I will increase my chances of getting a raise. | 4               |
| Effort Expectancy      | This construct measures how simple and flexible optional online professional development training is perceived by employees. | 1. My interaction with optional online professional development training would be clear and understandable.  
2. It would be easy for me to become skillful at using optional online professional development training.  
3. I would find the optional online professional development training easy to use.  
4. Learning to operate the optional online professional development training is easy for me. | 4               |
| Social Influence       | This construct examines how an employee believes their co-workers or employers will support and encourage them to participate in optional online professional development training. | 1. People who influence my behavior think that I should use optional online professional development training.  
2. People who are important to me think that I should use optional online professional development training.  
3. The senior management of this business has been helpful in the use of optional online professional development training.  
4. In general, the organization or company have supported the use of optional online professional development training. | 4               |
| Behavioral Intention   | This construct provides insight into employees’ intentions to utilize optional online professional development training in the future. | 1. I intend to use optional online professional development training in the future.  
2. I predict I would use the optional online professional development training in the future.  
3. I plan to use the optional online professional development training in the future. | 3               |

5-point Likert response options: 1= Strongly Disagree to 5= Strongly Agree
The UTAUT modified survey item section (i.e., Section 2) used 5-point Likert items rather than the original 5-point Likert items because numerous research studies have shown that five response options provide a more robust and reliable assessment (Carlsson et al., 2006; Revilla et al., 2014) and higher response rate than items with five Likert response options and are more straightforward and less confusing to participants (Bouranta et al., 2009). Furthermore, 5-point Likert items were utilized in various research investigations to analyze components in the UTAUT paradigm (Aditya & Permadi, 2018; Kohnke et al., 2014). Thus, this research study gathered survey data using 5-point Likert items with response options 1 = strongly disagree, 2 = disagree, 3 = Neutral, 4 = agree, and 5 = strongly agree to assess the four elements of UTAUT (PE, EE, and SI as predictor variables, and BI as the outcome variable). In addition, gender was included in this research as moderator variable.

The study targeted employees in Saudi Arabia. I modified the survey to the Arabic version because participants speak Arabic as their native language. Back-translation was performed to ensure the appropriate quality of the survey items in the Arabic version. This procedure helped participants to provide reliable responses by completing the survey (Brislin, 1970).

This study used an electronic survey developed and administered on Qualtrics to collect the participants’ responses. Creswell (2015) suggested that a survey tool allows researchers to gather information on a target set of people to describe their attitudes, perspectives, experiences, or behaviors in relation to a research issue. Furthermore, Saudi Arabian corporate employees have access to technological devices (phones, tablets, laptops) and an internet connection at work. Recent research in the field has shown that the majority of prospective responders can simply access online surveys (Alhabahba & Mahfoodh, 2016).
Validity and Reliability Evidence

Creswell (2015) defines validity as “the degree to which all of the evidence leads to the intended interpretation of test results for the stated purpose” (p. 145). Providing evidence regarding the validity of scores from an instrument and ensuring that its interpretation corresponds to the purpose for which it was designed are two important aspects of instrument validity (Creswell, 2015). Reliability refers to the overall consistency of scores obtained from a measure (Creswell, 2015). Many previous research studies have shown that the scores resulting from the survey developed by Venkatesh et al. (2003) have been consistent and reliable. The reliability estimates (Cronbach’s alpha) obtained by Venkatesh et al. (2003) for scores from each of the four factors as represented in Table 3 were higher than .70, which indicates adequate reliability evidence across various studies using different participants in different settings.

Table 3
Reliability (Alpha) Indices for UTAUT Constructs obtained by Venkatesh et al. (2003)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s Alpha</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy</td>
<td>.88</td>
<td>4</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>.87</td>
<td>4</td>
</tr>
<tr>
<td>Social Influence</td>
<td>.81</td>
<td>4</td>
</tr>
<tr>
<td>Behavioral Intention</td>
<td>.96</td>
<td>3</td>
</tr>
</tbody>
</table>

Regarding the instrument score validity, it was shown that data acquired from research employing UTAUT may be verified over time and with various samples in diverse contexts (Venkatesh et al., 2003). Various study results have revealed that the scores obtained from the UTAUT instrument accurately reflected the variables they sought to examine (Bandyopadhyay&
Fraccastoro, 2007; Habboush et al., 2011; Kijsanayotin et al., 2009). Their findings were congruent with those of several research investigations, including Kijsanayotin et al., (2009), Yoo and Han’s (2013) and Yoo and Huang’s (2012) which indicated that workers’ BI about online learning are predicted by their expectancies of their performance, effort, and their social impact. These criteria were shown to be important predictors of workers’ intentions to utilize optional online professional development in their studies.

The backtranslation of scores from an instrument is one of the concerns that might have an impact on the validity of such ratings. Because this research was carried out in Saudi Arabia where Arabic is the primary language spoken, the instrument material was translated from English to Arabic. A careful back-translation method was carried out to help ensure the data’s validity. First, I translated the survey questions into Arabic, followed by English. The survey was then sent to an Arabic-English translator, who was responsible for turning the Arabic survey questions back into English. I compared the translated Arabic-to-English survey to the original English survey to check accuracy and clarity. Then I share the survey with a group of colleagues to share their ideas about the content clarity of the survey items before sending it to the actual participants of this study.

Permissions and Ethical Considerations

Before conducting the study, I obtained all required clearances from the appropriate parties. First and foremost, I submitted an application to and obtained approval from the Northern Illinois University Institutional Review Board (IRB) to do research with people. I also provided a detailed description of the study and its procedures to the board members to understand all aspects of this research study.
Upon approval from the NIU IRB to conduct this research, I sent a letter containing information about the study to the chief executive of the concerned corporate firms where the online survey was administered and received approval to conduct this research in addition, participants were required to sign an informed consent form in order to participate in the study. They were informed that their comments were anonymous and that they were not required to provide their names or employment ID numbers when submitting their responses.

Procedures

Once NIU IRB approval was received, a letter of introduction was sent to the CEOs of the concerned corporate firms introducing the researcher, the study’s purpose, and a description of the steps needed for a data collection process to be successful in order to reach the maximum number of participants Appendix D. The CEOs of the study site distributed the survey link via email server to all their employees Appendix E. The hyperlink took participants to a Qualtrics survey page requesting informed consent before proceeding to the actual survey Appendix F. They were asked to read the informed consent statement to acknowledge that they understood the ethical practice of this research; for example, they were not obligated to participate and that they were able to withdraw at any time before or during the survey sections. Participants were also provided with an “Agree” button in the informed consent section to confirm that they understood the material and agreed to participate in the research.

A week later, a first email reminder was issued to the CEOs of the study site to send a postmaster email to all employees reminding them to complete the survey. A second email reminder was sent by the CEOs asking participants to complete the survey. A third email reminder was issued two weeks later. The online survey Appendix G was closed two weeks after
the third email reminder. The data collection procedure for this study took two months (Appendix H).

**Data Analysis**

The data collected were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics and inferential statistics were generated. Descriptive statistics provided information about the participants’ demographics such as age, gender, highest educational level attained, work experience, occupation, and experience with online learning. Although descriptive statistics alone cannot be used to draw conclusions about a population, they were valuable in demonstrating the similarities and differences across the sample. As a result, the central tendency (mean, median, and mode) and variability (standard deviation, variance, and range) measures were used to define primary variable in this research. The skewness and kurtosis of the UTAUT constructs were also investigated to evaluate how symmetrical, flat, or peaked the data collected were.

Multiple linear regression was employed as the inferential analytic strategy in this study to address the research questions and make inferences about the population from which the sample was taken. Multiple linear regression was used in this study to investigate how PE, EE, and SI predict employees’ BI to use an optional online training program, as well as how gender moderates the relationship between PE, EE, SI, and employees’ BI to use an optional online training program. Composite subscale scores for each of the four UTAUT components (PE, EE, SI, and BI) were calculated to answer the research questions. Gender was dummy coded for analytic purposes (0 = *male*, 1 = *female*), and interaction terms were added to address moderation effects. The normality assumptions of the multiple regression analysis were tested using
histograms and Q-Q plots of residuals. The homoscedasticity of residuals was also examined using residual scatterplots.

Summary

This quantitative study used the UTUAT model to collect quantitative survey data to examine the effect of PE, EE, and SI on the BI to use optional online training programs among Saudi Arabian corporate employees working at organizations and companies in Riyadh, Saudi Arabia. This study also used gender as moderating variable in the relationship between Saudi corporate employees’ BI to utilize optional online training programs and PE, EE, and SI. Multiple linear regression analysis and descriptive statistics were conducted to analyze the data collected. Chapters 4 and 5, respectively, present the results and discussion of findings of the present study.
CHAPTER 4

RESULTS

The two purposes of this quantitative correlational study were to examine how the UTAUT constructs PE, EE, and SI predict employees’ BI to use optional online professional development training in Riyadh, Saudi Arabia, and to examine whether gender moderated the relationship between the UTAUT constructs and behavioral intention to use optional online professional development training. This chapter provides results from the data analyses conducted to address the research questions and hypotheses.

Data Screening

After receiving an approval from the IRB at Northern Illinois University to conduct the study, an email with the survey link was sent as an email link to chief executive at companies and organizations in Riyadh, Saudi Arabia. The online survey asked for participants’ gender, age, college, nationality, years of experience, educational level, whether they had taken any optional online training for professional development, and the scales assessing the four constructs of (PE, EE, SI, and BI). Four hundred and sixty-four employees responded to the survey. I first evaluated the data for missing values. To assess whether the missing values were missing completely at random (MCAR), Little’s (1988) MCAR test was conducted. The test results showed that missing data were missing completely at random \((p = .401)\). One hundred and seventy-seven cases were removed from the data set due to various reasons, such as
participants agreeing to participate in the study but did not provide any additional responses, completing only the demographic items, or showing response patterns that included many missing values. In this study, hot-deck imputation was used to impute missing values. The final analytic data set was comprised of 287 cases.

Demographic Information

This section provides descriptive information about employees at companies and organizations in Riyadh, Saudi Arabia. This information includes characteristics such as gender, gender, age, nationality, years of experience, educational level, and whether any optional online training for professional development was completed.

Table 4 shows the distribution of participant characteristics. More males ($n = 191, 66.6\%$) responded than females ($n = 96, 33.45\%$). The age range that had the highest percentage of participants was 31-40 years which accounted for (46.3\%) of the total participants. The lowest age category of participation was 51–60 years (2.4\%) and over 60 years (0.8\%). The majority of the participants (91.6\%) were Saudi citizens. The category with the smallest number of participants (8.4\%) was non-Saudi citizens. The educational level of the employees that had the highest percentage of participants had a bachelor’s degree was ($n = 174, 60.6\%$), and only ($n = 10, 3.5\%$) indicated high school or below as the highest educational level attained. Participants were asked about their years of experience at their current position. Participants with the highest experience were 5 years or more ($n = 200, 69.7\%$), while participants with the lowest experience was less than 6 months ($n = 7, 2.4\%$). Participants that had “yes” as experience with optional online training was ($n = 219, 76.3\%$), and ($n = 68, 23.7\%$) for participants that had “no” experience with optional online training.
Table 4

Demographic Information

<table>
<thead>
<tr>
<th>Variables</th>
<th>Values</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>191</td>
<td>66.6</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>96</td>
<td>33.45</td>
</tr>
<tr>
<td>Age</td>
<td>18 – 24 Years</td>
<td>17</td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td>25 – 30 Years</td>
<td>92</td>
<td>32.1</td>
</tr>
<tr>
<td></td>
<td>31 – 40 Years</td>
<td>133</td>
<td>46.3</td>
</tr>
<tr>
<td></td>
<td>41 – 50 Years</td>
<td>36</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>51 – 60 Years</td>
<td>7</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>&gt; 60 Years</td>
<td>2</td>
<td>.8</td>
</tr>
<tr>
<td>Nationality</td>
<td>Saudi</td>
<td>263</td>
<td>91.6</td>
</tr>
<tr>
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<td>Non-Saudi</td>
<td>24</td>
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<td>Highest Educational Level</td>
<td>High School or below</td>
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<td>15</td>
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<td></td>
<td>Bachelor’s Degree</td>
<td>174</td>
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<tr>
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<td>Master’s Degree</td>
<td>67</td>
<td>23.3</td>
</tr>
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<td></td>
<td>Doctoral Degree</td>
<td>21</td>
<td>7.3</td>
</tr>
<tr>
<td>Years of Experience</td>
<td>&lt; 6 Months</td>
<td>7</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>6 Months – 1 Year</td>
<td>12</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>&gt; 1 Year but &lt; 5 Years</td>
<td>68</td>
<td>23.7</td>
</tr>
<tr>
<td></td>
<td>More than 5 Years</td>
<td>200</td>
<td>69.7</td>
</tr>
<tr>
<td>Experience with Optional</td>
<td>Yes</td>
<td>219</td>
<td>76.3</td>
</tr>
<tr>
<td>Online Training</td>
<td>No</td>
<td>68</td>
<td>23.7</td>
</tr>
</tbody>
</table>
UTAUT Constructs

This quantitative study used Likert scales to assess the UTAUT constructs: PE, EE, SI, and BI. These scales consisted of items in which participants specified their level of agreement to different statements using the following response options: 1 = *strongly disagree*, 2 = *disagree*, 3 = *Neutral*, 4 = *agree*, and 5 = *strongly agree*. Composite scores were computed as the mean score across items for each construct. Table 5 presents the descriptive statistics (mean, standard deviation, skewness, and kurtosis) across participants for the four subscale constructs (PE, EE, SI, and BI). At the sample level, the composite scores for BI items showed the highest mean value ($M = 4.16$, $SD = 0.72$), which indicates that participants had a high level of BI to use optional online training programs. EE showed the second-highest mean score ($M = 3.84$, $SD = 0.72$), which indicates that participants agreed that optional online training programs are easy to use in the future. The mean score for PE also was relatively high ($M = 3.77$, $SD = 0.72$), which indicates that participants agreed that their knowledge and skills would increase due to the use of optional online training programs. Finally, at the sample level, the lowest mean score was for SI ($M = 3.39$, $SD = 0.76$), which indicates that participants had a neutral intention about the impact of social influence toward using optional online training programs.

Table 5

Descriptive Statistics of the UTAUT

<table>
<thead>
<tr>
<th>Variable</th>
<th>$n$</th>
<th>$M$</th>
<th>$SD$</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy</td>
<td>287</td>
<td>3.77</td>
<td>0.72</td>
<td>-0.80</td>
<td>0.99</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>287</td>
<td>3.84</td>
<td>0.72</td>
<td>-0.76</td>
<td>1.11</td>
</tr>
<tr>
<td>Social Influence</td>
<td>287</td>
<td>3.39</td>
<td>0.76</td>
<td>-0.42</td>
<td>0.22</td>
</tr>
<tr>
<td>Behavioral Intention</td>
<td>287</td>
<td>4.16</td>
<td>0.72</td>
<td>-1.11</td>
<td>2.53</td>
</tr>
</tbody>
</table>
Figure 3 presents boxplots of the four UTAUT constructs. The boxplots show that each variable had outliers; in particular, three cases for PE were classified as extreme values (cases number 142, 146, 80, 172). Similarly, two cases for EE were classified as extreme values (case number 172, and case number 146). The extreme values for both performance expectancy and effort expectancy were truncated to the next-nearest outlying case.

![Boxplots for UTAUT constructs](image)

The extreme values for PE and EE were truncated to the next-nearest outlying case. For example, the values of PE for case numbers 142, 146, 80 and 172 were truncated to a value equal to that of case number 257 (Figure 4). Figure 5 shows how the values of EE for case numbers 146 and 172 were truncated to a value equal to that of case number 170.

Reliability of Instrument Scores

It was essential to assess the internal consistency of scores obtained from the survey because the survey items were modified from the original instrument. Cronbach’s alpha is used to provide evidence of internal consistency reliability (Bland & Altman, 1997). As shown in
Figure 4. Boxplot for transformed PE construct.

Figure 5. Boxplot for transformed EE construct.
Table 6, the value of Cronbach’s alpha for the UTAUT constructs suggested evidence of good reliability evidence with each value above 0.70 (Gliem & Gliem, 2003).

Table 6

Cronbach’s Alpha Coefficients for UTAUT Constructs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Corresponding Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy</td>
<td>1-4 (4 items)</td>
<td>.81</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>5-8 (4 items)</td>
<td>.81</td>
</tr>
<tr>
<td>Social Influence</td>
<td>8-12 (4 items)</td>
<td>.75</td>
</tr>
<tr>
<td>Behavioral Intention</td>
<td>12-15 (3 items)</td>
<td>.91</td>
</tr>
</tbody>
</table>

Inferential Statistics

Linear regression was used to assess the effect of each construct of UTAUT.

Research Question 1

This section examines the findings of the Research Question 1 and its associated hypotheses that examined PE, EE, and SI for predicting employees’ BI to use optional online professional development training in Riyadh, Saudi Arabia.

RQ1: What is the effect of (1) PE, EE, and SI (2) on employees’ behavioral intention to use optional online professional development training that is not required?

H1: Performance expectancy is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.
H2: Effort expectancy is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

H3: Social influence is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

**Multiple Linear Regression Analysis**

To assess Research Question 1, multiple regression was used to predict the outcome variable (employees’ BI) and from the predictor variables (PE, EE, and SI). Gender served as a control variable in this model.

Table 7 presents the results for the regression of employees’ BI to use optional online professional development training on PE, EE, and SI. The results show that the full set of predictors (gender, PE, EE, and SI) significantly predicted employees’ BI, $F(4, 282) = 69.121, p < .001$. A total of 49.5% the employees’ behavioral intention variation was explained by full set of predictors ($R^2 = .495$) while, after controlling for gender, the set of UTAUT constructs (PE, EE, and SI) significantly predicted behavioral intention $F(4, 282) = 69.121, p < .001$, accounting for 49.5% of the total variation in the outcome variable (Table 8).
Table 7

ANOVA for Regression of Behavioral Intention on PE, EE, SI, and Gender

<table>
<thead>
<tr>
<th>Model</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>71.500</td>
<td>4</td>
<td>17.875</td>
<td>69.121</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Residual</td>
<td>72.92</td>
<td>282</td>
<td>0.259</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>144.42</td>
<td>286</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Outcome Variable: Behavioral Intention

Table 8

Regression Model Summary Predicting Behavioral Intention

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.083</td>
<td>.007</td>
<td>.003</td>
<td>.709</td>
<td>.007</td>
<td>1.962</td>
</tr>
<tr>
<td>2</td>
<td>.704</td>
<td>.495</td>
<td>.488</td>
<td>.508</td>
<td>.448</td>
<td>90.886</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), gender
b. Predictors: (Constant), gender, Performance Expectancy, Effort Expectancy, Social Influence
c. Dependent Variable: Behavioral Intention

**Coefficients**

Evaluation of the regression coefficients (Table 9) revealed that after controlling for gender, each UTAUT construct had a statistically significant, positive relationship with BI ($\beta = 0.268$, $p < .001$; $\beta = 0.369$, $p < .001$; and $\beta = 0.239$, $p = <.00$, for PE, EE, and SI, respectively). Gender, however, was not a statistically significant predictor ($\beta = -0.047$, $p = .269$). Finally, to evaluate which predictor was most important, Pratt indices were computed. The results showed that the Pratt index for PE was 0.30, EE was 0.45 and the Pratt index for SI was 0.28, which indicated that EE was the most important of the predictors.
Table 9

Regression Coefficients for the Regression of Behavioral Intention on PE, EE, and SI

<table>
<thead>
<tr>
<th>Predictors</th>
<th>B</th>
<th>SE(B)</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>Pratt Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.046</td>
<td>0.195</td>
<td>0.071</td>
<td>5.365</td>
<td>&lt;.001</td>
<td>0.007</td>
</tr>
<tr>
<td>Female gender</td>
<td>-0.071</td>
<td>0.064</td>
<td>-0.047</td>
<td>-1.108</td>
<td>.269</td>
<td>0.051</td>
</tr>
<tr>
<td>PE</td>
<td>0.262</td>
<td>0.051</td>
<td>0.268</td>
<td>5.082</td>
<td>&lt;.001</td>
<td>0.043</td>
</tr>
<tr>
<td>EE</td>
<td>0.364</td>
<td>0.052</td>
<td>0.369</td>
<td>7.006</td>
<td>&lt;.001</td>
<td>0.045</td>
</tr>
<tr>
<td>SI</td>
<td>0.222</td>
<td>0.043</td>
<td>0.239</td>
<td>5.146</td>
<td>&lt;.001</td>
<td>0.228</td>
</tr>
</tbody>
</table>

Regression Assumptions

Regression assumptions, including homoscedasticity, normality of residuals, and linearity were assessed. Regression outliers and influential values were identified, and multicollinearity among predictors was assessed.

Outliers and influential values. Examination of regression outliers showed that the standardized residuals ranged in value between -2.94 and 2.72, with no values exceeding +/- 3.00. Also, Cook’s Distances revealed that influential cases were not evident, with no values exceeding 1.00.

Homoscedasticity and Linearity. As shown in Figure 6, the assumptions of homoscedasticity were met based on the visual examination of a scatterplot of the residuals on the predicted values. The scatterplot showed that the residuals were homoscedastic and there also was no evidence of non-linearity.
Normality of Residuals. A histogram of standardized residuals and the P-P plot were constructed to assess the normality of residuals. As shown in Figure 7, the histogram presented a normal distribution. This observation also was supported by examining the residual P-P plot (Figure 8). However, the results showed that residuals did not display extreme skewness or kurtosis, with skewness $= -0.136$ ($SE = 0.144$) and kurtosis $= 0.163$ ($SE = 0.287$). Moreover, any concerns about non-normality were mitigated due to the large sample size ($N = 267$).
Multicollinearity. According to O’Brien (2007), multicollinearity is suggested if the VIF is greater than 10 or, equivalently, if the tolerance value is less than 0.10 for predictor variables. The value of VIF for each predictor was below 10, and both values of tolerance were less than 0.10. Thus, excessive multicollinearity was not evident. Furthermore, no correlations among the predictors exceeded .90 (Table 10).

Table 10
Pearson Correlations Among Predictors

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>PE</th>
<th>EE</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female gender</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>-0.013*</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE</td>
<td>-0.100**</td>
<td>0.566</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>-0.007*</td>
<td>0.375</td>
<td>0.358***</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Note. N = 196; *p < .05, **p < .01, ***p < .001.
Research Question 2

This section presents the outcomes related to Research Question 2, which examined whether gender moderated the relationships between PE, EE, SI, and employees’ BI to use optional online professional development training in Riyadh, Saudi Arabia. A multiple linear regression model was fitted to address this research question. Prior to analysis, PE, EE, and SI were mean-centered. The analyses addressed the following research question and hypotheses:

RQ2: Does gender moderate the relationships between (1) performance expectancy, effort expectancy, social influence, and (2) employee’s behavioral intention to use optional online professional development training?

H4: Gender the relationships between performance expectancy and employees’ behavioral intentions to use optional online professional development training.

H5: Gender moderates the relationships between effort expectancy and employees’ behavioral intentions to use optional online professional development training.

H6: Gender moderates the relationships between social influence and employees’ behavioral intentions to use optional online professional development training.

**Multiple Linear Regression Analysis**

Table 11 shows the results for a model assessing the moderating effect of gender on the relationship between PE, EE, SI, and employees’ BI to use optional online professional development training.
development training. Results showed that gender did not significantly moderate the relationship between PE and BI ($\beta = 0.033, p = .760$), EE, and BI ($\beta = 0.029, p = .797$), or SI and BI ($\beta = 0.056, p = .570$). This model accounted for 48.5% of the total variation in the outcome ($R^2 = .485, p < .001$).

Table 11
Regression Coefficients for Regression of Behavioral Intention on PE, EE, SI, Gender, and Moderator

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>$SE(B)$</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.213</td>
<td>0.249</td>
<td>4.871</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>0.250</td>
<td>0.061</td>
<td>0.256</td>
<td>4.098</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>EE</td>
<td>0.348</td>
<td>0.064</td>
<td>0.353</td>
<td>5.418</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>SI</td>
<td>0.205</td>
<td>0.051</td>
<td>0.212</td>
<td>4.046</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Female gender</td>
<td>-0.071</td>
<td>0.065</td>
<td>-0.047</td>
<td>-1.104</td>
<td>.270</td>
</tr>
<tr>
<td>PE × Female Gender</td>
<td>0.033</td>
<td>0.110</td>
<td>0.021</td>
<td>0.305</td>
<td>.760</td>
</tr>
<tr>
<td>EE × Female Gender</td>
<td>0.029</td>
<td>0.111</td>
<td>0.018</td>
<td>0.258</td>
<td>.797</td>
</tr>
<tr>
<td>SI × Female Gender</td>
<td>0.056</td>
<td>0.098</td>
<td>0.033</td>
<td>0.569</td>
<td>.570</td>
</tr>
</tbody>
</table>

Regression Assumptions

Regression assumptions, including homoscedasticity, normality of residuals, and linearity were assessed. Regression outliers and influential values were identified, and multicollinearity assessed.

Outlier and influential values. Examination of regression outliers for the model including the moderating effect of gender on the relationship between PE, EE, SI, and the outcome showed
that the standardized residuals ranged in value between -2.91 and 2.73, with no values exceeding +/- 3.00. Also, Cook’s Distances revealed that influential cases were not evident, with no values exceeding 1.00.

**Homoscedasticity.** As shown in Figure 9, the assumption of homoscedasticity was met based on the visual examination of the scatterplot of the residuals on the predicted values from the regression.

![Homoscedasticity Scatterplot](image)

**Figure 9.** Scatterplot of residual values on predicted values.

**Linearity.** Figure 10 shows a scatterplot of the outcome variable (BI) on the predicted values. As seen in this scatterplot, linearity was evident.
Normality of residuals. A histogram of standardized residuals and P-P plot were constructed to assess normality of residuals. As shown in Figure 11, the histogram presented a normal distribution for the moderation model, indicating that the normality assumption of residuals was met. This observation was also supported by examining the P-P plot (Figure 12). Moreover, the results showed that residuals did not display extreme skewness or kurtosis, with skewness = -0.149 (SE = 0.144) and kurtosis = 0.182 (SE = 0.287). Moreover, the large sample size mitigated any concerns about non-normality.
Figure 11. Histogram of standardized residuals (outcome variable BI).

Figure 12. P-P plot for the regression model that included moderating effect of gender on the relationship between PE, EE, SI, and BI (dependent variable BI).
Multicollinearity. The value of VIF for each predictor was below 10, and the values of tolerance for each were less than 0.10. Thus, excessive multicollinearity was not evident.

Chapter Summary

This quantitative correlational study was designed to examine how the UTAUT constructs PE, EE, and SI predict employees’ BI to use optional online professional development training in Riyadh, Saudi Arabia. It also examined whether gender moderated the relationship between PE, EE, SI, and behavioral intention to use optional online professional development training.

This chapter contains two sections. The first section provided information regarding the study’s participants and the constructs/variables that were used. The second section provided inferential statistical analysis related to the study’s research questions using multiple linear regression.

Research Question 1 was, “What is the effect of (1) performance expectancy, effort expectancy, and social influence (2) on employees’ behavioral intention to use optional online professional development training that is not required?” The results revealed that all three predictors, PE, EE, and SI, significantly and positively predicted employees’ behavioral intentions. The regression model revealed that three predictors explained 48.5% of variation in employees’ behavioral intention.

Research Question 2 was, “Does gender moderate the relationships between (1) performance expectancy, effort expectancy, social influence, and (2) employee’s behavioral intention to use optional online professional development training?” The outcomes from multiple
regression analyses showed that gender did not show a statistically significant moderating effect on the relationship between PE, EE, SI, and employees’ BI to use optional online professional development training. In other words, the effects of PE, EE, and SI on employees’ intention to use optional online professional development training did not differ between females and males.

The two purposes of this quantitative correlational study were to examine how the UTAUT constructs PE, EE, and SI predict employees’ BI to use optional online professional development training in Riyadh, Saudi Arabia and to examine whether gender moderated the relationship between the UTAUT constructs and BI to use optional online professional development training. This chapter provides the data analysis and results that were conducted to address the research questions and hypotheses.
CHAPTER 5
DISCUSSION

This chapter discusses the results and the consistencies and inconsistencies of the results with the reviewed literature. Also, implications for research and practice, limitations, and suggestions for future research, are discussed. The chapter ends with the conclusion.

The purpose of this study was to examine the determinants that predict Saudi Arabian corporate employees of taking an optional online training grounded in the unified theory of acceptance and use of technology (UTAUT) model. This study used a survey tool to assess employees’ attitudes toward and acceptance of optional online professional development programs. The study also examined whether gender had a moderating effect on the relationship among the three UTAUT constructs and employees’ BI to use the optional online training.

The UTAUT consists of the following constructs: performance expectancy, effort expectancy, social influence, facilitating condition, behavioral intention, and use behavior and four moderator variables (gender, age, experience, and voluntariness of use). The model was used in several studies (e.g., AlAwadhi & Morris, 2008; Venkatesh et al., 2003) to predict different users’ BI to use new technology. In this study, three predictors PE, EE, and SI were used as independent variables and behavioral intention was dependent variable. Data were collected from 287 corporate employees in Saudi Arabia. The survey had two parts. Part I contained demographic questions related to participants’ gender, age, nationality, years of experience, education level, and whether they had taken any optional online training for
professional development previously or not. Part II contained 15 items that were related to the four constructs of UTAUT: PE (4 items), EE (4 items), SI (4 items), and BI (3 items).

Multiple linear regression was used to assess the effect of each construct of the UTAUT. The regression analysis showed that all three predictors, PE, EE, and SI, significantly and positively predicted employees’ BI with the three predictors explained 48.8% of variation in employees’ BI. The results of the statistical analysis also demonstrated that gender did not have a moderating effect on the relationship between the independent variables and dependent variable, meaning that the relationship between PE, EE, SI, and employees’ BI to use optional online training did not differ for females versus males. This was an unexpected result because I assumed that due to highly segregated Saudi Arabian corporate culture, gender would have had a moderating effect on the relationship between at least one of the independent variables and the dependent variable as initially hypothesized. The results of the study pertaining to each research question are discussed below. The findings are also discussed in relation to previous research studies in the following sections.

Research Question 1

RQ1: What is the effect of (1) performance expectancy, effort expectancy, and social influence (2) on employees’ behavioral intention to use optional online professional development training that is not required?

H1: Performance expectancy is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.
H2: Effort expectancy is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

H3: Social influence is positively related to employees’ behavioral intentions toward using optional online professional development training that is not required.

The three independent variables of the UTAUT: PE, EE, and SI served as the main predictors of the BI to use optional online training (outcome variable). The results of the multiple linear regression showed each UTAUT construct was statistically significant and had a positive relationship with BI to use online training and accounted for 49.5% of the total variation in the outcome variable. This study’s results parallel the results in Alrawashdeh et al.’s (2012) study, which reported that that PE, EE, and SI altogether predicted the behavioral intention to use web-based training of public sector’s employees in Jordan.

However, these results contradicted Alshrari’s (2018) study that examined Saudi employee’s BI to use online professional development training. In Alshrari’s study, when the significance of all predictors was assessed, only two out of three predictors—PE and EE—predicted the employees’ BI to use online professional development. SI was not a statistically significant predictor of the employees’ BI to use online professional development. The findings of the present study may be contradictory to Alshrari’s (2018) study’s results possibly because in his study the setting (hospital) and the participant characteristics were different (e.g., the proportion of female respondents was higher than male respondents).

These results should prompt the policymakers working in the corporate world of Saudi Arabia to consider employees’ BI to use online training and introduce strategies of encouraging
the employees to take online training to enhance the number of potential trainees. The following section will discuss the studies that utilized UTAUT to examine the predictors of individuals’ behavioral intention to use technologies.

**Effort Expectancy**

EE is a construct of UTAUT that intends to measure the level of ease of use associated with the use of technology or a system (Venkatesh et al., 2003). As UTAUT posits, EE can positively influence the BI to use the technology (Venkatesh et al., 2003). If the users find the system or technology services easy to use, they are more likely to adopt it.

In this study, the items related to EE contained statements related to the ease of use of optional online training. Although all predictors were significant, the computation of the Pratt Index showed that the EE was the important predictor of employees’ BI to use online professional development as the employees made less effort in taking the training. This finding was consistent with previous research studies (e.g., AlAwadhi & Morris, 2008; Alshrari, 2018; Ghalandari, 2012; Kijsanayotin et al. 2009) which reported that EE was one of the significant predictors of BI. For instance, Ghalandari’s (2012) study reported that the EE had a positive effect on users’ BI to use e-banking services in Iran. However, the results of the current study were inconsistent with some other studies (e.g., Gruzd et al., 2012; Khechine et al., 2014; Mohammadyari & Singh, 2015; Tarhini et al., 2016), which reported that the relationship between EE and BI was non-significant. Contradictory results can be explained by several factors, such as the research setting, sampling techniques, data collection procedures, or participants’ level of expertise with technology. For example, Tarhini et al. (2016) explained that the EE was an non-significant predictor because the users of internet banking were more likely to
utilize online banking services because of their perceived usefulness rather than their ease of use, which resulted in EE being an non-significant factor. As EE was not a significant predictor in their study, Tarhini et al. (2015) recommended that software developers should design more user-friendly internet banking interfaces to encourage consumers with less computer skills to adopt and use the system.

Mohammadyari and Singh (2015) speculated that the observed non-significance of EE in their study was due to the lack of a relationship between EE and continuance intention, stating that online learning, unlike other work-related technologies, heavily depends on the quality of the system’s design and the content of the training materials. Therefore, Mohammadyari and Singh (2015) recommended updating the content of e-learning systems so that individuals would be interested in using them. Based on the findings of the relevant literature regarding the effort expectancy, it can be concluded that employees might need the updated content, support in improving technical skills to use systems, and other types of assistance to encourage behavioral intention to use online professional development.

**Performance Expectancy**

PE is understood as a perception of individuals that utilizing a system would be beneficial in increasing their job performance (Venkatesh et al., 2003). Although all predictors were statistically significant in this study, the computation of the Pratt Index showed that performance expectancy was the second-most-important predictor of employees’ behavioral intention to use online professional development. This result was expected as it was consistent with relevant studies (e.g., Alshrari, 2018; Alrawashdeh et al., 2012), Tarhini et al., 2016; Mohammadyari & Singh, 2015; Yoo & Han, 2013) that reported PE was one of the important predictors of the BI,
meaning that when employees perceived the online professional development as useful for the career path, thus, their intentions to use the training increased.

As the findings from literature demonstrated, online training designers and content developers of trainings should consider the relatedness and usefulness of the content and materials to enhance employees’ work performance and skills before uploading the content in an online training platform.

**Social Influence**

SI is defined as “the degree to which an individual perceived that important others believe he or she should use the new system” (Venkatesh et al., 2003, p. 451). In the survey that was used in the current study, SI items contained statements related to the influence of others (e.g., colleagues and managers) on employees’ decisions to use optional online professional development. The results of the study showed that SI was one of the significant predictors of employees’ BI to use online professional development. This finding agrees with relevant studies (e.g., Ghalandari, 2012; Tarhini et al., 2016), which reported that SI is one of the key determinants of BI to use technology. For instance, Tarhini et al. (2016) found SI was one of the significant predictors on influencing customers’ BI to use internet banking. In a similar vein, Ghalandari (2012) also reported that SI had a positive and significant effect on users’ behavior and intention to use e-banking. Other studies (e.g., Alrawashdeh et al., 2012; Dečman, 2015; Kijsanayotin et al., 2009) also reported that SI was one of the significant predictors of BI, claiming that individuals tend to be socially influenced by their friends and coworkers in making decisions to use technology.
However, this finding is in disagreement with some other studies (e.g., Mohammadyari & Singh, 2015; Venkatesh et al., 2003), which found that SI had an effect on BI to use technologies only in mandatory settings. According to Venkatesh et al. (2003), SI was stronger for women or older workers during early stages of experience/adoption. In Mohammadyari and Singh’s (2015) study, SI of individual peers had a consistently strong impact on BI, but the impact of organizational SI was not strong. Therefore, the researcher recommended understanding users as social actors and not treating them isolated individuals because users’ interactions with their colleagues when engaging with new technologies could provide them with guidance as to the level of effort that they need to make before adopting technologies.

In sum, the findings pertaining to Research Question 1 were generally consistent with previous research, demonstrating that especially PE and EE were statistically significant predictors of the BI to use online professional development. SI also could significantly predict BI to use online professional development among corporate employees in Saudi Arabia, meaning that corporate employees were affected by the SI of their colleagues or other people to use online professional development. However, much research is needed to better understand the effect of social influence on employees’ BI to use online professional development in Saudi Arabia.

Research Question 2

RQ2: Does gender moderate the relationships between (1) performance expectancy, effort expectancy, social influence, and (2) employee’s behavioral intention to use optional online professional development training?
H4: Gender moderates the relationships between performance expectancy and employees’ behavioral intentions to use optional online professional development training.

H5: Gender moderates the relationships between effort expectancy and employees’ behavioral intentions to use optional online professional development training.

H6: Gender moderates the relationships between social influence and employees’ behavioral intentions to use optional online professional development training.

Because previous researchers (e.g., Venkatesh et al., 2003) reported that gender had a moderating role on the influence of PE on BI, this study assumed that the effect of gender would be significant. Given the segregated Saudi Arabian corporate work setting, I hypothesized that gender would have a moderating effect on the relationship between each of the three predictors and the dependent variable of this study. To test these hypotheses, seven predictors (performance expectancy, effort expectancy, social influence, gender, performance expectancy×gender, effort expectancy×gender, and social influence×gender) were included in the multiple linear regression model to investigate whether gender moderated the relationship between PE, EE, SI, and BI to use optional online professional development training. The multiple linear regression model showed that PE, EE, SI predictors significantly predicted employees’ BI to use optional online professional development.

When moderating effects of gender were tested, no statistically significant moderating effects were found on the relationship between PE, EE, SI, and the outcome variable (employees’ behavioral intention). Several relevant studies (e.g., Alshrari, 2018; AlAwadhi and
Morris, 2008; Al-Gahtani et al., 2007) reported that gender had no moderating effect on the relationship between PE, EE, SI, and BI. Therefore, the finding of the current study is consistent with the previously mentioned studies. In Alshrari’s (2018) study, which examined employees’ BI to use online professional development at King Abdullah bin Abdul-Aziz University Hospital, Saudi Arabia, gender did not have any moderating effect on the relationship between the UTAUT’s constructs and employees’ BI to use online professional development. The study conducted by Al-Gahtani et al. (2007) examined acceptance and use of computers by knowledge workers in Saudi Arabia. Since there were and still are some boundaries in social roles for women compared to men in Saudi Arabia, thus very few women were in professional knowledge worker roles, Al-Gahtani et al. (2007) speculated that that women in Saudi Arabia would be less likely to use computers to enhance their job performances and for advancement in their professional careers. However, their data analysis showed that gender did not have any significant interactive effect with the UTAUT constructs on behavioral intention. Since both Alshahrani (2018) and Al-Gahtani et al. (2007) conducted their study in Saudi Arabia and reported that gender had no moderating effect on the relationships between PE, EE, SI, and BI, the finding of the current study showed consistency with those studies, prompting researchers to not assume that gender would have an effect due to the segregated cultural contexts.

In contrast, several studies (e.g., Alshahrani & Walker, 2017; Venkatesh et al., 2003; Wang & Shih, 2009) reported that gender had a moderating effect on the relationship between PE, EE, SI, and BI. For example, Alshahrani and Walker (2017) reported that gender moderated the relationship between PE, EE, SI, and BI to adopt M-learning in Saudi Arabian higher education.
In Venkatesh et al.’s (2003) study, gender moderated the influence of PE on BI, demonstrating that the relationship between PE and BI was stronger for males than females; on the contrary, there was a stronger relationship between both EE and BI, and SI, and BI for females than for males. Wang and Wang (2010) examined mobile internet (m-Internet) acceptance of online users in Taiwan and reported that gender moderated the effect of PE on BI because the effect was significant for men. Moreover, EE on BI was significant across both male and female groups when moderated by gender and was significant for women than for men.

This inconsistency, as relevant research (e.g., Minton & Shneider, 1980, Venkatesh et al., 2003) on gender differences indicated can be due to the perception of men being more task-oriented than their female counterparts. As for the effort expectancy, the studies’ (e.g., Venkatesh & Morris, 200) findings showed that for female employees, it is more important than for males because of females tend to put more effort in completing a task. The strong relation between SI and BI could be explained by relevant research (e.g., Purohit & Aroroa, 2020) that has reported female employees being more influenced by colleagues or peers than males.

It can be concluded that there are inconsistencies in the findings regarding the effect of gender on predictors due to sample sizes, cultural setting, and inclusion of other variables that the current study did not include. Therefore, future research is needed to investigate the moderating effect of gender on the relationship between the three UTAUT constructs and behavioral intention to use online professional development. Future research will help better understand the perceptions of potential adopters and provide new insights on using optional online professional development.
Limitations of the Study

As inherent to any research, this study had limitations because the population, where the sample size was drawn, included the employees who were working at organization and companies only in Riyadh, Saudi Arabia, limiting the sample size only to one city in the country. Therefore, the respondents of the survey who are corporate workers in one city may not represent larger population of corporate employees in Saudi Arabia.

Moreover, as for gender of the participants, male and female respondent were not equally represented in this study. The number of male respondents were higher than female respondents. Given the context of corporate culture of Saudi Arabia, the number of female employees employed in corporate settings were less than their male counterparts. Consequently, the number of female respondents were less than the number of male respondents. Although this was a limitation inherent to this study, the findings highlighted the importance of understanding the role of gender on BI to use online training, particularly in developing country context.

Implications for Future Practice

This study examined the behavioral intention to use optional online professional development among employees at companies and organizations in Riyadh, Saudi Arabia to improve their professional competencies or advance in their careers. One of the major findings was that gender did not have any moderating effect on the relationship between PE, EE, SI, and employees’ behavioral intention to use online professional development. In the future, decision makers, policymakers, online training designers, and other interested parties could benefit from this finding as the training could focus on other factors that might affect the decision of employees’ behavioral intention to use.
The results of this study also showed that employees’ perceived PE, EE, and SI were important factors when using online professional development. If these factors are considered by trainers and content developers, online professional development would be beneficial for improving employees’ professional competencies. The ease-of-use online training (less effort) and perceived usefulness (PE) makes professional development sessions enticing, encouraging the employees to take the training. This finding showed agreement with previous research studies that reported the importance of understanding how individuals consider using technology if they believed that they could increase their job performance (Mohammadyari & Singh, 2015; Serrano, 2015; Venkatesh et al., 2003).

In sum, the results of the study demonstrated the constructs of UTAUT were salient to consider before the practical implementation. To boost employees’ behavioral intention to use optional online professional development, responsible parties, such as instructional technology practitioners, content developers, and trainers in Saudi Arabia, need to consider the factors of PE, EE, and SI to ensure successful enactment of online professional development in the corporate workplaces.

Suggestions for Future Research

This study used quantitative correlational design. Future studies should include different research methods, such as mixed methods, to examine in-depth the factors that affect employees’ decisions to use optional online professional development.

This study reported that SI influenced employees’ behavioral intention to use optional online professional development, without differentiating between individual-level or
organizational-level influences. Future research should make a distinction about the level of impact of different types of social influences.

This study reported that gender did not influence the relationships between PE, EE, SI, and behavioral intention to use optional online professional development. Therefore, future research should include different work settings to test whether gender would affect the relationships of UTAUT’s constructs.

In this study, only gender was used as a moderating variable; future research should include other variables, such as age, educational level, technology skills, and nationality as moderating variables.

Chapter Summary

The current study used UTAUT as the theoretical framework. UTAUT provides a conceptual framework to understand users’ behavioral intention to use new technology. The constructs of the model, the PE, EE, and SI, were used to predict Saudi corporate employees’ behavioral intention to use optional online professional development. Gender served as moderator to assess whether it moderated the relationship between PE, EE, SI, and the outcome variable (employees’ BI). The findings revealed that employees perceived optional online professional development as valuable and an easy-to-use tool to improve their professional competencies because the set of predictors could significantly predict employees’ behavioral intention to use optional online professional development. This chapter also discussed the limitations of this study, the implications for future practices, and suggestions for future research.


APPENDIX A

PERMISSION TO USE SURVEY INSTRUMENT
Dear Dr. Venkatesh,

Greeting, and I hope this email finds you well.

My name is Asma Albahli. I am a doctoral candidate at Northern Illinois University in DeKalb, IL. First, I would like to take your permission to use the survey items developed by you and your colleagues (Morris, Davis, & Davis, 2003). Because, I am planning to conduct my study in the near future about (USING THE UTAUT THEORY TO INVESTIGATE CORPORATE ACCEPTANCE OF ONLINE TRAINING PROGRAMS IN SAUDI ARABIA).

Thanks in advance for your help and support. I appreciate your time and look forward to receiving your email at your earliest convenience.

Best regards,
Asma Albahli
APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE
Demographic Questionnaire – English Version

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your gender?</td>
<td>Male (1)</td>
</tr>
<tr>
<td></td>
<td>Female (0)</td>
</tr>
<tr>
<td>What is your age</td>
<td>19 to 24 years</td>
</tr>
<tr>
<td></td>
<td>25 to 30 years</td>
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<tr>
<td></td>
<td>31 to 40 years</td>
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<td></td>
<td>41 to 50 years</td>
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<tr>
<td></td>
<td>51 to 60 years</td>
</tr>
<tr>
<td></td>
<td>Over 60 years</td>
</tr>
<tr>
<td>Nationality</td>
<td>Saudi</td>
</tr>
<tr>
<td></td>
<td>Arab (Non- Saudi)</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Years of experience</td>
<td>&lt; 6 months</td>
</tr>
<tr>
<td></td>
<td>7 months – 1 year</td>
</tr>
<tr>
<td></td>
<td>2-4 years</td>
</tr>
<tr>
<td></td>
<td>&gt; 5 years</td>
</tr>
<tr>
<td>Educational level</td>
<td>Associate degree</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s degree</td>
</tr>
<tr>
<td></td>
<td>Master’s degree</td>
</tr>
<tr>
<td></td>
<td>Professional degree</td>
</tr>
<tr>
<td></td>
<td>Doctorate degree</td>
</tr>
<tr>
<td>Have you taken optional online</td>
<td>1) Yes</td>
</tr>
<tr>
<td>training?</td>
<td>2) No</td>
</tr>
</tbody>
</table>
APPENDIX C

ORIGINAL AND MODIFIED SURVEY ITEMS
<table>
<thead>
<tr>
<th>Construct</th>
<th>Original Items</th>
<th>Modified Items</th>
</tr>
</thead>
</table>
| Performance         | 1. I would find the system useful in my job.  
2. Using the system enables me to accomplish tasks more quickly.  
3. Using the system increases my productivity.  
4. If I use the system, I will increase my chances of getting a raise.                                                                                                           | 1. I would find optional online professional development training useful in my job.  
2. Using optional online professional development training enables me to accomplish tasks more quickly.  
3. Using the optional online professional development training increases my productivity.  
4. If I use the optional online professional development training, I will increase my chances of getting a raise.                                                                                      |
| Expectancy          |                                                                                                                                                                                                               |                                                                                                                                                                                                               |
| Effort              | 1. My interaction with the system would be clear and understandable.  
2. It would be easy for me to become skillful at using the system.  
3. I would find the system easy to use.  
4. Learning to operate the system is easy for me.                                                                                                        | 1. My interaction with optional online professional development training would be clear and understandable.  
2. It would be easy for me to become skillful at using optional online professional development training.  
3. I would find the optional online professional development training easy to use.  
4. Learning to operate the optional online professional development training is easy for me.                                                                                       |
| Expectancy          |                                                                                                                                                                                                               |                                                                                                                                                                                                               |
| Social              | 1. People who influence my behavior think that I should use the system.  
2. People who are important to me think that I should use the system.  
3. The senior management of this district has been helpful in the use of the system.  
4. In general, the organization has supported the use of the system.                                                                                       | 1. People who influence my behavior think that I should use optional online professional development training.  
2. People who are important to me think that I should use optional online professional development training.  
3. The senior management of this business has been helpful in the use of optional online professional development training.  
4. In general, the organization or company have supported the use of optional online professional development training.                                                                                   |
| Influence           |                                                                                                                                                                                                               |                                                                                                                                                                                                               |
| Behavioral          | 1. I intend to use the system in the future.  
2. I predict I would use the system in the future.  
3. I plan to use the system in the future.                                                                                                               | 1. I intend to use optional online professional development training in the future.  
2. I predict I would use the optional online professional development training in the future.  
3. I plan to use the optional online professional development training in the future.                                                                    |
| intention           |                                                                                                                                                                                                               |                                                                                                                                                                                                               |
APPENDIX D

PERMISSION TO CONDUCT SURVEY
Dear Chief Executive,

My name is Asma Albahli; I am a doctoral candidate in the Department of Instructional Technology at Northern Illinois University. I am conducting a research study, which is titled "USING THE UTAUT TO INVESTIGATE CORPORATE ACCEPTANCE OF OPTIONAL ONLINE TRAINING PROGRAMS IN SAUDI ARABIA."

The purpose of this study will utilize the UTAUT model as the theoretical lens to examine the effect of performance expectation (PE), effort expectancy (EE), and social influence (SI) on the behavioral intention (BI) of Saudi Arabian corporate employees working at organizations and companies in Riyadh, Saudi Arabia, to use optional online professional development training. Also, this study will also investigate whether gender moderates the relationship between Saudi corporate employees’ BI to utilize optional online professional development training and PE, EE, and SI. This research is a partial fulfillment of the requirement for a doctoral degree in Instructional Technology, Northern Illinois University.

So, I am asking you to permit me to conduct this study with you and your employees.

Sincerely,

Researcher: Asma Albahli
Doctoral Candidate
APPENDIX E

PARTICIPANT RECRUITMENT
Dear Employee,

Thank you for choosing to participate in this survey. My name is Asma Albahli; I am a doctoral candidate in the Department of Instructional Technology at Northern Illinois University. I am conducting a research study, which is titled "USING THE UTAUT THEORY TO INVESTIGATE CORPORATE ACCEPTANCE OF OPTIONAL ONLINE TRAINING PROGRAMS IN SAUDI ARABIA."

The purpose of this study will utilize the UTAUT model as the theoretical lens to examine the effect of performance expectation (PE), effort expectancy (EE), and social influence (SI) on the behavioral intention (BI) of Saudi Arabian corporate employees working at organizations and companies in Riyadh, Saudi Arabia, to use optional online training programs. This study will also investigate whether gender moderates the relationship between Saudi corporate employees’ BI to utilize online professional development training and PE, EE, and SI. This research is a partial fulfillment of the requirement for a doctoral degree in Instructional Technology, Northern Illinois University.

You will be asked to complete an online survey. The survey consists of 21 questions and will take approximately 6-9 minutes of your time. The survey consists of two sections. The first section asks about demographic information, which includes six questions. The second section consists of 15 items that are focusing on four elements of the UTAUT model to assess using optional online professional development training.

Participation in this study is voluntary. You have the right to withdraw at any time without penalty. There are no risks or threats linked to participating in this study. You will not receive any incentive for sharing your perspectives related to the scope of this study. All data will be kept confidential and will be reported as group data. Also, the obtained data will be held in a secure place. If you have any questions or concerns, please contact the dissertation chair or researcher.

Dissertation Chair: Associate Professor Ying Xie, Department of Educational Technology, Research and Assessment, Northern Illinois University. 
Office phone number +1(815)-753-9323 
Email address: yxie@niu.edu

Researcher: Asma Albahli, Department Educational Technology, Research and Assessment, Northern Illinois University. 
Email address: z1839093@students.niu.edu 
Cellphone number: +1(815)517-6114 (USA)
APPENDIX F

INFORMED CONSENT
Northern Illinois University
Consent to Participate in a Research Study

"USING THE UTAUT THEORY TO INVESTIGATE CORPORATE ACCEPTANCE OF OPTIONAL ONLINE TRAINING PROGRAMS IN SAUDI ARABIA."

Title of Study: Asma Albahli
Dept: ETRA
Phone: +18155176114

Key Information
- This is a voluntary research study on USING THE UTAUT THEORY TO INVESTIGATE CORPORATE ACCEPTANCE OF OPTIONAL ONLINE TRAINING PROGRAMS IN SAUDI ARABIA: A quantitative Study.
- This [one semester] study involves [participants in using optional online training program in Saudi Arabia, Riyadh].
- The benefits include contributing to the literature about the relationship among performance expectation (PE), effort expectancy (EE), and social influence (SI) on the behavioral intention (BI) of Saudi Arabian corporate employees working at organizations and companies in Riyadh, Saudi Arabia, to use optional online training programs. This study will also fill in the research gap about the possible moderating effect of gender on the relationship stated above.]; the risks include [I have been informed that there are no potential risks and/or discomforts I could experience during this study].

Description of the Study
The purpose of the study is [will utilize the UTAUT model as the theoretical lens to examine the effect of performance expectation (PE), effort expectancy (EE), and social influence (SI) on the behavioral intention (BI) of Saudi Arabian corporate employees working at organizations and companies in Riyadh, Saudi Arabia, to use optional online training programs. This study will also investigate whether gender moderates the relationship between Saudi corporate employees’ BI to utilize optional online professional development training and PE, EE, and SI. The following research questions will guide the proposed study:

3. What is the effect of (1) performance expectancy, effort expectancy, and social influence (2) on employees’ behavioral intention to use optional online professional development training?
4. Does gender moderate the relationships between (1) performance expectancy, effort expectancy, social influence, and (2) employee’s behavioral intention to use optional online professional development training?

If you agree to be in this study, you will be asked to complete an online survey. The survey consists of 21 questions and will take approximately 6-9 minutes of your time. The survey consists of two sections. The first section asks about demographic information, which includes six questions. The second section consists of 15 items that are focusing on four elements of the UTAUT model to assess using optional online professional development training.
Risks and Benefits
I understand there are no reasonably foreseeable (or expected) risks.

I understand there is no direct benefit to myself individually from taking part in this study. I also acknowledge that I am not receiving compensation of any kind in exchange for my participation in this research.

Confidentiality [or ANONYMITY – only select one]
- This study is anonymous. We will not be collecting or retaining any information about your identity.

Your Rights

The decision to participate in this study is entirely up to you. You may refuse to take part in the study at any time. Your decision will not result in any loss of benefits to which you are otherwise entitled. You have the right to skip any question or research activity, as well as to withdraw completely from participation at any point during the process.

You have the right to ask questions about this research study and to have those questions answered before, during, or after the research. If you have any further questions about the study, at any time feel free to contact the researcher, [Asma Albahli] at [z1839093@students.niu.edu] or by telephone at take faculty mentor’s contact information, Dissertation Chair: Associate Professor Ying Xie, Department of Educational Technology, Research and Assessment, Northern Illinois University.
Office phone number +1(815)-753-9323
Email address: yxie@niu.edu

If you have any questions about your rights as a research participant that have not been answered by the investigators or if you have any problems or concerns that occur as a result of your participation, you may contact the Office of Research Compliance, Integrity, and Safety at (815)753-8588.

[For research involving more than minimal risk, or involving risk of physical harms, the following statement should be included:] Northern Illinois University policy does not provide medical treatment or compensation for treatment of injuries that may occur as a result of participation in research activities. The preceding information shall not be construed as a waiver of any legal rights or redress which the participants may have.

Future Use of the Research Data

After removing all identifying information from your data, the information could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from you.
By continuing below, you are indicating that you have decided to volunteer as a research participant for this study, and that you have read and understood the information provided above. Please take a screenshot or picture of this form to keep for your records.

☐ I agree to participate in this study. [or “Continue” or “Next”]

☐ I agree to be audio/videotaped in this study. [or “Continue” or “Next”]
APPENDIX G

SURVEY
Please use the prescribed scale of 1 - 5 with 1 being "strongly disagree" 2 "Disagree" 3 "Neutral" 4 "Agree" and 5 being "strongly agree" to evaluate users’ behavioral intentions to use optional online training. Additionally, three constructs performance expectancy, effort expectancy, and social influence aim to identify factors that might impact optional online training usage.

**Online Training**: refers to the use of online technologies to develop materials and deliver instruction synchronously (in real time) and/or asynchronously (not in real time) to enhance individuals’ professional knowledge and performance (Feldman & Zucker, 2015; Fry, 2001; Tuffaha, 2020).

**Online Professional Development**: refers to “delivering information and communication between the trainer and the student” so that one can develop or grow professionally (Race, 2005, p. 9).

**Optional training** means that the online training is not mandatory by your workplace, but you have the opportunity to decide whether you will participate in the training program or not. Items adopted from the original Venkatesh et al. (2003) study.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construct: Performance Expectancy</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1. I would find optional online professional development training useful in my job.</td>
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<tr>
<td>2. Using optional online professional development training enables me to accomplish tasks more quickly.</td>
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</tr>
<tr>
<td>3. Using the optional online professional development training increases my productivity.</td>
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<tr>
<td>4. If I use the optional online professional development training, I will increase my chances of getting a raise.</td>
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<tr>
<td><strong>Construct: Effort Expectancy</strong></td>
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<tr>
<td>1. My interaction with optional online professional development training would be clear and understandable.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. It would be easy for me to become skillful at using optional online professional development training.</td>
<td></td>
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</tr>
<tr>
<td>3. I would find the optional online professional development training easy to use.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Learning to operate the optional online professional development training is easy for me.

Construct: Social Influence

1. People who influence my behavior think that I should use optional online professional development training.

2. People who are important to me think that I should use optional online professional development training.

3. The senior management of this business has been helpful in the use of optional online professional development training.

4. In general, the organization or company have supported the use of optional online professional development training.

Construct: Behavioral intention

1. I intend to use optional online professional development training in the future.

2. I predict I would use the optional online professional development training in the future.

3. I plan to use the optional online professional development training in the future.
APPENDIX H

DATA COLLECTION TIMELINE
<table>
<thead>
<tr>
<th>Item</th>
<th>Time Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal Defended</td>
<td>December, 2022</td>
</tr>
<tr>
<td>Feedback and comments completed</td>
<td>December, 2022</td>
</tr>
<tr>
<td>Submitted the IRB supplication for approval</td>
<td>December, 2022</td>
</tr>
<tr>
<td>Receive the IRB approval</td>
<td>January, 2022</td>
</tr>
<tr>
<td>Reviewed the survey with an expert in the field.</td>
<td>January, 2022</td>
</tr>
<tr>
<td>The online survey was piloted with a group of 15 people for content clarity.</td>
<td>January, 2022</td>
</tr>
<tr>
<td>A letter was sent to the chief executive at companies and authorities in Riyadh, Saudi Arabia that explain the purpose of the study with the approved NIU IRB letter attached.</td>
<td>February, 2023</td>
</tr>
<tr>
<td>A letter explaining the data collection procedure was sent to the chief executive.</td>
<td>February, 2023</td>
</tr>
<tr>
<td>An email with survey link to participate in the study was sent to the chief executive at companies and authorities in Riyadh, Saudi Arabia.</td>
<td>February, 2023</td>
</tr>
<tr>
<td>Second reminder was sent to the chief executive at companies and authorities in Riyadh, Saudi Arabia.</td>
<td>March, 2023</td>
</tr>
<tr>
<td>The last reminder was sent to remind them to participate.</td>
<td>March, 2023</td>
</tr>
</tbody>
</table>