

E-Learning Delivery in Saudi Arabian Universities

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Abstract

The purpose of this qualitative thesis research was to explore the state of distance education in Saudi universities. The research focused on teaching and learning from the perspectives of the universities' instructors as well as expert designers from the Ministry of Education working in distance education. By using a multiple case studies approach, this study aimed to understand the opportunities and challenges faced in the development of online learning environments at Saudi universities from an ethical and cultural perspectives. Data collection methods consisted of 28 in-depth, one-on-one interviews as well a thematic analysis of 152 supporting documents related to the universities' strategies to deliver online learning. The advanced findings revealed how the recent integration of a blended learning model has helped to contribute to a shift in the Saudi distance education system, as it moves from a teacher-centered approach to a learner-centered approach. Furthermore, drawing on Hofstede's Cultural Dimensions and Social Construction of Technology (SCOT), the study uncovers complex interactions between the Saudi learning culture, technology integration, and ethical issues. This research contributes unique knowledge about the state of online learning development in Saudi higher education to help enhance distance education development in Saudi Arabia, as well as in other areas of the world where similar distance education development initiatives are underway.

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List of Abbreviations

<i>Abbreviation</i>	Explanation
<i>ADDIE</i>	Analyze, Design, Develop, Implement and Evaluate
<i>CEDA</i>	Council of Economic and Development Affairs
<i>CITC</i>	Communications and Information Technology Commission
<i>CoI</i>	Community of Inquiry
<i>CoP</i>	Community of Practice
<i>CSCL</i>	Computer- Supported Collaborative Learning
<i>ID</i>	Instructional Design
<i>KAU</i>	King Abdulaziz University
<i>KFU</i>	King Faisal University
<i>KSU</i>	King Saud University
<i>LMS</i>	Learning Management System
<i>MoHE</i>	Ministry of Higher Education

<i>MOOCs</i>	Massive Open Online Courses
<i>NCeL</i>	National Center for e-Learning
<i>NCSC</i>	National Cyber Security Center
<i>OCL</i>	Online Collaborative Learning
<i>OER</i>	Open Educational Recourses
<i>SCOT</i>	Social Construction of Technology
<i>SEU</i>	Saudi Electronic University
<i>SU</i>	Saudi Universities
<i>VSAT</i>	Very Small Aperture Terminal
<i>VSM</i>	the Viable System Model

Chapter One: Introduction

1.1 Statement of the Problem

Online learning within higher education in Saudi Arabia first appeared in the early 2000s (Aljabre, 2012). The first university to establish an e-learning centre was the King Fahad University of Petroleum and Minerals in 2003; it fell under the Dean of Academic Development (Al-Asmari & Khan, 2014). Within a few years, leading universities in distance education, including, King Abdulaziz University (KAU) and King Saud University (KSU) began to use technology and the Internet to deliver their courses (Basahel & Basahel, 2018). The evolution of online learning in Saudi Arabia encouraged the Ministry of Higher Education to establish the National Plan for Information Technology, which supports online learning and distance education in universities (Alebaikan & Troudi, 2010). In 2006, the National Plan for Information Technology founded a national centre, named the National Center for e-Learning (NCeL), which plays a significant role in determining the way in which distance education is conducted in Saudi universities and functions as a resource for distance education programs (Alturki, 2014). Moreover, e-learning deanships have been opened and continue to open in nearly all Saudi universities (Al-Shahrani & Cairns, 2015). Currently, most Saudi universities offer distance education programs in a range of disciplines (Alturki, 2014).

Like most Arab nations, Saudi education commonly applies teacher-centered learning approaches to transfer knowledge to students (Darandari & Murphy, 2013). Within this context, rote learning, which is based on memorization, is used as the main pedagogical approach for teaching and learning in Saudi Arabia (Smith & Abouammoh, 2013). Because of this, teachers are often viewed as the only source of information in the Saudi educational system (Alrashidi, 2014). Commonly, the teacher stands in front of the

students in the classroom and conveys the information from notes or uses the blackboard to emphasize certain points (AL-Ismaiel, 2013); students listen to the information that the teacher delivers while taking notes (Al-Keaid, 2004). There is little interaction between teachers and students in this learning approach because they are considered as just recipients of teachers' knowledge and wisdom (Ahmed, 2013).

Generally, teacher-centered learning approaches are based on the teacher's input and on his/her evaluation in terms of how well the students learned and reproduced the material taught (Scheurs & Dumbraveanu, 2014; Reigeluth, Myers & Lee, 2017). In this learning approach, teachers make all the decisions related to the content, teaching techniques, and the forms of assessment (Ahmed, 2013). However, as Mottet, Beebe, and Fleuriet indicate, this can be problematic because "teachers may not always make pedagogical decisions that are in the best interest of their students' learning" (2006: 146). This is the result of the fact that the teacher-centered learning approach places the student in a passive role (Toh et al., 2003) and causes them to have no control over their own learning (Ahmed, 2013). Therefore, as Duckworth (2009) states, teacher-centered learning limits the progress of the students' knowledge. Moreover, it discourages students from adopting a deeper approach like applying critical thinking and analysis to their studying (Elen et al., 2007).

The phenomenon of the teacher-centered learning approach reflects Saudi culture, in which the relationship between teachers and students has traditionally been formal (Al-Keaid, 2004). Saudi teachers do not frequently engage in discussions with students over the course of learning process (Hamdan, 2014b) and are seen as having the authority to control the teaching and learning context (AL-Ismaiel, 2013). This reflects the nature of

collectivist culture as students rely solely on their teachers during learning process (Hofstede, 1980). This mirrors the culture of Saudi Arabian families, where the members of the family respect and follow their elders (usually parents or grandparents), regardless of their gender and age (AL-Ismaiel, 2013; Basahel & Basahel, 2018). In this way, the relationship between students and teachers in the classroom is an extension of the relationship dynamic between themselves and their elder relatives; students view their teachers as leaders who rarely share authority and who should be listened to and respected (Ibid).

Distance education was (and continues to be) influenced by instructional design models such as the ADDIE model (analyze, design, develop, implement and evaluate) (Bates, 2015). Many of these traditional models focus on the objectivist learning approach (Ibid), which is based on behavioristic and cognitive theories (Vrasidas, 2000; Harasim, 2012). Objectivism is a teacher-centered learning approach that aims to represent and transfer objective realities from the teachers to the learners (Yang & Liu, 2007). Although instructional design models are strongly associated with quality design, explicit learning objectives, and carefully-structured content, they have nevertheless been “criticised by constructivists for not paying enough attention to learner-instructor interaction, and for privileging more behaviourist approaches to teaching” (Bates, 2015: 113).

The concurrence of constructivist approaches to learning along with the emergence of the Internet have led to the development of online collaborative learning models (Ibid). Constructivism refers to a learner-centered leaning approach in which learners can control their pace of learning (Yang & Liu, 2007; Reigeluth et al., 2017).

Online collaborative learning promotes this learner-centered approach, as students are encouraged to engage together to create their knowledge while the teacher facilitates the discourse or links the knowledge community (Harasim, 2012, 2017). Models of online collaborative learning emphasize learning through community as learners work together to build their knowledge (Kim, Glassman & Williams, 2015; Peterson, Beymer & Putnam, 2018). As Randy Garrison (2013) indicates, collaboration between learners in an educational community has both a social and academic emphasis because this community is nurtured through both social interaction and purposeful academic communication.

Online learning offers an opportunity for many Saudis to access higher education which they were previously unable to attain as a result of barriers such as full-time employment, living in a rural area, females with family obligations and limitations on the availability of classroom space due to a huge youth population (Aljabre, 2012; Alahmari, 2017). Saudi Arabia's population is relatively young, and 65 percent of the nation's 30 million people are under the age of 35 (Quraishi, 2012; Alrashidi, 2014; Hamdan, 2014a). This percentage will only continue to grow, as researchers estimate that the percentage of Saudi youth will increase by a third every eight years (AlMegren & Yassin, 2013). Therefore, online education offers the opportunity to expand the total number of students who can be enrolled in Saudi universities without the need to increase the physical capacity of the universities and associated facilities (Hamdan, 2014a; Basahel & Basahel, 2018).

In addition to increasing the number of students who receive post-secondary education, Hamdan (2014a) indicates that the environment of online learning has contributed to change the culture of Saudi students by moving towards engagement in

critical thinking and self-directed learning. The study seems to indicate a pattern regarding the influence of online learning in the Saudi learning culture. However, this quantitative research study is limited by a lack of empirical research on Saudi online learning, as it focuses on only sixty-seven undergraduate students from one university. Instead, this area should be examined by applying qualitative research methods involving instructors from several Saudi universities around the Kingdom and expert designers from the Ministry of Education engaging in distance learning. Furthermore, as online learning in Saudi Arabia is still relatively new, there is limited documentation available in the scholarly literature. Therefore, this geographic area provides a unique context that still needs to be explored in order to allow the opportunities and limitations of Saudi Arabian distance education to be better understood.

Saudi distance education is also unique as a result of the division between men and women within Saudi culture; this must be taken into consideration when examining the significant contribution that distance education has made in shifting the Saudi educational pedagogy from teacher-centered learning to learner-centered learning. Traditional education in Saudi Arabia is segregated between males and females. However, e-learning courses can be taught by either male or female instructors, with special modifications in the technology applied for male instructors so that cultural values are not violated while nevertheless ensuring the quality of the female students' education (Quraishi, 2012). Therefore, despite the constraints that culture places on females receiving education, online learning can be adapted to these important Saudi cultural values (Ibid).

Because of these issues, qualitative research is needed to explore the uniqueness of the Saudi distance education context. Qualitative analysis helps to explore the way in which this new trend contributes in shifting the pedagogical strategy in Saudi Arabia from a teacher-centered learning approach to a learner-centered learning approach. Additionally, this approach helps to fill the existing gap in the literature due to limited documentation in the area. The in-depth, one-on-one interviews conducted in this study provide greater insight into Saudi distance education from individuals who are directly involved in it.

This research also contributes by building on the available data for distance education in the international context. It addresses the challenges in developing distance education in Arab countries that share the same culture with Saudi Arabia. Furthermore, it makes recommendations to address these challenges in both Saudi Arabia and in other Arab countries with similar cultures.

1.2 Purpose of the Study

The purpose of this qualitative study is to explore the state of distance education in Saudi higher education with a focus on teaching and learning. The study examines the use of current online collaborative tools (i.e., learning management system (LMS), discussion forums, Wiki, and blogs) and insider perspectives of teaching staff and expert designers from the Ministry of Education with a purpose of capturing valuable insight concerning online learning delivery which is not public knowledge. The cultural, social and ethical influences on distance education in Saudi Arabia are also investigated.

The Ministry of Education provided the Jusur LMS tool to Saudi universities. This was developed by the National Center for e-Learning (NCeL), which was

established to assist in the plan of providing educational tools to local universities (Alharbi & Drew, 2014). In addition, almost all Saudi universities have established e-learning deanships to manage technical aspects and pedagogical approaches of e-learning (Alshahrani & Cairns, 2015). The tools that these deanships use and the way they run the programs is largely invisible to the public; as such, the best way to gain access to this information is by conducting interviews in-person. Therefore, insider interviews are a central feature of this study.

1.3 Overview of the Theoretical Framework and Methodology

It is necessary to use a combination of learning theories in order to design online course materials (Ally, 2008). The standard approach in developing distance education programs, the objectivist learning approach, was influenced by both behaviourist and cognitivist theories (Vrasidas, 2000). This approach emphasized the strategy of teacher-centered learning (Harpe & Peterson, 2009). However, current trends suggest moving beyond a teacher-centred learning approach in order to encourage students to actively engage in the course through self-directed learning (Yang & Liu, 2007). Creating this environment requires drawing from the constructivist learning approach and connectivist theories to develop online collaborative learning models (Brindley, Walti & Blashke, 2009). Additionally, the concept of pragmatism can be incorporated to test ideas raised in the course within a real-life context (Gutek, 2013).

It is also important to consider the culture in which the course is taking place, as culture influences the way people learn within a learning community. Hofstede's (1980, 2001) "cultural dimensions" was used to explain cultural values and behaviours. The six cultural dimensions developed by Hofstede are: individualism/collectivism, power distance, uncertainty avoidance, masculinity/femininity, long-versus short-term

orientation and indulgence versus restraint. The methodological theories of an e-learning program must be implemented with consideration of the traditional approaches to learning in a particular region or culture, as this will affect the way in which the theories can be implemented. In addition to examining how culture influenced the way people learn, it is also important to acknowledge the specific kind of culture created within e-learning, including the distinct ethical values involved with using technology in an educational context (Luppicini, 2009). As information technology becomes more prevalent in distance education, the chance of unethical behaviours related to this technology also increases.

In this dissertation, “learning theories” refers to behaviorism, cognitivism, constructivism, pragmatism and connectivism. The principles of online collaborative learning examine the way that these learning theories are incorporated to form online learning models and principles. Since online learning models vary greatly from country to country, cultural dimensions and ethical concerns influence the way people learn in an online environment.

With regards to methodology, this thesis used a qualitative case study research design in order to explore the state of distance education delivery in the Saudi higher education. Because this study was conducted at several universities in different locations around Saudi Arabia, a multiple case study design was used (Stake, 1994, 1995). Data selection of this study employed the nonprobability sampling strategy, which is the method of choice in qualitative case studies and helps to discover and gain insights from the selected sample (Merriam, 1988). The notable role and impact of the researcher in the study was not diminished as it comprises a crucial factor of a qualitative study (Merriam,

1988; Morse, 1994; Stake, 1994, 1995, 2010; Creswell, 2009). However, the role of the researcher was revealed in this study, and an effort was made by the researcher to maintain adequate distance from the data, following the techniques that were suggested by Lincoln and Guba (1985).

Multiple data collection methods, particularly interviews and documents, were utilized in this study in order to gain a nuanced understanding of the issues being examined (Merriam, 1988; Denzin & Lincoln, 1994). The data analysis of this dissertation employed descriptive coding and pattern coding methods to generate a description and an interpretation of the case (Merriam, 1988; Miles & Huberman, 1994; Neuman, 2007, 2011a; Eid, 2011, Saldaña, 2013; Creswell, 2009, 2013, 2014; Creswell & Poth, 2018). Various approaches were used to ensure the trustworthiness of this study, including the identification of the researcher's biases, triangulation, thick description, member checking and peer debriefing (Denzin, 1978; Merriam, 1988; Lincoln & Guba, 1985; Stake, 1995 Creswell, 2009, 2014; Creswell & Poth, 2018). Lastly, the ethical considerations were made throughout all the stages of this study.

1.4 Research Questions

1.4.1 Central question

How is e-learning delivered in Saudi Universities (SU) and how do current models accommodate social, cultural and ethical challenges in the delivery of e-learning in the Kingdom of Saudi Arabia?

1.4.2 Sub-questions

- How do current distance education models and principles guide the e-learning delivery in SU?
- How does culture influence e-learning delivery in Saudi Arabia?

- What are the main social, ethical, and cultural concerns in the current Saudi e-learning delivery?

1.5 Structure of the Thesis

This dissertation has been organized into seven chapters.

Chapter 1: Introduction – This chapter provides an overview of several significant issues that have been raised in Saudi distance education, particularly regarding the strategies and the pedagogical approaches used to deliver the learning content. It also offers some background on key factors of the study, including Saudi learning culture and the state of Saudi distance education. The purpose of the study is also explained, followed by an overview of the theoretical framework and methodology. Finally, the research questions that guided the study are provided at the end of the chapter.

Chapter 2: Literature Review – This chapter explores the concepts of various learning theories and the ways they are used in the design of online learning content. Additionally, it examines the state of online learning in Saudi Arabia, especially the cultural and ethical issues that influence e-learning. Finally, the theoretical framework and rationale for the study are indicated at the end of the chapter.

Chapter 3: Methodology – This chapter defines the qualitative case study research design used for the study. It also provides an overview and justification of the data selection, the role of the researcher, data collection and data analysis, as well as an overview of the code development process, trustworthiness and ethics of the study.

Chapter 4: Findings – This chapter presents the general findings of the study through a contextual description of the six categories identified during the data analysis procedures, namely (1) development of distance education, (2) culture, (3) learning theories, (4) pedagogical and technical support, (5) e-learning ethics and (6) current advantages and challenges of online learning.

Chapter 5: Analysis – This chapter expands on the general findings identified in the previous chapter. Pattern coding is used to link the findings of this study and the scholarly literature and theories in order to further analyze the delivery of distance education in the Saudi universities. The analysis focused on five identified categories: evolving distance education in KSA, the learning culture in Saudi distance education, the application of learning theories in distance education delivery in KSA, current opportunities and challenges for Saudi females in distance education, and transforming Saudi higher education through OERs.

Chapter 6: Discussion – This chapter first provides a brief summary of the study's main findings. Then, there is an overview of online collaborative learning principles, as well as a discussion of the connection between Saudi culture and online collaborative models. Finally, ethical dilemmas within Saudi distance education are considered.

Chapter 7: Conclusion – This final chapter discusses the significance of this study and the contributions it makes to the field, as well as the limitations of the study. Finally, the chapter ends with some possibilities and recommendations for future research.

Chapter Two: Literature Review

This chapter begins by presenting the theoretical framework of this study and how factors like the learning theories (i.e., behaviorist, cognitive, constructivist, connectivist and pragmatist), cultural dimensions (i.e., Hofstede's cultural dimensions) and ethical values are used to explain the function of the framework within the Saudi distance educational context. Then, the development of e-learning is identified while considering different contexts for delivering online learning content. After that, e-learning models (i.e., objectivist approach models and constructivist approach models) are explained in detail. Subsequently, the emergence of online learning in Saudi Arabia is clarified, with particular attention paid to the ways in which the cultural and social aspects influence Saudi e-learning. Next, online collaborative learning in the Saudi Arabian education system is presented. Finally, the ethical concerns of e-learning in general and in Saudi Arabia in particular are considered.

2.1 Theoretical Framework

There is no single theory that has been used to design all online learning materials; instead, a combination of theories was used to develop different aspects of e-learning (Ally, 2008). Three of the most common theories were behaviourist, cognitive and constructivist learning theories, all of which emerged in the 20th century (Harasim, 2012). More recently, Siemens (2005) proposed a contemporary learning theory called connectivism that focused on the influence of technology on society and the ways of gaining knowledge. These approaches were used in the development of learning models.

Traditionally, distance education models have been developed based on the objectivist learning approach (influenced by behaviourist and cognitivist theories)

(Vrasidas, 2000), which focused on the strategy of teacher-centered learning (Harpe & Peterson, 2009). Recently, however, it has become essential to move beyond a teacher-centered learning approach to involve students in active and self-directed learning (Yang & Liu, 2007; Harasim, 2017). This environment was fostered by applying online collaborative learning models (influenced by constructivist and connectivist theories) that were developed based on the constructivist learning approach (Brindley et al., 2009). Each of these perspectives will be explored in further detail below.

The theory of behaviourism drew from the work of early scholars Watson (1913), Thorndike (1913) and Skinner (1974). The notion of behaviorism was first introduced by John Watson (1913) who proposed that behavioural psychology should only be concerned with human behaviours and activities. As such, the behaviourist learning theory emphasized producing observable and measurable outcomes in learners (Ertmer & Newby, 1993). It argued that learning occurred when learners demonstrate a proper response following a specific stimulus (i.e., in a math lesson, $2+4$ is the stimulus and 6 is the proper answer) (Thorndike, 1913). Drawing from this research, behaviourists focused on the observable behaviour of the learner to indicate whether or not the learner has learned, but not on what he/she comprehends (Ally, 2008). All behaviour can be interpreted without the requirement to assess internal mental conditions or consciousness (Skinner, 1974). In this theory, there was no consideration for the thought process as the mind was viewed as a black box, because nothing was known about what goes inside it (Harasim, 2012).

Cognitivism gradually emerged during the period of the 1970s and 1980s as scholars studied the effects of mental processes on learning (Lee & Lin, 2009). Cognitive

theory, as presented by the work of Jean Piaget and Jerome Bruner, emphasized how learners perceive, process, memorize and retrieve the information that they collect from the environment (Morrison et al., 2004). However, cognitive theory was not new in psychology (Driscoll, 1994). Before behaviourism gained a strong position in psychological research and theory, Edward Tolman used cognitive maps to interpret purposive behaviour of rats, and Clark Hull relied on some of cognitive mediators between stimulus and response (Ibid). While behaviourism viewed the mind as a black box, cognitive theory identified the importance of the mind in making sense of world's materials (Harasim, 2012). Cognitivism focused on the acquisition of knowledge and the internal mental structure (Ertmer & Newby, 1993). Cognitivists have enhanced our understanding of how learners process and make sense of new information and how this information can be accessed, interpreted, integrated, organized and managed (Bates, 2015). They also enhanced our understanding of the conditions that affect learners' mental states (Ibid).

Despite their differences, both behaviourist and cognitive theories adhered to the philosophical assumption that the world is real and external to the user (Ertmer & Newby, 1993). The constructivist theory emerged, at least in part, in response to the limitations of this philosophical assumption (Harasim, 2012, 2017). Constructivism had roots in both psychology and philosophy (Perkins, 1991). There was no single constructivist theory of learning; rather, there were scholars in fields from science education to educational psychology and instructional technology who articulated several perspectives of a constructivist theory (Driscoll, 1994). The major philosophers and educators associated with constructivist approaches in learning were Piaget (1970), Vygotsky (1978) and

Dewey (1979). Wilson (1997) asserted that constructivism was best described as an underlying philosophy or understanding of the way in which learners see the world. Constructivism argued that learners see the world according to the nature of reality (that they learn by observation), the nature of knowledge (that they have in their minds), the nature of human interaction (that is based on shared or "negotiated" meanings) and the nature of science (that is a meaning-making activity) (Ibid). In other words, the constructivist theory stated that individuals learn by constructing their own knowledge and understanding of the world based on their own experiences and their reflections upon those experiences (Harasim, 2012). Constructivism led to a developed understanding of knowledge, concepts and principles, mastery of skills, and the learners' ability to adapt and apply their learning into different contexts (Harpe & Peterson, 2009).

Constructivism became the most widely accepted approach of learning as it placed emphasis on the learner-centered strategy and active learning (Bozic et al., 2009). It argued that learning would be most successful when students were actively involved in the learning process with their peers and with their instructor in a collaborative learning environment (Ibid). For example, when learners constructed knowledge with their peers through group discussions, they could have a clearer mental picture of that knowledge and were able to explain it to others as well as use it to solve live problems (Harpe & Peterson, 2009).

While behaviourism, cognitivism, and constructivism were the three main learning theories applied in designing instructional environments, it is important to recognize that these theories were developed during a time when technology did not have a large influence on learning (Siemens, 2004). As such, the development of other learning

theories that take technology into consideration has been necessary (Ibid). Recently, a learning theory named connectivism has emerged that is relevant to digital societies (Bates, 2015). According to Siemens (2004), connectivist theory described the way in which people learn and work in a networked context. In connectivism, knowledge was distributed throughout information networks and was able to be saved in different digital formats (Kop & Hill, 2008). In this theory, the role of the teacher was to provide the initial learning environment and context that helped to connect learners together, as well as to assist learners in constructing their own learning environments that allow them to be able to connect to networks that they find most useful (Bates, 2015). An example of this environment was a community of practice model where learners were connected based on common interests, discussed this common interest in groups and then applied the outcomes of their discussion into practice (Wenger, 2000). However, this learning theory is still under development and as such has been the subject of criticism and debate by scholars (Bates, 2015). For example, some researchers questioned the need for a new learning theory like connectivism when there were already well-established theories that may be applied effectively to design instruction (Ally, 2008; Kop & Hill, 2008). The researcher in this study assumes that connectivist theory is uniquely positioned to highlight the value of connecting learners together to share common interests within a virtual community of learners.

Generally, it is apparent that the three learning theories (behaviourist, cognitivist and constructivist) complemented and occasionally overlapped each other in online learning environments (Bozic et al., 2009), and the design of online learning materials was able to include concepts from all the three learning theories (Ally, 2008).

Behaviourists' approaches could be utilized to teach the *what* (facts); cognitive approaches could be utilized to teach the *how* (processes); and constructivist approaches could be utilized to teach the *why* (higher-level thinking that enhances personal meaning and contextual learning) (Ibid). In addition to these learning theories, it has been argued that connectivism should be used to assist in the development of online learning. This is because the other learning theories were established before the era of digital networks and therefore do not specifically address the issues that are unique to the online learning context (Siemens, 2004).

Online learning was also influenced by the pragmatism learning theory. The philosophy of pragmatism “emphasize[d] the practical application of ideas by acting on them to actually test them in human experiences” (Gutek, 2013: 76). Charles Sanders Peirce is considered the founder of pragmatism, along with later twentieth century contributors William James and John Dewey (Biesta & Burbules, 2003). Peirce, James, and Dewey were all interested in examining practical and empirical consequences to help determine which action to take as an attempt to better understand real-world phenomena, including psychological, social, and educational phenomena (Johnson & Onwuegbuzie, 2004). Thus, pragmatism pointed to the importance of connecting beliefs and actions in a process of inquiry that inspires any exploration of knowledge (Morgan, 2014). Dewey has been considered a pragmatic social constructivist theorist (Garrison, 1998), as he defined education as a collaborative reconstruction of experience (Garrison & Anderson, 2003). In 1999, Garrison, Anderson, and Archer explored and applied Charles Sanders Peirce's and John Dewey's pragmatist learning theory into their project of the community of inquiry model (CoI) (Garrison et al., 2000). Swan, Garrison and Richardson have

indicated that “the two constituting notions of community and inquiry form a pragmatic organizing framework of sustainable principles and processes for the purpose of guiding online educational practice” (2009: 45). The CoI model, stemming from Dewey’s prominence on collaborative constructivism and practical inquiry, showed promise as a theoretical and practical model for online learning (Ibid). Garrison, Anderson, and Archer (2010) indicated that their connection to pragmatist learning theory was especially important in the development of the concept of cognitive presence in a community of inquiry, especially when compared to other concepts such as social and teaching presence. Therefore, the CoI framework reflected the dynamic nature of higher-order learning and was a convenient guide for research and practice in online higher education (Garrison & Arbaugh, 2007; Yu & Richardson, 2015; Kaul et al., 2018).

In addition to these learning theories, instructional design models were, and continue to be, used by professional instructional designers for technology-based teaching (Bates, 2015). The ADDIE model (analyze, design, develop, implement and evaluate) has been the standard for professionally-developed and high-quality distance learning programs in both print-based and online learning (Ibid). For traditional instructional design models like the ADDIE model, the objectivist learning approach is used. The objectivist learning approach primarily employs behaviourist theories (Bates, 2015), although cognitive theories are also influential (Vrasidas, 2000). Since its early stages, instructional design was driven by B.F Skinner’s behaviourist theory (Tennyson & Schott, 1997), while cognitive psychologists (focusing on the perspective of information processing) have also contributed to the underlying theory of instructional design (Ibid). Therefore, traditional instructional design models were more focused on demonstrating

changes in the learners' behaviour and cognitive structures rather than on meaning-making and comprehension (Vrasidas, 2000).

Recently, instructional design models have been influenced by the constructivist learning theory (Duffy & Jonassen, 1992; Reigeluth, 1999; Tam, 2000; Reigeluth et al., 2017). Reigeluth (1989) claimed the need for a 'new mindset' that incorporated constructivism into the instructional design models. Furthermore, Bednar, Cunningham, Duffy and Perry stated that "the implications of constructivism for instructional design are revolutionary rather than evolutionary" (1992: 30). The constructivist revolution offered learners a new vision of learning as active sense-making and recommended new methods of instruction emphasizing hands-on-activities and discussion (Mayer, 1999). Constructivism also required a shift from passive to active learning, from a teacher-centered approach to a learner-centered approach (Reigeluth, 1999) and from teacher initiatives, control and responsibilities to learner shared initiatives, control and responsibilities (Ibid).

The concurrence of the constructivist learning approach along with the evolution of the Internet has led to the development of online collaborative learning models (Bates, 2015). In online collaborative learning, knowledge was shared among learners as they worked together to achieve common learning goals. This could be accomplished, for example, by engaging in an online group discussion to share understanding of a certain subject (Brindley et al., 2009). Therefore, it is important to keep in mind that the theoretical foundation of online collaborative learning models (for example, the community of inquiry model) was that of a collaborative constructivist educational experience (Swan et al., 2009). The nature of online collaborative learning models

supported the approach of creating a learning community through interactive processes that engaged students in social interaction and critical discourse (Deng & Yuen, 2010).

Online collaborative learning models also enhanced the approach of learner-centered learning, as students were encouraged to work together to create their own knowledge (Harasim, 2012, 2017). In these models, the role of the instructors was to act as facilitators and co-constructors of knowledge while the students were active, self-directed and self-regulated learners (Harpe & Peterson, 2009). Therefore, the environment of collaborative learning enabled students to develop higher order thinking skills and attain richer knowledge creation as they share goals, exploration and processes of meaning-making (Brindley et al., 2009). In addition to the importance of social constructivism in online collaborative learning, the principles of connectivism theory were necessary in guiding the development of learning materials in the digital age (Ally, 2008). According to Siemens (2004), knowledge in the digital age was no longer an internal, individualistic activity; rather, it relied on the connected learning that occurred through the interaction between participants in learning communities. In connectivism, the first step for learning took place when knowledge was actuated throughout the procedure of a learner connecting and providing information to a community of learning (Kop & Hill, 2008), in which a community is defined as “the clustering of similar areas of interest that allows for interaction, sharing, dialoguing, and thinking together” (Siemens, 2003: 3). The interconnectedness between community members provided a path for the distribution of new information, but it was the actual social interaction that determined what that information was and how it moved throughout these paths (Kim et al., 2015).

Connectivist models proposed that learning occurred when learners made connections between ideas throughout their learning networks (i.e., web search engines, electronic databases and online information resources) (Dunaway, 2011). One example of a connectivist model was the Communities of Practice Model, which viewed learning as “an inherently social and situated engagement” (Kop & Hill, 2008: 3). From this perspective, learning involved retrieving information from oneself, others and technologies, collaborating to construct knowledge, and conducting this knowledge into present settings (Brindley et al., 2009). Connectivism further argued that soliciting and constructing knowledge in online learning environments was usually achieved through interaction and discussion (Siemens, 2005). Brindley et al. (2009) agreed with Siemens, recognizing the significance of generating learning environments that enhanced team connectivity and collaboration in order to assist learners in gaining the necessary skills to construct and effectively participate in learning communities.

The characteristics of learning communities depended on a society’s culture, which influences the way that people learn. The concept of culture has been studied for over a century across a variety of disciplines, including anthropology, sociology and psychology (Straub et al., 2002). Culture is the “glue” that attaches members of a society together through shared values, norms and practices (Chandan, 2014). Hofstede’s ‘cultural dimensions’ was a useful theory to explicate cultural values and behaviours (Takaya, 2011). Decades ago, Geert Hofstede (1980) published his groundbreaking book on cross-cultural differences, *Culture’s Consequences: International Differences in Work-Related Values*. This work and its successor, entitled *Culture’s Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations* (Hofstede,

2001), have inspired thousands of empirical research studies of Hofstede's cultural value dimensions (Taras et al., 2010). For example, Kirkman et al. (2006) reviewed nearly 200 empirical studies that used Hofstede's dimensions and were published in 40 journals and book series between the period of 1980 and 2002. In addition, Tsui et al. (2007), Blodgett et al. (2008), Tang and Koveos (2008), Signorini et al. (2009) and Chandan (2014) have all demonstrated that Hofstede-inspired empirical research continues to increase exponentially.

Hofstede defined culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another” (Hofstede, 2001: 9). From this definition, the meaning of “group or category” could be a national society, but Hofstede believed that his definition applied also to other collectives, such as regions, ethnicities, professions, organizations, and also age groups and genders (Minkov, 2014). In his 1980 study, Hofstede also developed the following four heavily-used cultural dimensions: individualism/collectivism, power distance, uncertainty avoidance and masculinity/femininity. In 1991, he added a fifth dimension to his cultural model named long-versus short-term orientation (Hofstede, 2001). Recently, the sixth dimension called indulgence versus restraint was added to Hofstede's cultural dimension by his colleague, Michael Minkov (Minkov, 2009; Hofstede et al., 2010; Minkov & Hofstede, 2011).

It is important to examine Hofstede's cultural dimensions in more detail. The first dimension, power distance, was defined as “the extent to which the less powerful members of institutions and organizations expect and accept the power is distributed unequally” (Hofstede, 1997: 28). *Institutions* were the basic elements of society like

family, school and the community while *organizations* were the places where people work (Ibid). Thus, inequality in high power distance societies was considered a normal part of the society, while it was considered somehow wrong and should be minimized in low power distance societies (Hofstede, 2001). With regards to education, respect was the most important value the student could learn in a high power distance society, while being independent was one of the important values the student could learn in a low power distance society (Hofstede & Hofstede, 2005).

The second dimension was individualism versus collectivism, which “describes the relationship between the individual and collectivity which prevails in a given society” (Hofstede, 1980: 213). In an individualist society, people identified with the “I” identity while in collectivist society people identified with the “we” identity (Hofstede, 2001). For instance, in individualist society everyone was expected to look after her/himself and the nuclear family (i.e., father, mother and children), while in collectivist society individuals from birth onward were parts of strong in-groups (i.e., extended family, village society or the tribe) (Hofstede & Hofstede, 2005). In regards to education, in an individualist society students would tend to speak up in class or large group, but in a collectivist society students would hesitate to speak up in class even when the teachers put questions to the class (Hofstede et al., 2010).

The third dimension was masculinity versus femininity, which referred to the dominant gender role pattern in most traditional and modern societies (Hofstede, 1980). Hofstede (2001: 297) stated that “masculinity stands for a society in which social gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success; women are supposed to be more modest, tender, and concerned with the

quality of life. Femininity stands for a society in which social gender role overlap: Both men and women are supposed to be modest, tender, and concerned with the quality of life.” For example, in a masculine society, work was clearly more important than family because work was an acceptable excuse to neglect the family while family was not an acceptable excuse to neglect the work; on the other hand, in a feminine society people tried to balance between family and work (Hofstede, 1998). In the educational context, students in masculine cultures tried to make themselves visible in class and compete openly with each other, while in the view of feminist cultures, such assertive behaviour and attempts at excelling were easily ridiculed (Hofstede & Hofstede, 2005).

The fourth dimension of uncertainty avoidance was defined as “the extent to which the members of a culture feel threatened by uncertain or unknown situations” (Hofstede, 2001: 161). In a high uncertainty avoidance society, the uncertainty inherent in life was felt as a continuous threat that must be fought, while in low uncertainty avoidance society, uncertainty was a normal feature of life and each day was accepted as it comes (Hofstede, 1997). Therefore, in societies with low uncertainty avoidance there was fast acceptance of new products and technologies like e-mail and the Internet, while in societies with high uncertainty avoidance there was a hesitance toward new products and technologies (Hofstede & Hofstede, 2005). The acceptance of technologies also extended to new methods of learning in low uncertainty avoidance societies (Ibid).

The fifth dimension was long-term orientation versus short-term orientation. Long-term orientation stood for the fostering of virtues oriented to future rewards, specifically perseverance, thrift and saving; on the other hand, short-term orientation stood for the fostering of virtues of a society related to the past or the present, such as

national pride, respect for tradition and fulfilling social obligations (Hofstede, 2001). In other words, a short-term orientation society respected traditions while a long-term orientation society adapted traditions into the modern context (Hofstede, 1997). For example, in a short-term orientation society, there were universal and fixed guidelines about what was good and what was evil which could not be changed; in contrast, what was good and evil depended on the circumstances in long-term orientation society (Hofstede & Hofstede, 2005). Another example related to the educational context was that students in a short-term orientation society attributed success and failure to luck, but students in long-term orientation society attributed success to effort and failure to lack of it (Hofstede et al., 2010).

Finally, the sixth and most recent dimension was indulgence versus restraint (Minkov & Hofstede, 2011). This dimension was mainly related to the feeling of subjective happiness or unhappiness and the extent to which people control their own lives (Minkov, 2009). Indulgence “stands for a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun. Its opposite pole, restraint, reflects a conviction that such gratification needs to be curbed and regulated by strict social norms” (Hofstede et al., 2010: 281). People from indulgence societies had more optimistic or positive attitudes, while people from restraint societies had more pessimistic, cynical attitudes (Ibid).

In addition to examining the way that culture influenced how people learn, it is important to recognize that e-learning itself has a specific kind of culture with distinct ethical values that must be taken into consideration. E-learning ethics were “focused on ethical issues connected to the use of technology within education contexts” (Luppigini,

2009: 100). Naturally, the more frequently information technology is used in distance education, the greater the chance that unethical behaviours might occur. Furthermore, unethical behaviours might be more likely to happen in online environments because there is a “psychological distance” that makes these actions feel less personal since the individual cannot be seen or heard (and also cannot see or hear the other people involved) (Gearhart, 2001). There is a wide range of unethical behaviours that could impact e-learning; these include hacking, infringing on intellectual property rights, copyrights, plagiarism and cheating (Gearhart, 2014; Abu-Shaqra & Luppicini, 2016; Panda & Santosh, 2017; Strangfeld, 2019).

Along with these ethical considerations of online learning, these methods/theories/approaches must be considered in conjunction with an understanding of the traditional approach to learning of a particular region/culture, as this will affect the way in which the theories can be implemented. I will first describe briefly the typical system of education in Saudi Arabia before turning to examine the ways in which some of these methods can be seen in the development of the country’s online learning programs. Traditional Saudi education commonly utilized teacher-centered learning approaches to transfer knowledge to students (Darandari & Murphy, 2013), as teachers were viewed as the only source of information in conventional Saudi educational contexts (Alrashidi, 2014). The nature of the teacher-centered learning approach reflected Saudi culture, in which the relationship between teachers and students was traditionally formal (Al-Keaid, 2004). Saudi teachers were viewed as having the authority to control the teaching and learning setting (AL-Ismaiel, 2013) and did not often engage in discussion with students during the course of learning process (Hamdan, 2014b). This reflected the

essence of collectivist culture as students relied on their teachers alone throughout learning process (Hofstede, 1980).

However, it has been indicated that the online learning environment has created the conditions for a change in the learning culture of Saudi Arabia, as education moves beyond a teacher-centered approach towards a learner-centered approach (Hamdan, 2014a). It has also been indicated that online learning has contributed to shifting the culture of Saudi students by moving towards engagement in critical thinking and self-directed learning (Ibid). These changes supported using the online collaborative environment within the Saudi educational system, since the essence of online collaborative learning models was to support the approach of learning through a community in a way that engages students in social interaction and critical discourse (Deng & Yuen, 2010).

Evidence of this approach in Saudi Arabia can be seen in the work of Alkalaf et al. (2013), whose study reported that student dissatisfaction about online collaborative learning did not stem from a lack of available collaborative tools (i.e., chat rooms and discussion boards); rather, it appeared that course designs did not make effective use of these collaborative tools. Nearly half of the responding students indicated that they were not required to collaborate with other students, while the students who were required to collaborate tended to report more positive responses to e-learning experiences (Ibid).

Alghamdi (2013) also examined the use of online discussion boards and found that they improved students' achievements and learning in higher education. She recommended that instructors at all levels, and especially those in higher education, should engage students in discussion boards (Ibid). Thus, although there have only been a

few such studies, they have uncovered important information about the impact of collaborative e-learning in Saudi education (Alkalaf et al., 2013; AL-Ismaiel, 2013; Alghamdi, 2013; Hamdan, 2014b; Alzahrani, 2017). Indeed, these studies demonstrated that Saudi higher education was taking the initiative to pursue greater avenues of collaborative learning strategies.

At the outset of this section, the significance of learning theories (behaviourist, cognitivist, constructivist, connectivist and pragmatism) in informing the creation of models of online learning was described, whether these models were conventional (focusing on objectivist learning approach) or innovative (focusing on constructivist learning approach). However, the literature showed that constructivist and connectivist learning theories were best suited to inform the design of effective online collaborative learning environments. This is because these learning theories highlighted the significance of creating learning environments that enhanced learners' connectivity and collaboration in constructing their own knowledge.

Within the Saudi educational context, it has been suggested that online learning has contributed to changing the learning culture of Saudi students by moving beyond a teacher-centered learning approach towards engaging in critical thinking and self-directed learning (Hamdan, 2014a). However, this claim was drawn from research that focused on only sixty-seven undergraduate students from one university using a quantitative research method, and therefore there were no empirical grounds to support it. The improper use of online collaborative tools from the instructors' side (as indicated in Alkalaf et al. 2013) was another area that needs to be studied further using a qualitative research method.

This dissertation is guided by the following theoretical framework (Figure 1) that describes the connection between the learning theories and online learning models and principles. Next, the influence of socio-culture and ethics on the e-learning environment is described. Then, the present situation of e-learning delivery, including strategies, processes and procedures in Saudi Arabia is explained. Finally, the Saudi Arabian e-learning delivery outcomes will be explored in this qualitative study. This qualitative study will demonstrate the way that learning theories and online collaborative models function in practice.

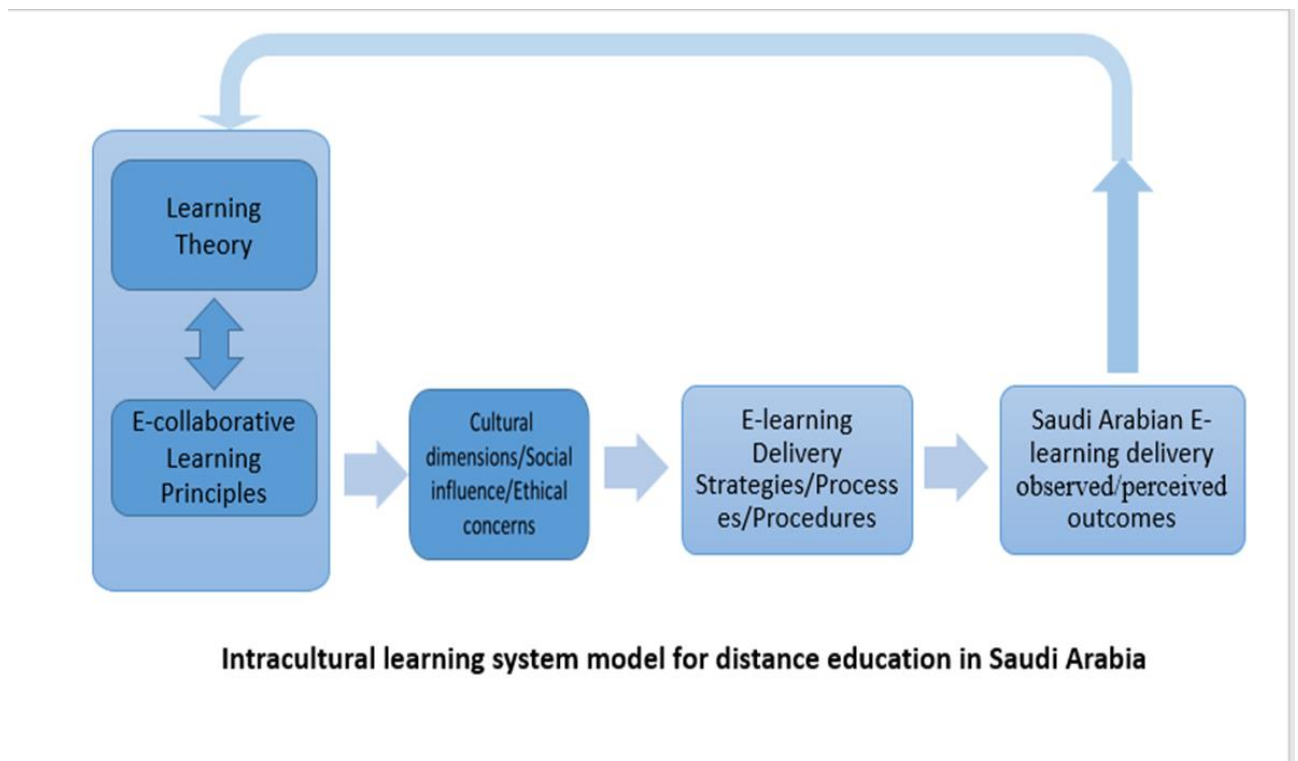


Figure 1: Theoretical Framework

In this dissertation, “learning theories” refers to behaviorism, cognitivism, constructivism, pragmatism and connectivism. “E-collaborative learning principles” indicates the way that these learning theories are incorporated to form online learning

models and principles. Since online learning models are not rigid and do not work the same way in different countries around the world, “Cultural dimensions”, “Social influence” and “Ethical concerns” all have an influence on the way people learn in online environment. Moreover, the Saudi “E-learning delivery”, including its “Strategies”, “Processes” and “Procedures” is presented. In this context, this refers to the current online learning practices in the Kingdom’s higher education, along with how online learning has contributed on shifting the learning system in Saudi Arabia from a teacher-centered approach to a learner-centered approach. Finally, the “Saudi Arabian e-learning delivery observed/perceived outcomes,” which refers to the insider perceptions of the current Saudi e-delivery outcomes.

2.2 E-learning Development and Tools

This section highlights the history of distance education and how the Internet revolutionized its learning context. The characteristics of online learning compared to face-to-face learning are also revealed. In addition, this section identifies the communication tools applied into the contexts of fully online learning and blended learning.

Despite its typical association with modern technology like the Internet, the history of distance education in fact spans nearly three centuries (Moore et al., 2011). For example, the *Boston Gazette* advertised in 1728 that Caleb Philipps, a teacher of the new method of short hand, sought students to learn via weekly mailed lessons (Holmberg, 2005). One hundred years later, the first distance education course was provided by Sir Isaac Pitman, who taught shorthand on postcards by mailing transcribed texts to his students and receiving transcriptions back from them for correction in the 1840s

(Holmberg, 2005; Towhidi, 2010). However, it was not until the early 1970s that universities and colleges began to offer their students distance education opportunities (Roy & Schumm, 2011). During that period of time, students were able to learn course material without being in the classroom through television broadcasts, detailed study guides, textbooks and access to professors via the telephone (Towhidi, 2010; Roy & Schumm, 2011; Bolliger & Erichsen, 2013). In the mid-1990s, distance education was revolutionized by the proliferation of the Internet (Mullins, 2007; Bolliger & Erichsen, 2013). The shift from basic correspondence via postal service to the wide variety of tools available through the Internet resulted in significant changes regarding how learning occurred and was communicated (Moore et al., 2011). In this way, the Internet facilitated the evolution from distance learning to e-learning (Mullins, 2007).

E-learning is not simply the incorporation of the Internet into instructional methods; rather, it includes a wide variety of tools that can be used in different ways in diverse contexts in order to create a better learning experience (Reese, 2013). Indeed, e-learning has been identified as a viable alternative to traditional courses (Garcia et al., 2014) in part because its diversity provides a way for students and instructors to collaborate more freely, gain greater flexibility and take advantage of new media to learn (Reese, 2013). Humphreys and Konomos identified the diverse nature of e-learning, defining it as “a technological mode of content delivery. It involves the use of electronic media such as the internet, intranets, satellite-broadcast, CD-ROMS, video and audio streaming courses, PowerPoint, webcast, and other means of delivering educational content to students” (2010: 1). The diversity of electronic media available meant that different types of tools that are both synchronous and asynchronous might be used

(Falloon, 2012). A well-balanced online environment should offer a combination of synchronous and asynchronous tools, both of which enhance communication and collaboration among class peers and course instructors (Reese, 2013).

Synchronous and asynchronous tools were essential parts of the e-learning approach and have been utilized to support the learning acquisition in fully online learning over the last decade (Stoerger, 2010; Falloon, 2012; Young et al., 2014; Watts, 2016; Peterson et al., 2018). The synchronous tools enhanced real time social interactions between learners and instructors as well as between the learners themselves (Stoerger, 2010; Watts, 2016). Because of the interactions between learners, synchronous tools have been identified as an efficient learning setting since learners can meet virtually and share knowledge (Callaghan et al., 2010). In this way, the synchronous tools crossed the boundaries set by traditional in-class education (Stoerger, 2010; Young et al., 2014; Peterson et al., 2018). This allowed learners to approximate the collaboration of a conventional classroom within an e-learning setting, which could increase their networking opportunities and allow them to gain different perspectives because of the diversity of students who make up e-learning classrooms (Ibid). In addition to the synchronous tools, the asynchronous tools should be implemented to further enhance the e-learning environment (Falloon, 2012; Garcia et al., 2014). Unlike synchronous tools, the asynchronous tools occurred in delayed time and did not need simultaneous interaction between students and teacher (Johnson, 2006; Watts, 2016). One example of this learning tool was the implementation of discussion forums which use thread structures to demonstrate links between related notes, thereby allowing students to follow several discussions that take place at the same time (Oztok et al., 2013). With

asynchronous tools, students could also retain the studying material more effectively by having access to their presentations in advance and receiving structured guidelines for analyzing content (Falloon, 2014). Ultimately, the use of both synchronous and asynchronous tools demonstrated the way in which online learning might contribute to a diverse and well-rounded learning experience (Johnson, 2006; Reese, 2013).

In addition to the fully online learning environment that utilized both synchronous and asynchronous tools (Stoerger, 2010; Falloon, 2012; Young et al., 2014; Watts, 2016; Peterson et al., 2018), another trend in distance education combined face-to-face and online instruction (Garcia et al., 2014; Abdelrahman & Irby; Hockly, 2018). This combination method was known as blended learning (Ibid). The blended learning approach incorporated self-paced learning activities, face-to-face interactions and Web-enhanced sessions in order to meet the various needs and learning preferences of the students (Bolliger & Erichsen, 2013; Abdelrahman & Irby, 2017; Hockly, 2018). The percentage of the course content delivered online can vary between 30 and 80 percent (Ibid). The aim of blended learning was to leverage the best practices of face-to-face and online experiences (Garcia et al., 2014; Abdelrahman & Irby, 2017). In this way, blended learning might provide a good compromise in situations in which fully online courses were not available/feasible (Bolliger & Erichsen, 2013). Before adopting either fully online or blended learning approaches, research should be conducted/consulted in order to determine which option is the most effective way to teach in the specific context (Reese, 2013).

2.3 E-learning Models

Several models have been employed for the delivery of distance education (Gustafson & Branch, 2002a; Garrison et al., 2000; Wenger, 2000). Traditionally, these models were built based on an objectivist learning approach (Vrasidas, 2000), emphasizing teacher-centered learning (Harpe & Peterson, 2009). However, it is necessary to move beyond this approach to engage students in active and self-directed learning (Yang & Liu, 2007). This section covers examples of objectivist and constructivist learning models and explores how they work in online learning contexts.

2.3.1 Instructional Design Models

Instructional design (ID) theory provided clear guidance on how to better help people learn and progress (Reigeluth, 1999). Defined as “a system of procedures for developing education and training programs in a consistent and reliable fashion” (Gustafson and Branch 2002a: 17), ID theory aimed to enhance learning “for any performance we want to teach” (Reigeluth, 1999: 6). ADDIE was an example of a traditional instructional design model that emphasized learning through process (Gustafson & Branch, 2002b).

Traditional instructional design models provided a step-by-step process to plan and design instruction that provided the student with the content and resources required to assist them in achieving the instructional purposes (Jones & Davis, 2008). For example, the ADDIE model, which stands for Analyze, Design, Develop, Implement and Evaluate (Gustafson & Branch, 2002b; Jones & Davis, 2008), was a generic framework for a systematic approach to enhance the instructional development (Morrison et al., 2010). The ADDIE model and other traditional instructional design models utilized the objectivist learning approach, which was influenced by behaviourist and cognitive theories (Vrasidas, 2000; Chen, 2007), with behaviourist theory being the most influential

(Bates, 2015). Under this teacher-centred model (Harpe & Peterson, 2009), the instructor must first identify the knowledge to be transferred to the learners before proceeding using specific behavioural objectives (Vrasidas, 2000; Chen, 2007).

Recently, constructivist learning theories have influenced instructional design models (Duffy & Jonassen, 1992; Reigeluth, 1999; Tam, 2000; Reigeluth et al., 2017). The constructivist revolution saw learners as active participants and recommended new strategies of instruction fostering discussion and critical thinking (Mayer, 1999). It argued for a shift from a teacher-centered approach to a learner-centered approach (Reigeluth, 1999). This also caused a shift in best practices, the core of the learner-centered learning approach is the belief that individuals make their own meaning out of information and experiences (Reigeluth et al., 2017).

ID models (both traditional and constructivist-based learning) are part of the learning theory literature but are not yet found in the literature specifically related to Saudi Arabian distance education. As Tony Bates noted, “there are almost no instructional designers in Saudi Arabia – indeed, educational theory or design is not a topic taught in the universities” (2009: 3).

2.3.2 Online Collaborative Learning

The growing popularity of constructivist approaches to learning, along with the development of the Internet, has led to the creation of online collaborative learning (Bates, 2015). In online collaborative learning, knowledge is shared among students as they work together to achieve common learning goals such as engaging in an online group discussion to find solutions to a problem in a course subject (Brindley et al., 2009). The theory of online collaborative learning (OCL) was described by Linda Harasim:

OCL theory provides a model of learning in which students are encouraged and supported to work together to create knowledge: to invent, to explore ways to innovate, and, by so doing, to seek the conceptual knowledge needed to solve problems rather than recite what they think is the right answer. While OCL theory does encourage the learner to be active and engaged, this is not considered to be sufficient for learning or knowledge construction [...] In the OCL theory, the teacher plays a key role not as a fellow-learner, but as the link to the knowledge community, or state of the art in that discipline. Learning is defined as conceptual change and is key to building knowledge. Learning activity needs to be informed and guided by the norms of the discipline and a discourse process that emphasises conceptual learning and builds knowledge.

(Harasim, 2012: 90)

The most cited collaborative learning models in the literature are mainly focused on online communities of learning; as Augar et al. (2006) stated, “community” was a common term in current online learning literature. The term “community” was used as an abbreviation of “community of learners,” which was defined as “a learning partnership among people who find it useful to learn from and with one another about a particular domain” (Rausch & Crawford, 2012: 178). Students who felt connected to their online learning community were more likely to be active members in that community as they worked with their peers to build knowledge (Kim et al., 2015). Furthermore, higher education has viewed community as crucial in supporting collaborative learning and discourse that requires critical thinking (Rausch & Crawford, 2012). In addition, Randy Garrison argued that collaboration in an educational community involves both social and academic perspectives: “community where open communication is to be nurtured through both cohesive social communication and purposeful academic communication” (2013: 3). Therefore, the essence of a learning community was that it was an interactive system that involved students in social interaction and critical discourse (Deng & Yuen, 2010; Peterson et al., 2018).

Examples of models applied in online communities of learning include community of inquiry (CoI), community of practice (CoP), online collaborative learning (OCL) pedagogy, massive open online courses (MOOCs) and computer-supported collaborative learning (CSCL). The CoI model was defined as “a group of individuals who collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding” (Garrison, 2011: 15). CoI consisted of three overlapping essential elements: cognitive presence, social presence and teaching presence (Ibid). The CoI model assumed that learning occurs within the community through the interaction of these three core elements (Garrison et al., 2003). Since the CoI model was developed by Garrison, Anderson and Archer (2000), there have been a plethora of studies that have indicated the importance of these three essential elements in online learning (Garrison et al., 2004; Conrad, 2005; Arbaugh, 2007; Akyol et al., 2009; Yu & Richardson, 2015; Kaul et al., 2018).

In addition to CoI, several studies have highlighted the importance of CoP in online collaborative learning (Wenger, 2000; Kok et al., 2007; Ellaway et al., 2004; Daniel et al., 2009; Eggs, 2012; Baker & Beames, 2016). Wenger, McDermott and Snyder indicated that “Communities of practice are groups of people who share a concern, a set of problems, or a passion about topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (2002: 4). CoP has three crucial characteristics known as the domain of knowledge, notion of community and practice (Wenger, 2000). In addition, seven key design principles for creating effective communities of practice were identified in the Wenger, McDermott and Snyder (2002) study, which are: design for evolution to meet the interests of the participants without

moving too far from the domain of interest; open a dialogue between inside and outside perspectives; encourage and accept different levels of participation; develop both public and private community spaces; focus on value (feedback and discussion); combine familiarity and excitement; and create a rhythm for the community (being aware of social presence, motivated to share information and be willing to collaborate) .

In the OCL pedagogy, Harasim (2012; 2017) underlined the significance of three key phases of knowledge construction through discourse: idea generating, idea organizing and intellectual convergence. **Idea generating** was the brainstorming phase where the learners collected ideas; **idea organizing** was the phase where learners discussed together and analysed the ideas gathered in the previous phase; and **intellectual convergence** was when learners reached intellectual synthesis after arguing to construct their ideas (Ibid). The role of the teacher in OCL pedagogy was viewed as particularly critical because he/she was not only facilitating the discourse by providing the suitable resources to the learners, but also because he/she acted as a representative of a knowledge community or subject domain who ensured that the main concepts and practices of the subject domain were effectively integrated into the learning process (Bates, 2015).

Massively Open Online Courses (MOOCs) have gradually garnered attention as they are offered for free to anyone (Roscorla, 2012; Nobre et al., 2018). The term MOOC emerged for the first time in 2008 for a course offered by the Extension Division of the University of Manitoba in Canada, which was designed by George Siemens, Stephen Downes and Dave Cormier (Bates, 2015; Nobre et al., 2018). There are two main types of MOOCs namely “x MOOCs” and “connectivist MOOCs” or “cMOOCs” (Roscorla, 2012). The first, x MOOCs (objectivist pedagogy), were more instructionist as they

emphasized content mastery, integrated courses on websites and utilized computerised grading tools to support huge number of students (Ibid). In contrast, cMOOCs (connectivist pedagogy) were more social and focused on network learning, as learning was enhanced through the connections and discussions between students using social media (i.e., webcasts, blogs, discussion forums) (Ibid). As they were based on collaborative-connectivist pedagogy, cMOOCs reflect many of the features of communities of practice (Bates, 2015).

In addition, computer-supported collaborative learning (CSCL) was a process model where students could work together on a learning context using technology to facilitate their collaboration (Koschmann, 2002; Moreno, 2005; Augar et al., 2006; De Leng et al., 2009; Xiong et al., 2015; Ludvigsen & Arnseth, 2017; Adanir, 2019). CSCL supported peer interaction as it enabled sharing knowledge among community members (Moreno, 2005; Adanir, 2019). Timothy Koschmann defined CSCL as “a field of study centrally concerned with meaning and practices of meaning-making in the context of joint activity, and the ways in which these practices are mediated through designed artifacts” (2002:18). The “practice of meaning-making in the context of joint activity” was thoroughly associated with the concept of knowledge co-construction in social constructivism (Xiong et al., 2015). From a socio-cultural perspective, participants in a CSCL community commonly possessed a high level of autonomy to determine group objectives, monitor group procedures and construct group outcomes (Ibid). In a CSCL community, procedural facilitation may take the form of online feedback provided by an instructor (interaction) as well as of features inserted in the CSCL program (structure) (De Leng et al., 2009). Examples of structure features were: **classifications** that learners

could use to classify their participations, **sample phrases** that were useful when creating a note of a determined type and “**anchors**” that facilitated the decision to contribute in the discussion (Guzdial & Turns, 2000). Anchors were texts or pictures that attracted the attention of members in a discussion forum by presenting topics that were assumed to be of interest to the members (De Leng et al., 2009). Thus, a certain amount of interaction and structure was needed in CSCL for sustained on-topic discourse (Ibid).

Indeed, online collaborative learning models could develop the skills that digital age learners need since these models can support them to build their knowledge. Members of online learning communities enhanced sustainable relationships with their peers that allowed them to simply contribute in a shared community discourse (Garrison, 2007). Additionally, it permitted members to feel motivated not only to log on to the community, but also to actively search for collaborative knowledge construction and problem-solving contexts as incorporated members of that community (Kim et al., 2015). Among the numerous models, Garrison, Anderson and Archer's Community of Inquiry (CoI) framework has been the most commonly explored, tested and cited in studies (Lee, 2014).

2.4 Online Learning in Saudi Arabia

Online learning within higher education in the Kingdom of Saudi Arabia started to appear in the early 2000s (Aljabre, 2012). Online learning offered access to many Saudi students who wished to pursue higher education despite constraints such as having a full-time job or living in remote areas, which made them unable to attend face-to-face classes (Hamdan, 2014a; Alahmari, 2017). However, online learning is still relatively new in Saudi Arabia and it continues to face many obstacles (Alturki, 2014). Al-Khalifa noted

that Saudi Arabia “has been slower than many nations to move into distance education and that it has a very short history of using printed, electronic, or broadcast means for students who are not physically on site” (2009: 1).

Although online learning only recently emerged in Saudi universities, it has experienced a rapid increase in participation (Aljabre, 2012). In 2003, the King Fahad University of Petroleum and Minerals was the first university in the Kingdom to establish an e-learning center, which fell under the dean of academic development (Al-Asmari & Khan, 2014). A few years later, leading universities in distance education like King Abdulaziz University (KAU) and King Saud University (KSU) started to implement technology and the Internet to deliver their courses (Basahel & Basahel, 2018). The development of online learning in Saudi Arabia led the Ministry of Higher Education to establish the National Plan for Information Technology, which encouraged e-learning and distance education in higher education (Alebaikan & Troudi, 2010). In 2006, the National Plan for Information Technology established a national centre, called the National Center for e-Learning (NCeL) (Alebaikan & Troudi, 2010; Alahmari, 2017; Aljaber, 2018). It played a significant role in the initiation of distance education in Saudi universities and worked as a source of expertise for distance education programs (Alturki, 2014). In the few years since its establishment, the NCeL has made a lot of headway, including creating system bridges, called *Jusur*, for the management of the educational process (Ibid; Alahmari, 2017). In collaboration with the Ministry of Higher Education, NCeL also issues rules governing online learning (Ibid). Moreover, in 2009, the NCeL held and organized the first international conference of e-learning and distance education in Saudi Arabia (Al-Harhi, 2009). In 2011, the Saudi Electronic University (SEU) was established

in Riyadh City as an educational institution offering distance education across several programs, such as business and financial studies, health sciences and computer science (Moukali, 2012; Alturki, 2014; Zawacki-Richter et al., 2015; Aljaber, 2018).

Furthermore, SEU is the first to offer a blended learning program to its students (Alahmari & Amirault, 2017). Various branches of the Saudi Electronic University were then established in other cities around the Kingdom (Alturki, 2014; Richter et al., 2015; Aljaber, 2018). Currently, most Saudi universities offer distance education programs in a variety of disciplines (Ibid).

2.4.1 The Views of Women in Saudi Online Learning

Female students often do not attend universities due to their home and family obligations (Al Alhareth et al., 2013; Al-Asmari & Khan, 2014). Therefore, despite the constraints that culture places on gaining education for females, online learning can adapt to these important Saudi cultural values (Ibid). Because education is segregated between males and females in Saudi Arabia, there is a significant shortage of female lecturers in Saudi universities (Al-Khalifa, 2010; Al-Asmari & Khan, 2014). As a result, the thousands of female students who are enrolled each year are limited in the courses they can take (Ibid). This further demonstrates the need for online learning to educate Saudi females (Al-Kahtani et al., 2006). The online learning principle is employed in Saudi distance education to accommodate female learners and offer them the chance to take the courses they need with male instructors (AlMegren & Yassin, 2013). In Saudi Arabia, online learning courses can be taught by either male or female instructors, with special modifications applied in the use of technology for male instructors of female students to ensure that it does not violate cultural values while maintaining the quality of education the female students receive (Quraishi, 2012). Ultimately, the development of these types

of distance education initiatives in Saudi universities can empower Saudi female students to overcome social and cultural obstacles (Alahmari, 2017).

Online learning was also useful for Saudi female instructors. Tony Bates, an international expert in e-learning who also provides e-learning training across Saudi Arabia, recognized the effort and enthusiasm of Saudi female instructors in 2009. He asserted his belief that the success of Saudi e-learning “will be driven by women faculty, despite the difficulties they face. The women faculty I worked with showed great determination and a commitment to change which was not always present with the male faculty” (Bates, 2009: 16).

In 2015, the NCeL also became a partner with the Open Education Consortium in order to provide forty Saudi female faculty members and university leaders with the skills required for online and blending learning. This program, called the e-Learning Pioneer Program, proved to be successful, as it supplied more female lecturers with proper training (Tam, 2015). Furthermore, distance education has also allowed female instructors within higher education to reach higher ranking positions (i.e., Professor or Program Director) because it provides these instructors with access to additional training (Walabe & Luppicini, 2019).

2.5 Culture

The concept of culture has been defined in several ways (Hofstede, 1980), resulting in plethora of contradictory scholarly opinions (Straub et al., 2002). For example, Kroeber and Kluckhohn’s (1952) review of cultural definitions encountered over 160 different conceptions of the term. Moreover, culture has been an object of study for centuries in several disciplines, including anthropology, sociology and psychology (Jenks, 1993;

Straub et al., 2002). Thus, the first obstacle that we faced when analyzing culture was arriving at a definition of the term itself, especially given the myriad formulations and dimensions used to describe this concept (Leidner & Kayworth, 2006). One notable consensus definition came from the field of anthropology:

Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values.

(Kluckhohn, 1951: 86)

Another definition of culture that connected anthropological and sociological perspectives stated that culture was the “transmitted and created content and patterns of values, ideas, and other symbolic-meaningful systems as factors in the shaping of human behavior” (Kroeber & Parsons, 1958: 583). Kroeber and Parsons proposed that the term “society” could be used to designate the specifically relational system of interaction among individuals (Ibid). They indicated that the confusion among anthropologists and sociologists about the concept of culture slowed theoretical advances on the concept between the two disciplines, and they hoped that the agreement would develop understanding of this relation (Spillman, 2002).

In another way of defining culture, Triandis (1972) distinguished “subjective” culture from “objective” culture. Subjective culture was described as “a cultural group’s characteristic way of perceiving the man-made part of its environment. The perception of rules and the group’s norms, roles, and values are aspects of subjective culture” (4). In contrast, objective culture consisted of everything that was man-made, including things such as institutions and art (Minkov, 2014). Similarly, culture has also been divided into

“non-material” and “material” culture (Roth, 2001; Macionis & Gerber, 2009; Barkan, 2012). Non-material culture embraced the symbols, language, norms and values that define a specific society (Barkan, 2012), while material culture consisted of the physical objects of a specific society to which people attach meaning, like clothing, food, tools and technology (Roth, 2001).

The concept of subjective culture or non-material culture that represents a pattern of value-based thinking underlines the definition of culture proposed by Geert Hofstede (Straub et al., 2002; Minkov, 2014). Other academics recognize Hofstede as one of the most notable scholars in this school of thought (Straub et al., 2002; Kummer et al., 2007), and his understanding of culture is useful to this study. In a 2001 study, Hofstede defined culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another” (Hofstede 2001, 9). Hofstede’s “cultural dimensions” theory was especially useful for interpreting cultural values and behaviours (Takaya, 2011).

Scholars described national culture using either a single dimension model like Hall’s context dimension and Hall’s time dimension (1976) or a multiple dimension model like Hofstede (1980) and Trompenaars (1993). Hall (1976) differentiated between “high context culture” and “low context culture” to capture differences in social relations; *Context* was defined in terms of how individuals and their societies sought information and knowledge (Morden, 1999). Western culture was characterised as low context, as individuals tended to be clear and provide sufficiently detailed information during their communications (Hall, 1976; Lin, 1993; Nisbett & Masuda, 2003; Ghanem et al., 2013; Smolińska, 2017). In contrast, eastern culture was identified as high context, since

individuals mainly depended on non-verbal communication and one usually drew conclusions from informal interactions (Hall, 1976; Keegan 1989; Nisbett & Masuda, 2003; Ghanem et al., 2013; Smolińska, 2017). Hall (1976) indicated that high context cultures tended to send messages based on indirect and implicit methods, which predicted that the audience could interpret the meaning based on their perceptions and thoughts (Ibid). Therefore, high context cultures did not require detailed information in their communications, as they relied on the contextual clues of the message (Ibid).

Hall (1976) also distinguished between “monochronic” and “polychronic” cultures to capture differences between societies regarding their orientations to time. Monochronic cultures focused on doing one thing at a time, which required some sort of scheduling, either implicit or explicit (Ibid). On the other hand, polychronic cultures were flexible with time concerns as people in these cultures did many things at once, often in an unplanned or unprincipled sequence (Morden, 1999). Generally, Hall indicated that people in monochronic cultures were task-oriented and stuck to their plans whereas people in polychronic cultures tended to change plans and perform several tasks at one time (Hall, 1976; Bluedorn et al., 1992). For example, Hall categorized North Americans, Germans, Swiss and Finns as being monochromic while he classified Indians, Latin Americans, Polynesians and Arabs as polychronic (Hall, 1976; Morden, 1999; Nonis et al., 2005).

Hall and other national culture scholars tended to treat culture as a single dimension (Minkov & Hofstede, 2011); however, an important shift occurred in 1980, when Hofstede established the four cultural dimensions: individualism/ collectivism, power distance, uncertainty avoidance and masculinity/femininity. In 1991, he added a

fifth dimension to his cultural model called long-versus short-term orientation (Hofstede, 2001). More recently, the sixth dimension called indulgence versus restraint was added to Hofstede's cultural dimension by his colleague, Michael Minkov (Minkov, 2009; Hofstede et al., 2010; Minkov & Hofstede, 2011).

Later, Fons Trompenaars (1993) developed a seven-dimensional framework of national culture named "the seven value dilemmas" in order to understand cultural diversity in business. These seven dimensions were: universalism versus particularism, individualism versus communitarianism, neutral versus emotional, specific versus diffuse, achievement versus ascription, sequential versus synchronic and internal versus external control (Trompenaars & Hampden-Turner, 1998). Derived from social theory (Draguns, 2007), the first five dimensions (universalism versus particularism, individualism versus communitarianism, neutral versus emotional, specific versus diffuse and achievement versus ascription) described the way individuals in a society deal with each other (Hofstede, 1996). These five dimensions were initially proposed by sociologist Talcott Parsons (1951). The sixth dimension (sequential versus synchronic) related to the society's time management and priorities, and the seventh (internal versus external control) related to whether people believe that they could control the environment or that the environment could control them (Trompenaars & Hampden-Turner, 1998). The latter two dimensions were originated by anthropologists Florence Kluckhohn and Frederick Strodtbeck (1961). Charles Hampden-Turner and Fons Trompenaars have also indicated that their work (the seven value dilemmas) was informed and influenced by Hofstede's dimensional model (Hampden-Turner & Trompenaars, 1997).

In fact, Hofstede's (1980, 2001) cultural dimensions have had greater influence than the other competing cultural dimensions (e.g., Hall's context dimension, Hall's time dimension, 1976; Hampden-Turner & Trompenaars, 1994) (Kirkman et al., 2006; Tang & Koveos, 2008). That is because Hofstede's work facilitated the comparison of more than seventy-four countries by providing tangible scores of the surveys he used in his study (Reinecke & Bernstein, 2013). Hofstede's cultural dimension also stood out in national cultural research because of its clarity and its broad visibility in the literature (Alves et al., 2006; Tang & Koveos, 2008). In addition, the Social Science Citations Index showed that Hofstede's work is more widely cited than other cultural dimensions (cited 1,800 times through Hofstede, 2001) (Kirkman et al., 2006), and has inspired thousands of empirical studies that used Hofstede's cultural value dimensions (Taras et al., 2010).

2.5.1 The Cultural Influence in the Saudi e-learning Delivery

Hofstede (2001) defined culture as “the collective programming of the mind that distinguishes the members of one group or category of people from another” (9). Saudi Arabia is an Arab country that is almost entirely Muslim (Yamin, 2013). It is also a deeply religious and conservative nation (Feghali, 1997). The country is home to the two holy cities: Makkah and AL-Madina, where Islam came into existence and was spread by the Prophet Mohammad (*peace be upon him*) (Abunadi, 2012; Nouraldeen & Elyas, 2014; Alahmari, 2017). It was in this place where the religious book, the Qur'an, was revealed and documented (AL-Saggaf, 2007).

Because Saudi Arabia is a religiously conservative culture, Islam has greatly influenced how Saudis behave and conduct their daily lives which defines the culture of the Kingdom (AlMegren & Yassin, 2013; Basahel & Basahel, 2018). The manner in which one conducts oneself should be based on a literal interpretation of Qur'an and

Hadith — that is, on the sayings of the Prophet Mohammad (*peace be upon him*) (AL-Saggaf, Himma & Kharabsheh, 2008). Furthermore, Saudi Muslims must follow Islamic law or *shari'ah*, as law is viewed as a matter of religion (Almutairi, 2008). Islam forms the basis of the kingdom's constitution as well as the educational curriculum at all levels (including content and teaching time) (Smith & Abouammoh, 2013). Thus, education in Saudi Arabia (whether conventional or online learning) places a great emphasis on the teachings of Islam (Zuhur, 2011). Moreover, as is customary in Saudi culture, separation between male and female students at all levels of education (except in kindergarten, nursery school and some medical schools in universities) is strictly required (Ibid). When men and women attend the same institution, they occupy different parts of campus in order to avoid interaction with each other (Basahel & Basahel, 2018). Members of separate campuses within the same university communicate with each other via emails, telephone calls, and video conferencing (Ibid).

E-learning faces some particular difficulties as a result of the fact that Saudi Arabia is classified as collectivistic high context culture relying on indirect ways of communication including non-verbal cues through tone of voice, body language and gestures (Hofstede, 1983). As such, the nature of online communication may impair Saudi students' ability to apply these cultural factors online, which affects their locus of control (AlMegren & Yassin, 2013; Hamdan, 2014a). However, Saudi students' continued engagement with online learning might overcome these issues and teach them to be more independent and to take charge of their own decisions (Hamdan, 2014a).

2.5.2 The Social Influence in the Saudi e-learning Delivery

Chandan (2014) indicated that culture was the “glue” that attached members of a society together through shared values, norms and practices. Therefore, “society” refers to a

group of people who live in a particular territory and who share a culture (Barken, 2012). As mentioned, Saudi society is deeply religious and conservative, practicing Islam in daily life, law and education (Almutairi, 2008). *Shari'ah* law is the most powerful force in the decision-making process for education or any other subjects (Alrashidi, 2013). While the impact of Saudi belief and culture on e-learning has been explored earlier in this paper, there are still many social and technical challenges that the nation faces in order to improve distance education (Aljabre, 2012). These challenges are related to the Saudi teaching system, the resistance to technology and the youth revolution (Smith & Abouammoh, 2013; AlMegren & Yassin, 2013; Quraishi, 2012).

The transition from a classroom-based education system to a technology-integrated one is complicated and requires both the instructors and the students to make adjustments to their practices and expectations (AlMegren & Yassin, 2013). In conventional Saudi education, rote learning was used as the main pedagogical approach (Smith & Abouammoh, 2013). The teachers were viewed as the only source of information transformers in the classroom (Alrashidi, 2014). Therefore, the “absence” of the teacher may be one factor contributing to students’ reluctance when faced with distance learning (Aljabre, 2012). As such, Saudi educators have acknowledged that there is a need to shift the higher educational philosophy to a more learner-centered approach in order to meet the needs of 21st century learners (Alrashidi, 2013).

Furthermore, Saudi Arabia has been slower than many countries to move into online learning due to its very short history of using the technology for education (Al-Khalifa, 2009). The learner’s lack of prior knowledge of technology (particularly amongst the older generation of Saudis) was the major factor that limits the acceptance of e-learning by

students (Abbad et al., 2009; AlMegren & Yassin, 2013). Moreover, the society's low self-esteem with regards to the use of technology was also related to the low degree of public awareness of e-learning (Mirza & Al-Abdulkareem, 2011). One reason for the low level of public awareness was the government's initially passive attitude towards e-learning (Ibid). Additionally, the online degree was seen as offering fewer job opportunities and as not being comparable to conventional degrees (Al-Kahtani et al., 2006). All of these factors led to concerns about quality; indeed, until very recently, there was still a strong resistance to online distance learning, especially in the national accreditation agency (Bates, 2009). For example, Saudi Arabia first approved distance learning degrees in 2010, but restricted the degrees to those obtained from only three Saudi universities, namely King Abdulaziz University in Jeddah, King Saud University in Riyadh and King Faisal University in Al-Hasa (Al-Asmari & Khan, 2014). Distance learning degrees obtained from other Saudi universities as well as international universities like MIT, Harvard and Stanford in the US and Oxford in the UK were rejected by the Saudi Arabian government (Ibid). Thus, Saudi students were not able to use an online degree to qualify for a government job (Al-Asmari & Khan, 2014).

The demographics of Saudi Arabia contribute greatly to their educational needs. Roughly 65 percent of the nation's 30 million people are under the age of 35 (Quraishi, 2012; Alrashidi, 2014; Hamdan, 2014a), and the percentage of Saudi youth is expected to grow by a third every eight years (Al Megren & Yassin, 2013). At the same time, demand for higher education is also increasing, as a national report published by the Saudi Arabian Ministry of Higher Education revealed that this demand increased by over 479% between the 2005 and 2009 school years (Aljaber, 2018). Even though not all high school

graduates will want to pursue higher education, this nevertheless results in thousands of students potentially being shut out of universities every year. For example, in 2011, there were 54,000 more high school graduates than there were new spaces in the universities (360,000 graduates versus 306,000 spots) (Ghamdi et al., 2011). Similarly, in 2013, there were 380,000 high school graduates and only 360,000 students were accepted by the universities; therefore, about 20,000 students were not able to pursue higher education (Alturki, 2014). Even if it is assumed that not all high school students will be interested in higher education, this still represents in a large discrepancy between potential demand and availability. These students' educational needs can be met through online education, which increases the total number of students who can be enrolled in Saudi universities without needing to increase the physical capacity of the universities and associated facilities (Hamdan, 2014a).

2.6 Online Collaborative Learning and Saudi Arabia

As mentioned earlier in this chapter, collaborative learning was based on a social constructivist pedagogy that supported the strategy of a learner-centered approach through social interactions with peers for the purpose of improving learning skills (Maina et al., 2015). Although there have only been a few such studies, these studies nevertheless uncovered important information about the influence of online collaborative learning in Saudi education (Alkalaf et al., 2013; AL-Ismaiel, 2013; Alghamdi, 2013; Hamdan, 2014a; Alzahrani, 2017). In particular, these studies revealed the initiative that Saudi higher education officials are taking toward online collaborative learning strategies. For example, Hamdan (2014a) asserted that the online learning environment has contributed to the shift in the learning culture of Saudi students with engagement in critical thinking and self-directed learning surpassing the rote-learning tradition. Barhoumi and Kabli

(2013) also indicated that collaborative e-learning in Saudi universities fostered the development of knowledge construction through discussion, social interaction, illumination of ideas and evaluation of other learners' thoughts.

Alkalaf et al. (2013) revealed that students' dissatisfaction about online collaborative learning in their study was not because of a lack of available tools (i.e., chat rooms and discussion boards); rather, this research showed that the design of e-courses had not made effective use of these collaborative tools. About half of the responding students stated that they were not required by their instructors to collaborate with their peers, while the students who were required to collaborate tended to report more positive responses to e-learning experiences (Ibid).

Similarly, the purpose of Al-Ismaiel's (2013) study was to explore student collaboration in Saudi higher education through the use of online collaborative tools (in a blended learning context). The study showed that students did not make sufficient use of online collaborative learning tools as they did not use the feedback of their instructor and peers to develop their final tasks (Ibid). The researcher concluded that the students' inadequate use of the online collaborative tools might have resulted from cultural factors, namely preference for face-to-face learning, lack of experience using online tools for learning, lack of using collaborative learning and their learning backgrounds of a teacher-centered learning approach (Ibid). Therefore, the researcher recommended that instructors should be encouraged and supported to use online collaborative tools for their teaching strategies (Ibid). In conjunction with this, the students also should be mentored on how to use the collaborative tools most effectively in their courses (Ibid).

Alghamdi (2013) also examined the use of online discussion boards and found that they improved students' achievements and learning in higher education. She recommended that instructors at all levels, and especially those in higher education, should engage students in discussion boards (Ibid). Furthermore, the careful planning of a pedagogy that aligns with the learning objectives was a significant element that could help to ensure the effectiveness of the course and the teaching strategies (Ibid).

Another study conducted by Alaulamie (2014) explored one of the online collaborative models (community of inquiry) in an e-learning program at one of the largest Saudi universities. The study sought to determine whether its three elements (cognitive, social, and teaching presence) were significant predictors of overall student satisfaction about the online program. She indicated the importance of the CoI elements in predicating Saudi students' satisfaction in the online program. She recommended using the CoI model to examine whether the model itself was being used in Saudi learning programs and, if it was being employed, to explore the importance of the CoI model in Saudi online learning programs. She asserted that this would be best accomplished by interviewing faculty and students.

Finally, a recent study by Alzahrani (2017) investigated the effect of using discussion forums in Arabic blended learning courses on male students' achievements at a public university in the Western region of the Kingdom. The study indicated that using the discussion forums was likely to lead to higher grades (Ibid). The possible reasons for this included the social interaction and collaborative nature of the discussion forums. Additionally, the active learning required in blended learning courses likely contributed to increased achievement. Tools such as the discussion forums require participation as

part of the grade, which supplements more traditional learning methods (Ibid). However, the study also indicated that contextual dimensions needed to be considered because they can affect how the discussion forums influence students' achievement (Ibid).

In summary, while each of these studies has made important contributions to the field, they also each have limitations in their approaches that could be addressed in future research. In many cases, these studies were particularly limited by small sample sizes. For example, Alkalaf et al.'s (2013) study utilized a mixed-method approach. Questionnaires were used to collect information from students and interviews were conducted with only 6 faculty members from two Saudi universities offering online learning. The purpose of their study was to gain a general understanding of online learning in Saudi Arabia, especially the use or non-use of online collaborative tools and methods, and students' general attitudes about online learning.

However, qualitative methods were the most common across the majority of the studies. Al-Ismaiel's (2013) study used qualitative research methods including interviews and observation strategies to examine the students' interactions with the online collaborative learning tools. In addition, quantitative research with 155 students was conducted in Alghamdi's (2013) study to examine the students' perceptions toward the use of online collaborative tools as well as in Alaulamie's (2014) study. Alaulamie used a quantitative research method to determine to what extent the three elements of community of inquiry model (cognitive, social, and teaching presence) predicted the students' overall satisfaction about their online learning program. Furthermore, Alzahrani's (2017) study used quantitative analysis to examine 138 undergraduate students from one university in the West region of Saudi Arabia. The study sought to

examine the effects of discussion forums on students' learning and achievement. The analysis revealed that there were significant and positive relationships between student participation in discussion forms and their final grade.

In general, all of the abovementioned studies examined the students' perceptions and attitudes toward utilizing online collaborative learning tools; however, these studies were limited by the fact that they did not examine the instructors' readiness to emphasize online collaborative learning within the Saudi higher education. Additionally, the small scale of many of these studies means that much of the research was anecdotal. This study addresses this gap in research by applying qualitative research methods to both instructors and expert designers from the Ministry of Education to explore the current online learning models used the Saudi distance education.

2.7 Ethical concerns

To foster the community of online collaborative learning, ethics should be taken into consideration (Demiray & Sharma, 2009). This section starts by defining the ethical issues that are associated to the environment of distance education. Then, further detail about the e-learning ethical issues related to social, political, cultural, accessibility and legal concerns will be presented. Lastly, the stage of considering e-learning ethics within the Saudi higher education will be indicated.

E-learning ethics are "focused on ethical issues connected to the use of technology within education contexts" (Luppicini, 2009: 100). It has been indicated that the level of unethical behaviours might increase with greater use of information technology (Gearhart, 2001). This was because of "psychological distance", which is when online acts seem less personal because the individuals involved could not be seen or heard (Ibid). Within an e-learning context, unethical behaviours included hacking,

infringing on intellectual property rights, copyrights, plagiarism and cheating (Gearhart, 2014; Abu-Shaqra & Luppicini, 2016; Panda & Santosh, 2017; Strangfeld, 2019).

In addition to the possible increase in unethical behaviours, other issues within online learning relate to social and political influence, cultural diversity, learner diversity, etiquette, the digital divide and accessibility and legal issues (Khan, 2005, 2012; Corbeil et al., 2018). Khan (2005, 2012) noted that the political, religious and social traditions of a specific country could have an impact on e-learning content, student activities or teaching strategies. As e-learning is accessible to learners around the globe, it is important to consider the cultural diversity of one's students in order to enhance the learning environment (Anderson & Simpson, 2007). When designing online course elements of diverse cultures, ways of communication, language and symbols should be taken into consideration (Wang & Reeves, 2007). For example, the online communication style of the Eastern collectivistic presented the culture through the use of collective pronouns "we" or in expressing loyalty to an individual's group, while the online communication style of the Western individualistic presented the culture through the use of individualistic pronoun "I" and present personal achievements (Ghanem et al., 2013). Additionally, in some countries there is a strong tradition of the authoritarian role of the teacher as he/she is considered the only source to transmit knowledge to students whereas the views of classmates are counted as unimportant (Bates, 2015). Therefore, these students face challenges when participating in online collaborative learning contexts and need extensive attention from their instructors (Ibid). E-learning should be designed to accommodate the different learning styles of students, such as visual/verbal (students prefer to read materials), visual/non-verbal (use of diagrams and graphs) or

audit/verbal (students prefer listening) (Khan, 2005, 2012). Moreover, instructors should also familiarize themselves with different cultural etiquettes, so as to maintain good manners in online learning communications (Buelens et al., 2007).

Another ethical consideration is the digital divide issue, which refers to the gap between those who have Internet access at home and those who do not (Simpson, 2009; Haythornthwaite & Andrews, 2011). It can also refer to the different Internet speeds available in different geographic regions, where some countries have broadband or high-speed Internet services, while others only have dial-up connections via phones (Luppicini, 2010b). Access for students with disabilities and designing courses to meet the particular needs of these students should also be considered (Reamer, 2013; Gearhart, 2014). Lastly, universities should also develop e-learning policies (i.e., privacy, plagiarism and copyright) during the early formation of the programs in order to make expectations clear to students and instructors (Gearhart, 2009).

Indeed, privacy, plagiarism and copyright infringement are serious ethical issues in an e-learning context (Khan, 2005; Demiray & Sharma, 2009; Luppicini, 2010b; Reamer, 2013; Panda & Santosh, 2017; Strangfeld, 2019). In relation to student privacy, one of the important factors of online collaborative learning models is the use of discussion forums as a core component of teaching (Bates, 2015). Some of the students may choose to share personal information in these discussion forums and subsequently run the risk of their written communications being disclosed by their classmates on the Internet (Harper & Luck, 2009; Reamer, 2013). Therefore, educational administrators and instructors should make an effort to protect students' privacy and confidentiality (Khan, 2005). Instructors should inform the students about their obligations to their classmates

and should implement a set of principles and guidelines concerning student privacy (Reamer, 2013).

Plagiarism was one of the most common misuses of the Internet by students (Khan, 2005; Demiray & Sharma, 2009; Luppicini, 2010b; Gearhart, 2014; Strangfeld, 2019). Thus, e-learning institutions should provide students with clear information regarding their policies on plagiarism (Gearhart, 2009). Khan (2005) suggested that in order to avoid plagiarism, the design of the assignment should be challenging and personal to encourage students to focus on their own ideas and link them with the thoughts of other people in an appropriate way. Proper citation was another key element in avoiding plagiarism and consequently protecting the copyright of others' work; this needs to be addressed in the online-learning setting so that students have clear guidelines and expectations (Luppicini, 2010b; Smith, 2012). Additionally, instructors, administrators, guest speakers and students should be aware of copyright issues and their applications in e-learning, ensuring that all copyright permissions are acquired when using the work of others (Khan, 2005). For example, it is important to consult the owner of any information on the Internet (i.e., postings from discussion forums or email messages) to request permission for its use and to ascertain its validity (Ibid).

Ultimately, because Saudi Arabia has a short history of online learning, few studies have addressed the ethical concerns in relation to e-learning contexts (Titi et al., 2013; Muhammad et al., 2013; Muhammad et al., 2014). As Hamdan stated, "despite such [ethical] concerns, it appears from this research study that few concrete measures are being undertaken to address them" (2014a: 327). Given Saudi Arabian religious cultural values, the focus of Titi et al.'s (2013) study was to integrate ethical guidelines in

e-learning from the main sources of Islam (i.e., the Quran and the Sunnah of the Prophet Muhammad), which placed great importance on the adherence of moral values (Muhammad et al., 2013). Thus, there is a need for designing e-learning tools and applications to be based on Islamic principles (Muhammad et al., 2014).

2.8 Chapter Summary

Overall, the literature review identifies the key studies that have examined the significance of online collaborative learning in enhancing students' learning. In particular, these studies explored how students engage with each other in online discussions to achieve common learning goals. Moreover, previous studies have shown how the Saudi cultural and social values have influenced the delivery of the e-learning context in a way that makes it unique compared to other countries. However, it is also clear that a gap still exists in the literature in regards to studying and exploring online collaborative learning in the Saudi universities. While some studies have recently highlighted the importance of online collaborative learning in Saudi universities (Alghamdi, 2013; Alkalaf et al., 2013; AL-Ismaiel, 2013; Hamdan, 2014a; Alzahrani, 2017), the issue still needs to be explored further. In particular, the current trend towards online learning within Saudi higher education needs to be examined to better understand the opportunities and limitations of Saudi Arabian distance education. In addition, due to the fact that online learning has only recently emerged in Saudi Arabia, there has only been limited research into ethical concerns specifically related to the e-learning context (Titi et al., 2013; Muhammad et al., 2013; Muhammad et al., 2014). Therefore, there is a need to explore this area further in this study.

Chapter Three: Methodology

This chapter outlines the methods employed in this study by highlighting the perspectives of qualitative case study research design, selection of data, role of the researcher, data collection, data analysis, and overview of the code development process. Additionally, trustworthiness and ethical considerations are also discussed in this chapter.

3.1 Research Design

A qualitative case study research design was utilized for this study. The history of the qualitative research is extensive, formally disciplined by ethnographers, social psychologists, historians and literary critics over the last centuries (Stake, 1978; Bogdan & Biklin, 1982; Stake, 1995). Denzin and Lincoln (1994) defined qualitative research as a “multimethod in focus, involving an interpretive, naturalistic approach to its subject matter” (2). Likewise, Creswell (2009) defined qualitative research as a means for investigating and interpreting the meaning individuals or groups assign to a social or human problem. It relies primarily on human perception and understanding (Stake, 2010). This means that qualitative researchers emphasize viewing the world from the perspective of the participants in their studies and adopting a more holistic approach (studying the whole person, organisation, or culture rather than one small measurable criteria of it) (Jackson et al., 2011). These perspectives turn the world into a series of representations, including fieldnotes, interviews, conversations, photographs, recordings and memos to the self (Denzin & Lincoln, 2011). At this point, qualitative research incorporates an analytical, naturalistic approach to the world (Ibid). Its emphasis is on conducting detailed investigations of particular cases that appear in the natural flow of social life (Neuman, 2011a).

Qualitative research embraces the studied use and collection of several empirical materials—case studies, personal experience, artifacts and cultural texts and productions, along with observational, historical and visual texts—to interpret routine and problematic moments and meanings in people’s lives (Denzin & Lincoln, 2011). The type of research design that was conducted in this qualitative research was a case study. The case study approach that was used as part of the research design of this study was mainly defined by Merriam (1988), Stake (1994, 1995), Neuman (2007) and Creswell (2007, 2009, 2013). A case study is an investigation of particular phenomenon like a program, situation, person, process, organization or social group (Merriam, 1988). Stake (1994) defines a case study as “the process of learning about the case and the product of our learning” (237). Moreover, Creswell (2007) indicates that case study “involves the study of an issue explored through one or more cases within a bounded system (i.e., a setting, a context)” (73). Thus, the study of cases tends to generate complex interpretation in the shape of an unfolding plot or a narrative story about specific individuals or events (Neuman, 2011a). Therefore, a qualitative case study can be described as an intensive, holistic interpretation and analysis of a specific incident in a particular context (Merriam, 1988).

Although Stake (1994, 1995) argued that case study research is not a methodology but rather *a bounded system* (in that it is restricted by a particular time, site and activity), other qualitative studies researchers identified it as either a methodology or a comprehensive research strategy (Denzin & Lincoln, 2005; Creswell, 2007; Yin, 2009; Creswell, 2013; Creswell & Poth, 2018). Creswell and Poth (2018) identified the case study research as “a qualitative approach in which the investigator explores a real-life, contemporary bounded system (a *case*) or multiple bounded systems (cases) over time,

through detailed, in-depth data collection involving *multiple sources of information* (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a *case description and case themes*” (96). For this study, the researcher explored a real-life context (online learning delivery in Saudi universities) in multiple sites (West, Center, East, North and South regions) using multiple sources of information (interviews and documents) and reported a case description of the state of distance education in Saudi universities.

Like any research design, case studies have their own benefits and drawbacks. However, Merriam (1988) stated that the strengths of a case study design outweigh its limitations. With regard to its strengths, a case study provides detailed exploration of a specific case that is related to a real-life situation (Neuman, 2011a). It also offers a means of investigating complex social components that consist of multiple variables (Merriam, 1988), and its inductive approach emphasizes gaining insights from the data collected as it considers matters related to the richness, texture and feeling of raw data (Eid, 2011). Finally, it builds on the readers’ knowledge as it presents holistic and lifelike descriptions similar to those the readers may experience in their own lives (Lincoln & Guba, 1985).

On the other hand, a case study research design has its limitations. First, it can simplify or exaggerate a situation, which may lead the reader to draw inaccurate conclusions about the actual circumstances (Merriam, 1988). It also can be limited by the sensitivity and integrity of the investigator as it is subject to his/her biases (Ibid). In addition, failing to decide “boundaries” of the case—how it might be restricted in terms of time, events, and process—may create challenges to conducting the case study

research; therefore, the researcher needs to set appropriate boundaries surrounding the case (Creswell, 2007).

The type of case study that was used in this research is known as a collective or multiple case study (Stake, 1994, 1995), because the research was conducted at several universities around Saudi Arabia. In a collective or multiple case study, one issue or concern should be selected, and then the investigator selects multiple case studies to clarify the issue (Creswell, 2007). Most of the time the investigator intentionally selects multiple case studies to show different perspectives on the issue (Creswell, 2007). Yin (2014) indicated that multiple case study design employs the logic of replication as the investigator replicates the processes for each case. Some of the replications might duplicate the exact conditions of the original experiment, while others might change one or two experimental conditions (Ibid).

Because the context of each case is different, qualitative scholars are unwilling to generalize from one case to another (Creswell, 2007, 2013). According to Stake's clarification, the reasons behind avoiding generalization were that "certain activities or problems or responses will come up again and again" (1995: 7). Therefore, the investigator needs to select representative cases for inclusion in the qualitative study (Ibid). This method helps to understand a particular case in depth rather than knowing what is generally true of the many (Merriam, 1988).

In this research, the case study design has been chosen to explore the state of distance education in Saudi universities with a focus on teaching and learning while taking into consideration the Saudi cultural values. This case study design allowed this issue to be explored in-depth throughout the interviews and supporting documents.

3.1.1 Justification for Research Design

The qualitative case study research design was chosen for this thesis because this type of design is suitable for exploring a problem within a context about which little is known (Creswell, 2007); in this case, that context is the state of distance learning in Saudi higher education. As distance learning only emerged in Saudi higher education in the early 2000s, there are gaps in the literature which can only be understood by conducting qualitative research. This research design is also well-suited for this study because qualitative research seeks a complex, detailed understanding which can only be established by talking directly with individuals; this study explores the insider perspectives of teaching staff, educational developers and expert designers from the Ministry of Education by conducting interviews as the central method of data collection (Creswell, 2013).

A case study approach was then selected because it allowed the researcher to examine the specific details about the strategies and principles used to deliver distance education in the Saudi universities. Investigating the strategies and principals of delivering distance education in Saudi universities involves complex procedures; therefore, it was convenient to use a case study approach to explore this particular context. In addition, the data collection of this study involved multiple sources of information (interviews and documents), which made it consistent with the structure of case study approach. Finally, a case study can also provide a wealth of information, which makes it possible to interpret specific situations comprehensively; thus, the researcher endeavored to seek out the complexities of the case and contribute to expanding knowledge about the state of distance education in Saudi universities.

3.2 Data Selection

Sampling is part of data selection in qualitative research. It involves the determination of the research site, time, people and circumstances (Merriam, 1988). More specifically, sampling in qualitative research reveals new theoretical insights, discloses distinguishing aspects of people or social situations, and expands the understanding of complex circumstances, events, or relationships (Neuman, 2011a). This is possible because the essential concern of qualitative research is to find cases that enhance what the researchers learn about social activities in a specific setting (Neuman, 2007); therefore, they tend to use nonprobability sampling to achieve this purpose (Ibid). As such, nonprobability was used as the sampling strategy for this study. Nonprobability sampling means that “each unit of analysis in the population does not have an equal chance of being selected for the sample” (Eid, 2011: 10). It is the method of choice in qualitative case studies as it helps the researcher to discover and gain insights from the selected sample that is believed to be able to reveal the most (Merriam, 1988).

Quota and sequential strategies were used as part of nonprobability sampling. Quota as a sampling strategy that refers to “fulfilling a preset number of units in each of several predetermined categories that reflect the diversity of the population, using hazard method [hazard method means gaining units in a way that is convenient]” (Eid, 2011: 10). In other words, by using quota sampling, the researcher first determines relevant categories among the population he/she was sampling to capture diversity among units (Neuman, 2011a). Next, the researcher decides how many cases to obtain in each category (Neuman, 2007). For example, in quota sampling, the researcher first identifies

relevant categories among the population he/she is sampling to capture diversity among units (i.e., male and female; or under age 30, ages 30 to 60, over age 60) (Neuman, 2014). Then, the researcher determines how many cases to get for each category, and thus fixes a number of cases in various categories of the sample at the start (Ibid). Nevertheless, quota sampling ensures that a sample has some diversity (Ibid). In the present study, the determined categories were male and female online instructors from the Saudi universities (West, Center, East, North, and South sites). For each category, four instructors from each site were chosen. In addition, the determined category from the National Center for e-learning (NCeL) in the Ministry of Education was male and female educational developers and expert designers; the number of the cases for each of these categories was also four. However, one of the drawbacks of quota sampling is that fixed number of cases in each category may not actually reflect the proportion of cases in the total population of the category (Neuman, 2011a). Thus, determining only four university instructors from each site of Saudi Arabia might not be enough to reflect the perspectives of the total instructors in each site. Therefore, sequential sampling was considered in this study.

Sequential sampling strategy refers to gaining cases until there is no additional information or new characteristics (Eid, 2011; Neuman, 2007). According to Neuman (2014), “sequential sampling is a nonrandom sample in which a researcher tries to find as many relevant cases as possible until time, financial resources, or his or her energy is exhausted or until there is no new information or diversity from the cases” (276). In sequential sampling, the researcher continues to gather cases until the amount of new information ends or a certain diversity of cases is reached (Ibid). Thus, one of the major

advantages of sequential sampling is that it has limitless options in terms of the sample size selection, which allows the researcher to make minor changes and adjustments through the initial part of the study in order to correct and enhance the research method (Etikan et al., 2017). However, the sequential sampling method cannot be used to represent the entire population, even with a large sample size, nor can it be used to create conclusions or make decisions about the entire population (Ibid).

Neuman (2011a) also stated that “the principle [of sequential sampling] is to gather cases until we reach a saturation point” (333). Saturation refers to a situation in data analysis where the participants' examples become repetitive and confirm previously collected data (Jackson et al., 2011). When the researcher believes that data analysis has reached saturation, this is a sign that data collection is complete, because no new information is being added (Ibid). It is commonly taken to indicate that, since the data that has already been collected or analysed, further data collection and/or analysis is unnecessary (Saunders et al., 2018). Saturation of data gives the researcher confidence that the explanation of the phenomenon has been captured (Jackson et al., 2011). In this study, the researcher continued to gather information from the participants at Saudi universities and the National Center for e-Learning until saturation was reached.

In terms of selecting the data, interview participants and documents for the study, the researcher made use of criterion, quota and sequential strategies, as part of the nonprobability sampling approach. First, criterion and quota strategies were used in the selection of interview participants. The researcher recruited participants based on certain criteria, which Neuman (2007, 2011a) argues is a valuable strategy for assuring the quality of the study. In this study, the criteria were that instructors from the Saudi

universities needed to have had a minimum of two years of online teaching experience within the Saudi Electronic University (SEU) or any other university that offered online learning programs. Similarly, participants from the National Center for e-learning (NCeL) were also required to have a minimum of two years' experience involving the delivery and managing of online learning in Saudi universities. Second, a request email (in Arabic and English) was sent to Saudi universities from West, Central, East, North and South regions in order to obtain permission for conducting the study at their universities (see Appendix A: Permission Text). Another request email (in Arabic and English) was sent to the NCeL to obtain permission for conducting the study at their center. In addition, the researcher asked the Saudi universities and NCeL for suggestions of individuals who fit these criteria and who might be willing to participate in the study.

In cases when the researcher received permission to conduct the study without a list of interested participants' names, prospective participants were recruited via an invitation message sent to their email addresses, available in their institution's website. The email briefly explained the study and invited them to participate in a voluntary interview (see Appendix B: Recruitment Text). Follow-up reminders were made by email and telephone. Then, the best possible choice of participants was made by the researcher using the criterion and quota strategies. The researcher did receive acceptance from individuals who were willing to participate but did not meet the criteria because they had fewer than two years of experience. In this case, the researcher declined to include them in the study, and only included those who met all the criteria.

In addition, documents were identified through the use of criterion and quota strategies. The first criterion that the researcher determined for the documents was that

they had to be written in Arabic and English, since the Saudi universities and NCeL are Arab institutions and English is the second language used there. English and Arabic were also the languages used to conduct this study. Moreover, the researcher requested insider (published) documents from the participants concerning the strategies and principles used by the Saudi universities to deliver online learning. Furthermore, the researcher explored the posted information and published documents on the website of the NCeL and universities that agreed to conduct the study with their staff, as well as other peer reviewed articles and articles available on Google and the databases.

Quota and sequential strategies were also employed in the selection of the documents. This means that general topics were identified by the researcher and then relevant cases were selected until there was no new information or new diversity from the cases (Neuman, 2011a; 2014). The majority of documents identified using these approaches were those posted on the websites of the NCeL, SEU and KAU, as well as the peer reviewed articles. The researcher was able to obtain electronic copies of them online.

3.3 Role of the Researcher

In a qualitative case study, the investigator or the researcher is the essential instrument for gathering and analyzing data (Merriam, 1988). According to Stake, “the most valuable instrument for qualitative research is the researcher—experiencing an event or listening to a person with special experience or browsing through records” (2010: 101). It is the researcher who applies his/her skills, patience and wisdom to obtain the necessary information during data collection and who uses these elements to produce a rich qualitative study (Morse, 1994). That is because he/she is commonly involved in a maintained and intensive experience with the participants (Creswell, 2009). Although the

competent researcher is guided by what the case may indicate, the understanding of the case is shaped by the researcher (Stake, 1994). In addition, the researcher has an obligation to provide high-quality analysis so that the analysis can provide useful information to the reader and may inform subsequent studies (Stake, 1995).

With this in mind, it is important that the researchers explicitly identify and reflect upon their biases, values, and personal background (such as gender, history, and culture) that influence the way that their interpretations are shaped during a study (Creswell, 2009, 2014). Furthermore, the researcher's role is also shaped by having access to a research site and by addressing any ethical issues that might arise (Ibid). This can be accomplished through including statements about the researcher's past experiences with the research problem or with the participants in order to help the reader to understand the connection between the researcher and the study. These factors may include the researcher's past education, work experiences, ethnicity, race, or any other demographics that connect the researcher directly to the study (Creswell, 2014). The researcher should explicitly explain how these experiences may possibly shape the illustrations the researcher makes during the study. For instance, personal experience may make the researcher lean toward particular themes and draw positive or negative conclusions about the sites or participants (Ibid). The researcher also needs to designate the steps taken to gain permission from the Institutional Review Board to protect the rights of human participants; this is done by attaching the approval letter from the IRB as an appendix that clarifies the process involved in securing permissions (Creswell, 2009). Finally, the researcher needs to address the sensitive ethical issues raised during the study, which might involve steps such as masking participants' names, places and activities; the

research should also discuss the process of masking this information (Creswell, 2009, 2014).

In the current study, the researcher was born and raised in Saudi Arabia, and was educated there until she finished her undergraduate studies. Then, she worked as an instructor in Saudi Arabia for one and a half years in a university and one and a half years in a high school, before she pursued her graduate studies in Canada. Consequently, her past experiences as both a student and teacher in the Saudi educational system are central to her interest in working on that topic for her dissertation.

However, the researcher was never involved in the Saudi distance education, either as a student or as a teacher. In recognition of these influential aspects of her background, a researcher journal was used for the duration of the study. This technique was suggested by Lincoln and Guba (1985) to help the investigator reflect on the research by recording a variety of information about the self and the methods. Personal logs of the researcher (a kind of diary) were recorded throughout the research process which included several kinds of entries like reflexive and introspective notations about the researcher's mind in relation to what was happening in the field of Saudi distance education (Ibid).

3.4 Data Collection

Qualitative researchers usually utilize multiple data collection methods in a single study (Eid, 2011). The objective of using more than one data collection method in qualitative study is “to have the discovery lead the choice of method rather than the method leading the discovery” (Jackson et al., 2011: 241). Qualitative case studies rely heavily on qualitative data gained from interviews, observations and documents (Merriam, 1988).

These methods support the production of empirical materials and theoretical interpretations of the world (Denzin & Lincoln, 1994). The data collection procedures involve setting the boundaries for the study, gaining information through unstructured or semi-structured observations and interviews, documents, and visual materials, along with conducting the protocol for recording information (Creswell, 2009, 2014). This study is based on multiple data collection methods, specifically interviews and documents.

First, conducting interviews is the common means of collecting qualitative data (Merriam, 1988). The interview generates situated understandings formed in a specific interactional occasion (Denzin & Lincoln, 1994) in which the interviewer elicits behaviours from a respondent (Denzin, 1978). During the interview process, the researcher puts the participant at ease, having some sense of what he or she wants to know, but not being either rigid or mechanical in method (Eisner, 1991). In qualitative case study research, the main objective of an interview is to gain a particular kind of information, as the researcher wants to discover what is “in and on someone else’s mind” (Merriam, 1988: 72). Specifically, the fundamental purposes of conducting interviews in qualitative case study research are to gain unique information or interpretation, to gather a numerical aggregation of information, and to discover “a thing” that the researchers were unable to observe themselves (Stake, 2010). Interviews were central features of this study because it sought to understand the state of distance learning in Saudi higher education that was not visible to the public. Therefore, the only way to gain access to this information was by conducting interviews.

In this study, interviews were chosen as the main source of data collection because they allowed the researcher to both reach individuals (instructors from the Saudi

universities as well as expert designers and instructional developers from the NCeL) as well as to have access to data that was otherwise impossible to obtain. Therefore, in-depth, one-on-one interviews were conducted to collect data of this study. In-depth interviews were carrying on “to solicit people’s descriptions and explanations of events taking place in their own environment” (Eid, 2011: 10). The researcher conducted interviews with eighteen male and female instructors (seven from the West side of Saudi Arabia, four from the Central region, one from the East side, two from the North side, and four from the South side). Moreover, the researcher conducted one-on-one interviews with four expert designers and instructional developers from the NCeL in Riyadh who played or were playing significant roles in the delivery and management of Saudi distance education. In addition, the researcher conducted one-on-one interviews with six Blackboard trainers and instructional designers from three sites in Saudi Arabia (four in the Central region, one in West side, and one in the North side). These interviews with participants were conducted one-on-one via Skype, Zoom, or through cell phone applications such as WhatsApp, Soma, Imo, Yee Call, which was selected based on the preference of the participants. This was because as a female researcher, she was not able to conduct face-to-face interviews with male participants, due to cultural constraints. Therefore, the only way to reach the male participants was by conducting online interviews. To keep the method of collecting data consistent, the research also conducted online interviews with the female participants. The interviews had a semi-structured, open-ended format, and were intended to be in a maximum duration of one hour. The average length of the interviews was one hour, sixteen minutes and thirty seconds.

Interviews were conducted over a period of approximately seven months, between November 2, 2017 and May 30, 2018.

To perform the interviews, the creation of an interview protocol was required (see Appendix C: Interview Protocol), which contained ten open-ended questions, accompanied by probes as needed, which helped guide the researcher-interviewer. The interview questions, which were motivated by the research questions as suggested by Merriam (1988) and Stake (1995, 2010), were refined for relevance and clarity through an informal pilot testing completed with five colleagues of the researcher prior to the start of the interview meetings. The conduct of the interviews also contained establishing a rapport with participants, audio-recording the interviews, observing, taking notes of participants' responses, and making complete and accurate transcripts of all interviews. The participants were given the opportunity to review their transcripts for the accuracy of the information provided during the interview meetings. A secure electronic document was sent to them via email and they had the chance to review the information for its accuracy, which was expected to take approximately fifteen minutes of their time.

Second, documents are another method of data collection. Documents were defined by Merriam as "a ready-made source of data easily accessible to the imaginative and resourceful investigator" (1988: 104). In other words, they can be accessed at any time convenient to the researcher (Creswell, 2009). The type of the documents could be both public documents (i.e., newspapers, minutes of meetings, official reports) and private documents (i.e., personal journals and dairies, letters, e-mails) (Creswell, 2014). Document data is particularly valuable for qualitative case studies because it can establish an investigation within a specific context and provide details about the problem being

investigated (Merriam, 1988). Moreover, it is valuable because it is always available at a low cost (mainly the investigator's time), it is a stable source of information (it accurately reflects situations happened in the past), it is a rich source of information (it appears in the natural language of the setting it represented), it is legally unassailable (it represents formal statements which satisfy some accountability requirements) and, unlike human respondents, it is nonreactive and unobtrusive source of information (Lincoln & Guba, 1985).

As Lincoln and Guba (1985) and Merriam (1988) indicated, documents can provide a historical perspective of distance learning in the Saudi higher education that can be analyzed and reanalyzed without enduring changes through out the process. The process of gathering documents started prior to the start of the interviews, and continued after the end of the last interview. Specifically, the documents were collected between March 2017 and December 2018.

The types of supporting documents gathered during the data collection process included strategies and principles used by the Saudi universities to deliver online learning, reports, studies, maps, news, conference proceedings, peer reviewed and online articles (see Appendix E: Documents List). An estimated 150 documents were used in the research. These documents were obtained through several methods. First, the researcher collected insider (published) documents (in English and Arabic) from the participants which were not available to public. Second, the researcher analyzed posted strategies, principles, reports and conference proceedings of online education on the websites of institutions (SEU, KAU, and NCeL) that gave the researcher the permission to conduct

the study in their sites. In addition, relevant peer reviewed and online articles available on Google and various databases were also collected.

3.5 Data Analysis

One of the vital stages in the research process is being able to comprehend the collected data (Merriam, 1988; Eid, 2011). According to Huberman and Miles (1994) data analysis involves three subprocesses: data reduction, data display, and conclusion based on drawing and verification. In a qualitative research design, analysis is considered to be an “ongoing process involving continual reflection about the data, asking analytic questions, and writing memos throughout the study” (Creswell, 2009: 184). In other words, qualitative data analysis is a cyclical procedure of questioning and verifying the findings (Jackson et al., 2011). The intention of analyzing data in a qualitative study is to make sense out of text and image data (Creswell, 2014). Data can take the shape of a text format from documents, open-ended interview transcripts, observational notes, physical artifacts, audio- or videotapes, and images or photos (Neuman, 2011a). As stated by Creswell & Poth (2018), data analysis “involves organizing the data, conducting a preliminary read-through of the database, *coding* and organizing *themes*, representing the data, and forming an *interpretation* of them” (181). The data analysis processes for this case study research were mainly drawn from Merriam (1988), Miles and Huberman (1994), Neuman (2007, 2011a), Eid (2011), Saldaña (2013), Creswell (2009, 2013, 2014) and Creswell & Poth (2018).

First of all, once the collected data was organized and prepared for analysis, the researcher went through it to gain a general sense of the information. Then, the data was analyzed by organizing them into categories on the basis of themes, concepts, or similar

characteristics (Eid, 2011). Next, the researcher used coding methods to interpret and describe the phenomena behind this study. Qualitative coding is a vital part of data analysis because it is guided by the research question and leads to new questions (Eid,2011). Qualitative coding “involves aggregating the text or visual data into small categories of information, seeking evidence for the code from different databases being used in a study, and then assigning a label to the code” (Creswell & Poth, 2018: 190). Additionally, descriptive coding (Saldaña, 2013) was used in the first cycle coding method in this study. In descriptive coding, basic labels (i.e., a word or short phrase) were often used to summarize the topic of a passage of qualitative data (Ibid). As indicated earlier in this chapter, multiple sources of data (interviews and documents) were used as part of the data analysis procedure of this study. Descriptive coding identified a total of 36 themes in the interview data as part of the first cycle coding process.

Between the various coding methods suggested by Saldaña (2013) to analyze descriptive codes, the second cycle pattern coding was found to be a well-suited technique for use in this study. Pattern coding was defined by Miles and Huberman as “a way of grouping those summaries into a smaller number of sets, themes, or constructs” (1994: 69). It searches for rules, reasons and explanation in the data (Saldaña, 2013). This coding method was also indicated by Creswell (2009) to find the most descriptive wording on the topic and turn these words into categories. Most commonly, patterns could be drawn from the research questions and serve as a template for the analysis, while sometimes the patterns could emerge surprisingly from the analysis (Stake, 1995). Patterns support the analysis in moving toward the development of a theory to describe the data’s meaning (Merriam, 1988). In other words, once a pattern in data has been

identified, the researcher needs to interpret it with regard to a social theory or the setting in which it happened (Neuman, 2011b).

In this study, the coding scheme list of descriptive codes contained six categories and thirty subcategories, which was then reduced to five categories throughout the process of pattern coding. The categories were determined through frequency of repetitions in the interview and documents data. While efforts were made during the process of data analysis to ensure that the interview data speaks for itself, the research and interview questions, and the theoretical framework of this study were also used to guide the process of the data analysis. The researcher used theoretical ideas to connect different concepts to each other within set categories (Neuman, 2011b).

Then, the documents were analyzed after the completion of the interview data analysis. Overall, a total of 151 documents were analyzed in this study. These documents were chosen because they related to the themes and categories that emerged from the interview data. Further, the documents often supported the information provided in the interviews, which helped the researcher to identify and draw connections between the interviews and the documents.

Furthermore, it must be noted that the coding approach was employed manually in an individual manner by the researcher for this study. At this point, it is important to illustrate the influence of the researcher in the data analysis process in this qualitative case study research. For example, the interpretations of the researcher were presented in the analysis of this case study. This is based on the study of Huberman and Miles (1994), which indicated that the researcher's background influences the data set that is chosen as

a basis for thinking about its meanings; that is, the conclusion drawn from the analysis is based on the researcher's own interpretations of the displayed data.

After the completion of the first cycle coding process (descriptive coding), the researcher was able to provide a description of the setting in a narrative way in order to describe what happened and then what happened next (Huberman & Miles, 1994). That process of interpretation starts with the development of the codes, the creation of the themes from the codes, and the organization of these themes into broader units to allow the researcher to understand the data collected (Creswell, 2013). In the initial stage of the data analysis process of this study, the researcher presented the context of Saudi distance education delivery by highlighting certain significant themes that were revealed in the interviews. Then, the researcher defined the six categories and thirty subcategories that provided an explanation of the state of distance education in the Saudi higher education system. The categories were organized sequentially, starting with the category that describes the early development of distance education in Saudi Arabia. Then, categories that identify specific factors that influenced distance education in Saudi Arabia such as culture and ethics were explored.

After that, the second cycle coding process (pattern coding) was used as an advanced way of reorganizing and reanalyzing data coded through the first cycle coding process (Saldaña, 2013). This was done through fitting categories with one another to develop a coherent metasynthesis of the data body (Ibid). Thus, the researcher would link his/her interpretation to the larger body of the academic literature developed by others (Creswell, 2013). In this study, the advanced analysis and interpretation were utilized to illustrate and enhance understanding of the state of distance education in Saudi Arabia. In

the last step of the analysis, the researcher delineated the meaning of the case, lessons learned, best practices and recommendations.

3.6 Overview of the Code Development Process

3.6.1 Coding Software

The software tool used to facilitate the coding process in this qualitative study was NVivo 11 (<https://www.vivo.com>). The 12 interviews that were in Arabic were first translated to English by the researcher of this study and then reviewed by certified translators. Next, all interviews were transcribed by the researcher and imported into NVivo 11. After importing the transcripts, the researcher went through all interviews manually and started the coding process by labeling similar concepts and producing categories. Following translation of the Arabic documents, the researcher also imported all documents into NVivo 11. The researcher went through all the documents following the same coding process used to code the interviews. This first produced seventeen categories, which were reduced to six categories and thirty subcategories. Then, an Excel bar chart was created to visually present and sort these categories and compare values across these categories.

3.6.2 Description of the Coders

A revision of the coding scheme was conducted by two E-business graduate students at the University of Ottawa in conjunction with the researcher. Then, formal reliability testing was completed by those research partners. The task was to test the coding of 10% of the interviews (which were 3 interviews) and categorize the content based on the given categories list and coding rule book, with detailed information about code definitions, example codes and coding rules (see Appendix F: Coding Rule Book).

3.6.3 Intercoder Reliability

Following the general development of the coding process above, a formal intercoder reliability test was performed. In a qualitative research study, reliability often refers to the

steadiness of responses to multiple coders of data sets (Creswell & Poth, 2018). After the coders tested the 10% of the interviews using the categorization list and coding rule book, the agreement percentage between the coders was 84%. Then, the coders sat together to resolve the 16% disagreement. The coders examined the disagreed codes, discussed the possible reasons, and then they reached an agreement.

3.7 Ensuring Trustworthiness

The main concern in relation to trustworthiness is how the researcher persuades his/her readers that the findings of the study are worthy of attention and consideration (Lincoln & Guba, 1985). Therefore, several strategies were employed to ensure the trustworthiness of this qualitative study. These strategies included the identification of the researcher's biases, triangulation, thick description, member checking and peer debriefing.

First, at the outset of the study, it is important that the researcher clarifies his/her assumptions, worldview and theoretical orientation that may impact the research inquiry (Merriam, 1988). Clarifying the researcher's bias creates an open and honest narrative that will allow the study to resonate well with readers (Creswell, 2009). This can be done in the form of a personal log that reflects the researcher's thinking in relation to the research topic (Lincoln & Guba, 1985). For this study, bias identification was addressed, including a section about the researcher's self-disclosure (see above in this chapter), which outlined researcher's views, biases, values and personal background.

Second, triangulation strategy uses multiple sources of data or multiple methods to confirm the emerging findings (Denzin, 1978; Merriam, 1988; Lincoln & Guba, 1985; Stake, 1995 Creswell, 2009, 2014; Creswell & Poth, 2018). The rationale of triangulation strategy is that the defects of one data collection method were usually the strengths of

another; by employing multiple data collection methods, the researcher can attain the best of each while overcoming their distinct deficiencies (Denzin, 1978). The technique of triangulation can support in improving the probability that the findings and interpretation of the study could be found credible (Lincoln & Guba, 1985). Thus, multiple data collection methods were employed in this qualitative study, namely interviews and documents. As Stake (1995) indicated, when using multiple data collection methods within a single study, “we are looking to illuminate or nullify some extraneous influences” (114). According to Creswell (2009; 2013; 2014) triangulation of different data sources can be done by taking the evidence from the sources and using it to construct a rationalization for the themes. If the themes incorporate multiple sources of data or perspectives from different participants, then this process can be shown to support the validity of the study.

Third, rich and thick description were employed to convey the findings of this study. Qualitative researchers believe that rich descriptions of the social world are valuable (Denzin & Lincoln, 1994). Stake (1995) defined the technique of thick description as the “description of things that readers ordinarily pay attention to, particularly places, events, and people, not only commonplace description [...], [through] the interpretations of the people most knowledgeable about the case” (102). By employing that technique, a case study researcher can use lots of narrative description when writing the case (Ibid). Creswell (2014) clarified the significance of this strategy, noting that it may “transport readers to the setting and give the discussion an element of shared experience” (202). Creswell and Poth (2018) also indicated that to ensure that the findings are transferable between the researcher and those being studied, thick description

is necessary. When qualitative researchers afford detailed description of the setting, the outcomes become more realistic and deeper, which can add to the validity of the findings (Creswell, 2009). Therefore, the researcher utilized the thick description strategy to write the findings of this study, in order to create in-depth understanding of the research settings for the readers by conveying details of the entire contexts.

Fourth, member checking was also conducted in this study to determine the accuracy of the qualitative findings. In member checking, the researcher seeks the participants' perspective of the credibility of the findings and interpretations (Creswell, 2013). According to Lincoln and Guba (1985), member checking is considered "the most critical technique for establishing credibility" (314). In this strategy, the data and interpretations were taken back to the participants to verify their accuracy (Merriam, 1988; Stake, 2010) by conducting a follow-up interview (Creswell, 2009, 2014). Even though it is the participants themselves who had been studied, they often provide critical interpretations, sometimes giving suggestions as to other sources of data (Stake, 1995). The researcher conducted five- to ten-minute follow-up interviews with the participants and requested that they comment on and correct the findings in order to determine their accuracy.

Finally, a peer debriefing of this qualitative study was conducted prior to the interview sessions to enhance the accuracy of the account. The peer debriefing served to ensure that all aspects of the inquiries within the study were clear to all outsiders, not just to the researcher (Lincoln & Guba, 1985). According to Creswell, "this process involves locating a person (a peer debriefer) who reviews and asks questions about the qualitative study so that the account will resonate with people other than the researcher" (2009: 192). This strategy further adds validity to the study by involving an outside person in the

interpretation (Creswell, 2014). For this study, the interview questions were refined through informal pilot testing conducted by the researcher with professors, colleagues and acquaintances prior to the interview sessions. A certified translator was also used to review the translated interview protocol (the Arabic version), permission and invitation letters.

In addition, for the sake of trustworthiness, it worth mentioning that generalization is not an essential component of qualitative case study research. Qualitative scholars do not generalize between cases because each case has a different context (Creswell, 2007, 2013). As was stated by Stake (1994), the aim of case study is to represent a particular case rather than to represent the world. Stake (1995) also stated that “single cases are not as strong a base for generalizing to a population of cases as other research designs” (85). Unlike other qualitative approaches, the case study approach concentrates on providing an in-depth understanding of a case or cases, as well as developing an in-depth description and analysis of a case or multiple cases (Creswell & Poth, 2018).

3.8 Ethical Considerations

A major concern in qualitative case study research is trustworthiness, as it is essential that the investigations are conducted in an ethical manner (Merriam, 1988). Ethical considerations were made fundamentals throughout this qualitative case study research. First of all, an ethics application was submitted for review in May 2017 to the Social Sciences and Humanities Research Ethics Board of the Office of Research Ethics and Integrity of the University of Ottawa, and afterward given final approval in July 2017 (see Appendix G: Ethical Approval). Specifically, ethical consideration was given to the

several means of data collection utilized in this study which are the interviews and documents. There were no ethical concerns with regard to the documents, since they were all available in the public domain and received without any issue by the researcher.

All the interviews of this study were conducted on a voluntary basis with the participants. As mentioned earlier in this study, an informed consent form was developed for interview participants to read and sign before they engaged in the study (see Appendix H: Consent Form). Informed consent refers to fully informing the research participants of all characteristics of the study that might influence his/her willingness to participate (Christensen et al., 2011). This consent form explained the purpose of the study to participants, the details of their participation, and gave them the freedom to withdraw from the study at any time without suffering any negative consequences. Participants were requested to review their interview transcript for the accuracy of the information and to provide approval to include it in the study. The participants reviewed their transcript, and most of them did not make any modifications, while six of them did modify their transcripts.

The anonymity and confidentiality of the participants were guaranteed in this study. Anonymity refers to keeping the identity of the research participants unknown, while confidentiality refers to not revealing information obtained from the research participants to anyone outside the research group (Christensen et al., 2011). Thus, the names of the participants in this study and their particular positions were not associated with the research findings. Creswell (2009) indicated that “researchers need to protect their research participants; develop a trust with them; promote the integrity of research; guard against misconduct and impropriety that might reflect on their organizations or

institutions; and cope with new, challenging problems” (87). The identity of the participants was known only to the researcher. Anonymous quotes were used in the publication of the results. Confidentiality was of extreme importance, and consideration was taken to ensure the confidentiality of the information shared by participants during the study. Only the researcher and the supervisor had access to participants’ interview responses.

Finally, another important aspect of ethical considerations is the consideration of risks and benefits. In this study, the benefits of the research for participants exceeded any risks; indeed, there are no known risks or discomforts related to the study, and the benefits for participants include the chance to openly share their knowledge, experience and opinions, in addition to the opportunity to take part in a qualitative research study. Thus, the participants were given the chance to reflect on their role in the delivery of distance education in the Saudi higher educational institutions and share their perspectives on the strategies used to deliver distance education. This sharing of information took place during in-depth interviews, which might make them think about the topic from different angles. Their participants in this study have also contributed to the advancement of knowledge of distance education in Saudi Arabia. While participating in the study, the participants may have developed sense of pride by having their personal and institutional efforts and strategic processes recognized and investigated as a successful model of distance education delivery in the Kingdom. Lastly, participants of the research will also benefit by being given a preliminary copy of the thesis research in an electronic format prior to any form of publication. This is beneficial to the participants

because it allows them to incorporate the strategies illustrated in this study into their own online teaching practices.

Chapter Four: Findings

This chapter will start by presenting the demographics and the context of the study followed by the general analysis. The general analysis will discuss the data collected and the coding schemes that were created in the form of categories. Then, an overview of the findings will be provided. All names within the quotations have been changed to protect the confidentiality of the respondents.

4.1 Demographics and Study Context

In this section, participants' backgrounds will be revealed, followed by the study context including elements like geography, age, gender, and income.

4.1.1 Participants' Backgrounds

The participants of this study were from all the provinces (West, East, Center, North and South) of the country of Saudi Arabia. A total of 28 participants were interviewed in this study: 16 instructors from the Saudi Electronic University (SEU) (5 from the West branch, 4 from the South branch, 2 from the North branch, 1 from the East branch, and 4 from Center branch), and 5 administrators (4 Blackboard trainers and 1 instructional designer) were interviewed. 4 participants were from the National Center for E-learning (NCeL), namely a director in the Center, Jusur LMS Representative, SHMS OER Representative, and the E-learning Pioneers Program Representative. From King Abdulaziz University, there were 3 participants (a Vice Dean at the technical section, Blackboard trainer, and an instructor). For more information, please see Table 1, Appendix I.

4.1.2 Geography

Education is not accessible in every place in the Kingdom of Saudi Arabia, which is a large country with a population of more than thirty million (Participant #22). Distance education programs at the Saudi universities aimed to rectify this problem (Zawacki-Richter et al., 2015; Participant #2). Alghamdi (2016) noted that “online learning helps to accommodate the growth of enrollments in Saudi higher education institutions, [and] allows students from small cities to pursue their studies without the need for traveling” (1). There was also a significant demand for distance education in remote areas where it is difficult to establish colleges and universities (Al-Asmari & Khan, 2014). Learning via the Internet made education accessible to everyone.

4.1.3 Age

Online learning offers an educational opportunity for students of all ages who lack access to traditional face-to-face programs (Alghamdi, 2016). Some students might face some age-related barriers to pursuing traditional education and instead opt for distance learning, as Participant #11 noted. In traditional face-to-face programs at the governmental universities, there are rules that may hinder the students from enrolling in regular face-to-face programs because of their age, so distance learning programs opened the door for them (Participant #28). Participant #12 noted that online education might also be useful for those who face restrictions because they did not immediately enroll in university after they graduated from high school. Participant #16 highlighted the wide range of ages, as she mentioned that her program has “recent graduates from high school, and a 55-year old; most of them are below 30, and 30% are above 30.”

4.1.4 Gender

Distance education can be accessed by both genders equally (Participant #21), and both genders may decide to enroll in distance education based on their specific needs and circumstances. Women might be more interested in online learning because family responsibilities make it more difficult to travel, while men might be forced to enter the workplace before finishing their traditional education and need the flexibility of online learning (Participant #28).

However, distance education opened a wider door for Saudi women than for men, especially young married women, who otherwise may find it challenging to pursue their education (Yamin, 2013). This is especially true for those who live in rural and remote areas (Participant #27). Additionally, some branches of the Saudi Electronic University (SEU) have a higher percentage of female students than male students (Participant #14).

4.1.5 Income

Unlike face-to-face programs at the governmental universities, distance education programs charge tuition fees; the price varies depending on the university (Participant #26). Because there is a tuition fee, distance education programs mostly targeted employees (Participant #4). According to Hamdan (2014a), distance education provides access to students who aspire to study at the university level, but who are not able to physically attend school because of their work schedules. Those employed students enroll in distance education programs so that when they graduate, the degree gives them promotion at their work or a raise in their salaries, as Participant #13 noted.

4.2 General Findings

The coding scheme of this study incorporated six categories and thirty subcategories. The six categories with the percentage of the responses in each category are presented in Figure 2.

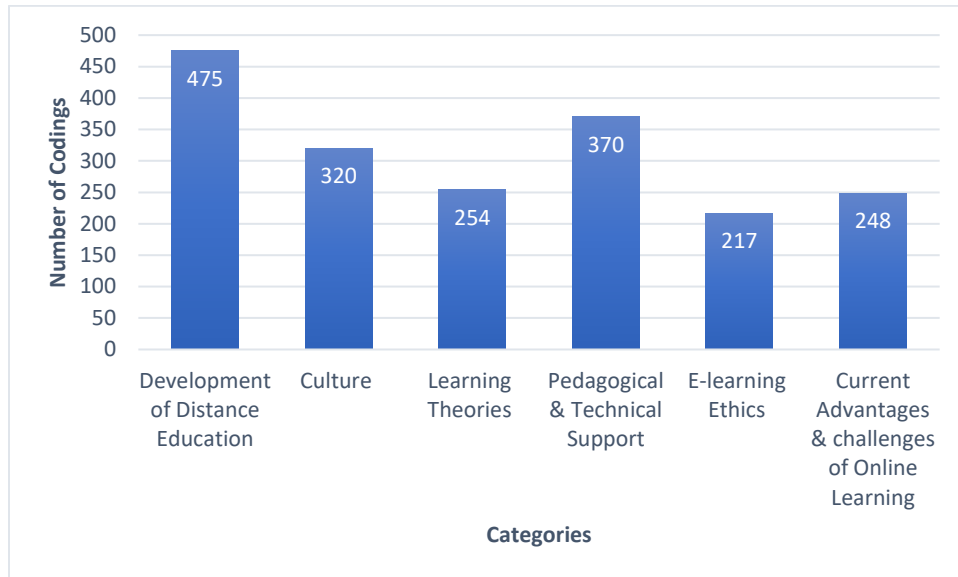


Figure 2: Coding Scheme

4.2.1 The Development of Distance Education

This category gained the highest number of codes with a total number of 475 responses, or 25% (Figure 2). This category included five subcategories: early development of distance education in KSA, the transition from distance learning to blended learning in Saudi universities, government funding & services, collaboration, and leadership roles.

- **Early Development of Distance Education in KSA**

Historically, distance education in Saudi universities started as a correspondence program, known in Arabic as *Entesab*. King Abdulaziz University was among the universities that adopted correspondence studies in 1972 (Alturki, 2014; Participant #15). In the early 2000s, advances in technology allowed the correspondence programs to be

delivered more efficiently; this was called *Entesab Motawar* (advanced correspondence programs). McLaren and Alanazy (2015) emphasized that the inclusion of certain technologies and changes in teacher-student interactions distinguished e-learning from the earlier correspondence courses.

King Abdulaziz University (KAU) created a separate department for distance learning in 2002 (Alturki, 2014), and opened their distance learning deanships in 2005. Subsequently, both King Faisal (KFU) and King Saud (KSU) universities also opened distance learning programs. KSU established the Deanship for e-Learning and Distance Learning in 2007, while the e-Learning Unit at KFU was established in 2008 (Al-Asmari & Khan, 2014). These developments created the need to establish a special center to manage this new form of learning.

The Ministry of Higher Education established the National e-Learning and Distance Learning Centre (NCeL) in 2006. The main role of the NCeL was to cooperate with the MoHE to support and standardize distance learning at all Saudi universities through “technical support, tools, and the means necessary for development of digital educational content in higher education throughout the country” (Alebaikan & Troudi, 2010: 53). Participant #24 shared that the NCeL encouraged the establishment of distance learning deanships to better manage the distance learning programs, and to “give e-learning its correct value in the universities.”

In October 2017, the NCeL became an independent center and was no longer under the umbrella of the Ministry of Education (NCeL, 2017). This was a key development, as some of NCeL’s new commitments included cooperating with new and different entities:

The Ministry of Planning assigned us to “go and coordinate everything related to digital learning under Council of Economic and Development Affairs (CEDA)”, which looks after everything except the military and security forces, and Alhamdulillah, we did coordinate with about 80-plus representatives.

(Participant #22)

The independent management of distance and online learning continues to be important.

Female Access in Saudi Distance Education. The Girls’ Colleges Agency was one of the first educational sectors to implement distance education in Saudi Arabia. Since 2003, the agency started to use technology for the purpose of increasing the absorptive capacity to educate more girls and overcome the shortage of faculty members (Al-Kathery, 2006). Distance education was particularly successful in this context because “it covers vast areas and provides privacy to our girls through the [very small aperture terminal] VSAT technology” (2006: 4). Consequently, distance learning reached all the girls from all around the country.

To better manage girls’ distance learning during that time, girls’ colleges were moved from the supervision of the Ministry of Education (K-12) to the supervision of Ministry of Higher Education (Participant #22). The Ministry of Higher Education cooperated with the NCeL to promote the quality level of distance learning at the girls’ colleges, so that they could rely on proper support, just like the other Saudi universities. For example, when the Ministry of Higher Education realized that more than 300,000 women had been taking correspondence classes with poor Internet connectivity, they tried to remedy this (Participant #22).

- **The Transition from Distance Learning to Blended Learning in Saudi Universities**

Distance education has gone through several stages in Saudi Arabia, beginning with correspondence programs, which expanded to use technology to deliver the content in advanced correspondence programs, also called distance learning programs. Recently, attention has shifted to blended learning approaches as well as fully online courses.

In the past, distance learning programs (or advance correspondence programs) were widely available in order to support “those who want to learn but are unable to be present” (Participant #7). However, in 2016, the universities stopped the admission in distance learning programs (Participant #23) because the Ministry of Education decided that “there wasn’t an immense interest in the quality of distance learning systems” (Participant #11).

The higher education system in Saudi Arabia is gradually transforming from a distance learning system to a blended learning system (Alturki, 2014). The Ministry of Education revealed that only the SEU is allowed to provide these programs (Zawacki-Richter et al., 2015).

Blended Learning in KSA. As blended learning was just recently introduced into Saudi higher education, the SEU is the only university specialized in blended learning that delivers both graduate and undergraduate degree programs along with life-long education (SEU, 2017a).

The distinct feature of the blended learning approach at SEU is that “75% of the content is offered online and 25% requires campus presence (face-to-face)” (Participant #19). Participant #4 described how this works in practice: “we have two lectures every week. In the first lecture, the students have to come physically to our class. In the second

lecture, they take it online through virtual medium, like the Blackboard system.” In addition, Participant #3 noted that they give weekly online assignments and quizzes. However, this could change, depending on the circumstance. One of the participants acknowledged that in sections with low attendance or when there is a shortage in faculty, classes may be entirely virtual (Participant #14).

Fully Online Courses. Some Saudi universities such as Princess Norah University and Al-Jouf University started to have fully online courses within their regular programs. Participant #15 revealed that general courses (Arabic language and Islamic studies, taken by all students) at Princess Norah University are now taught fully online. Participant #23 indicated that this was also done gradually at Al-Jouf University, where there are now 19 courses that are online only.

- **Government Funding & Services**

This section shows the Saudi government’s financial support of distance education as well as the services that the government provides to assist the delivery of distance and blended learning.

The Saudi government invests heavily in the development of online education (Zawacki-Richter et al., 2015). McLaren and Alanazy (2015) summarized the government support:

The establishment of deanships in most national universities to better facilitate the move to e-learning/distance learning platforms; the establishment of Saudi Electronic University [SEU]; appropriating necessary funds via the Ministry of Finance to ensure monies are available for growth and development; the expansion and implementation of policies via the Ministry of Higher Education regarding the application of e-learning and distance learning in the country, and the establishment by the Ministry of Higher Education of the National Center for E-Learning and Distance Learning [NCeL].

(McLaren & Alanazy, 2015)

It is clear that the government of Saudi Arabia has invested a significant amount of money and resources into supporting the development of distance education.

Most of the services that the government used to support distance education were provided through the NCeL. Since its establishment in 2006, the NCeL has incorporated many significant projects and services to develop distance education in Saudi Arabia, including:

The Saudi Electronic University (SEU), The Saudi Digital Library (SDL), The Educational Satellite Channel (iEN), Digital Repository (Maknaz), The Saudi Technical Support Center (Saneed), The Open Educational Recourses Program (SHMS), The Distance Learning Bylaws, Jusur LMS, 4 International Conferences (eLi), Digital Content Services, Training and Advisory Services, as well as conducting research and studies.

(NCeL, 2016: 1)

These services provided by the NCeL have evolved over time. Participant #24 clarified that at first, the NCeL provided e-learning services like the Jusur Learning Management System and converting content to e-content; they have since started hosting workshops, conferences, seminars, and training sessions for universities and the educational sector.

In addition to these services the NCeL has also started to focus on establishing rules, policies and bylaws to manage distance education (Participant #24). These regulations include:

1. Setting regulations and quality standards of e-Learning.
2. Control[ing] the quality of e-Learning programs.
3. Grant[ing] licenses for companies and governmental entities of e-learning programs to provide accredited certificates.
4. Qualifying for the licenses granted to the entities and companies providing e-learning programs.
5. Supervis[ing] the Open Educational Resources program OER.
6. Conducting research and studies in the field of e-learning.

(NCeL, n.d.-a: 1)

Each of these areas of focus allows the NCeL to manage the quality of distance education.

The Saudi government has also supported distance education financially by purchasing the permanent license of the Blackboard system and so that it can be obtained by all Saudi universities without incurring extra costs, as mentioned by Participant #19.

In addition to paying for the license, the government also provided Blackboard training for the administrators and faculty members involved in distance education. Participant #20 explained that this training occurs each semester and includes workshops for male and female administrators and faculty members. This training allows for distance education to continue to be developed at all Saudi universities.

- **Collaboration**

This category included three subcategories which are overseas and local institutions, NCeL collaboration with e-learning deanships, and individual's contribution & cooperation.

Overseas and Local Institutions. This section presented the extent of the Saudi universities' collaboration with other international and local institutions. That collaboration was meant to enhance the delivery and the quality of distance education in the Kingdom.

SEU was the first Saudi university to establish partnership with other foreign institutions to design and deliver online content. Participant #20 noted that curricula of SEU are developed in cooperation with other international universities, such as Colorado University, Franklin University and others. Furthermore, the partnership seeks to recruit

highly qualified faculty members and cooperate with international institutions to meet a high level of standard that copes with Saudi society (SEU, n.d.-b). For example, Participant #11 mentioned that there might be a lecturer from the United States, but a facilitator from Saudi Arabia. Throughout online learning and Blackboard, SEU benefits from professionals around the world.

SEU also collaborates with local entities and other universities. For example, it is a partner with the Saudi Digital Library (SDL) so that all students, faculty, and staff are able to use the materials found in the library's databases (SEU, 2017b). The SEU also cooperates with other Saudi universities by providing them the required training and support for the Blackboard system. Since adopting the national license for Blackboard, the SEU has provided annual training for 100 Saudi employees (50 per semester; 25 males and 25 females) from all governmental universities (Aljabr, 2018).

On a larger scale, the deans of distance learning at the Saudi universities meet regularly to share their experiences. Participant #26 indicated that these meetings are used to discuss issues such as potential drawbacks to e-learning and areas to improve. This level of collaboration will be examined further in the following section.

NCeL Collaboration with e-Learning Deanships. The meetings between the deans were coordinated and managed by the NCeL. Since its establishment in 2006, the NCeL has coordinated thirteen seminars, four international conferences and several workshops and trainings to enhance the awareness of distance learning in Saudi higher education. The NCeL also launched the excellence award to motivate innovation in the field of distance learning.

During the thirteen seminars, several topics were discussed on pivotal issues in order to enrich the distance learning and teaching methods at the academic level in the Saudi universities (NCeL, 2014). These seminars also supported the distance learning deanships by allowing them to build and share their experiences in the field of distance education.

Moreover, four international conferences on e-learning and distance learning (eLi) were organized by NCeL, from 2009 to 2015. These conferences included participation from professionals in the field from all over the world (Participant #22).

The NCeL also conducted workshops and trainings to train the faculty members at Saudi universities. At first, the workshops were intended to raise awareness about online learning and tools (Participant #15). More recently, the NCeL organized workshops about Open Educational Recourses (OER); Participant #22 mentioned that, in one of that advanced OER trainings, they invited about 250 trainees to participate in four types of workshops on all issues related to OER. Thus, the NCeL has updated the workshops to fit the evolving needs of the deanships.

Lastly, the NCeL launched the “Excellence Award”, which:

seeks to encourage initiatives, and to motivate universities and individuals to introduce new additions in the field of e-learning, in order to keep up with the acceleration and development of this type of learning around the world.

(NCeL, n.d.-b: 1)

In 2018, King Abdulaziz University won the excellence award as it was the first university to participate and upload a lot of content in SHMS OER (Participant #27).

Individuals' Contribution & Cooperation. This section examined the significant contributions of instructors, Blackboard trainers and NCeL staff to develop distance learning in Saudi higher education.

The main contribution of instructors in distance and blended learning was to deliver predesigned content, which was provided by the deanship of distance learning (Participant #28). At the end of the semester, faculty members were required to write a course report, in which they gave recommendations for ways to improve the course based on drawbacks they encountered during the semester (Participant #3). Thus, the instructors contributed to facilitating and updating the electronic content for the students.

Additionally, faculty members cooperate with each other informally whenever an issue arises, typically through a group email or on a discussion board, as Participant #17 noted. They also meet more formally online to collaborate in meetings and conferences using internal communications tools (Participant #14). These methods of formal and informal collaboration allow the faculty to support each other.

Moreover, the essential contribution of the IT trainers in Saudi universities was to train faculty members and students on how to use and interact with the tools in Blackboard. As stated by Participant #20, “we always try to give them the steps and ideas from a pedagogical perspective.” Building on this, Participant #21 noted, “we also develop manuals and video tutorials for the students and faculty on how to use the Blackboard tools for e-learning to achieve the best education.”

Finally, the knowledge of e-learning experts was key because it was their research that in led to the Ministry approving the establishment of the NCeL. As Participant #24 explained:

Those individuals came from different backgrounds. Some of them came from the Saudi universities, and some from the Ministry. The goal was to promote and utilize the advancement in electronic learning, which was beginning to be seen in other countries where education was really benefitting from the electronic advancements of technology.

(Participant #24)

Therefore, the experts who would become NCeL staff played a significant role in bringing the NCeL into existence.

▪ **Leadership Roles**

The development of distance education in Saudi Arabia was supported by high levels of leadership, such as the universities themselves, the Ministry of Education, and the royals.

Initially, the universities themselves had to act as leaders in distance education. As Participant #1 noted, the universities were the ones who “took the initiative and started developing online courses.” For example, for a time, the only university offering distance learning was King Abdulaziz University (Participant #23). Other universities like King Faisal University and King Saud University were also considered leaders in the field of distance learning.

The role of the deans and heads of colleges was to guide, supervise and promote the process of distance education. This can be done collaboratively across locations, and Participant #17 noted that there were “virtual regular meeting across SEU branches. A dean can join the Riyadh, Dammam, Qassim and Jeddah branches together in one meeting.” In

addition to general supervision (Participant #11), deans can also be involved in the development of content, programs, and the courses themselves (Participant #14).

Finally, the role of high-level leadership like the royals and the Ministry of Education has been crucial in developing distance education at Saudi universities. One participant emphasized this, stating, “when the approval for SEU came from King Abdullah, may his soul rest in peace, it was the greatest support for online education” (Participant #2).

In summary, the development of distance education in Saudi Arabia has gone through several stages. It would not have reached the current level without government funding, collaboration at the national and international level as well as among the individuals involved in its delivery, and the leaders that have supported and managed such development.

4.2.2 Culture

This category gained the third highest number of codes with a total of 320, or 17% of the total responses (Figure 2). The six main subcategories of culture are: power distance, individualism vs. collectivism, masculinity vs. femininity, uncertainty avoidance, long term vs. short term orientation, indulgence vs. restraint.

- **Power Distance**

In an educational setting, a high power distance society refers to one in which its “educational system focuses on top level” (Hofstede, 2001: 107). That is, “the educational process is teacher centered; teachers outline the intellectual paths to be followed” (Hofstede, 2001: 100). This accurately describes Saudi Arabia. Within the educational context, Arab students in general and Saudi students in particular are known

for relying on the instructor to be the source of information. Participant #10 asserted that “we still believe that the teacher has to give the whole lecture, and the student would just sit there and listen.” Participant #16 added that “the focus is on the instructor, and his performance, but we haven’t reached that stage when the student is self-reliant where she reads the material, and comes to class to discuss it with me.”

Furthermore, “respecting” the instructor is a cultural value that needs to be considered. In a high power distance society, “students treat teachers with respect, even outside class” (Hofstede, 2001: 107). Basahel and Basahel (2018) emphasized that respect for one’s elders is encouraged in all settings, including educational institutions. Participant #6 confirmed this, noting, “the teacher’s respect is a big thing in Saudi Arabia. There is no place in world where teachers are as respected by their students as they are in Saudi.”

In addition, the development of all e-content should be approved by a committee that takes Saudi culture and values into consideration, as Participant #14 and many others indicated. This committee, which is part of the Vice Rectorate for Academic Affairs at SEU, “makes sure nothing in the curriculum touches Sharia law, ethics or culture” (Participant #18).

- **Individualism vs. Collectivism**

Generally, individualism versus collectivism “describes the relationship between the individual and collectivity which prevails in a given society” (Hofstede, 1980: 213). The culture of Saudi Arabia was identified as a collectivist, in which no individual is fully independent, but rather much is shared within the society, as Participant #9 noted.

The collectivist nature of Saudi society is correlated to high power distance and the fact that traditional education was teacher-centered, in which students do not speak up in class and there is little two-way communication between teachers and students (Hofstede, 2001). That was also reported by one of the participants of this study:

Honestly, based on my experience for 3 years in SEU, [no one from any of my classes] told me, 'No, I don't agree with you.' No one said it to me. No one asked me, 'You have to correct your information.' No one asked me or give me another opinion that might be against or opposite to my views.

(Participant #9)

Therefore, Saudi Arabia fits well within the typical expectations of collectivist societies, which is particularly reflected when students hesitating to speak up in class.

However, the context of distance education (self-learning) has inadvertently contributed to shifting Saudi society toward being individualist. Hamdan (2014a) noted that the collectivist nature of Saudi society was not “specifically considered” in the development of online learning (325). This incidental change was also indicated by one of the participants:

The whole online education is based on the student, and this wasn't available before; you know that we have a traditional system. So, when online learning comes along, and makes the student self-reliant so that he can have self-learning, this is definitely an advantage.

(Participant #10)

Furthermore, the philosophy of online education purposely encouraged the students to be the center of learning. For example, Participant #1 asserted, “we tried our best to make it a student-centered approach. Everything is from the student, so we facilitate the knowledge to the student and the students do most of the work by themselves.”

Participant #19 echoed this process, and Participant #10 noted they have found some success with the individualist approach.

- **Masculinity vs. Femininity**

It has been indicated that one of the key cultural values distinguishing Saudi Arabian culture from others is that it is “oriented towards masculinity; men are responsible for the key areas of planning and decision-making” (Basahel & Basahel, 2018: 299). Like face-to-face classes, the culture of separating males and females in the Saudi educational context was also applied in the virtual lectures (Participant #11). In maintaining these cultural boundaries, distance education has both opportunities and challenges for Saudi women.

As Saudi Arabia was known as a patriarchal society, there were many obstacles for women’s education. However, distance education has created many opportunities for female students and instructors in Saudi Arabia. Participant #7 revealed some of the obstacles that e-learning helps female students overcome:

We have many married female students with kids, and they have the desire to learn, and e-learning gave them the opportunity to do so. That’s why we have many more female students than male students because they see this as an opportunity that wasn’t available before. She’s in her home, and learning, all the assignments are there online, and they don’t need attendance.

(Participant #7)

E-learning also helped to give female students who lived in rural areas equal learning opportunities that other privileged men or women can get in the big cities (Participant #25).

Distance education also provided female instructors with many benefits. It made it easier for female instructors to communicate with their male counterparts, as Participant

#6 mentioned that both male and female faculty members participate in the same Blackboard meetings together. It also made it convenient for them to teach from their home, which helped to balance their responsibilities at home with their teaching careers, as Participant #7 explained. Thus, distance education created unique advantages for both female students and instructors.

However, there were also some challenges that females faced in the online educational environment. Based on Saudi culture, turning on the camera when teaching female students was not permitted even if the instructor was a female (Participant #17).

Another participant noted:

I can't use the camera as a teacher to connect with my students. They can't see me. Keeping our traditions and religious values, I can't force it upon the society; it's banned for us as females. I didn't let the technology force me to do it, I forced it by not using the camera.

(Participant #20)

In addition, even though male instructors can teach female students online, it is not permitted for either Saudi or foreign women to teach male students online (Participant #5). Therefore, although distance learning does provide some opportunities for women, the culture may still create some challenges that may hinder females' learning through distance education.

- **Uncertainty Avoidance**

Uncertainty avoidance was commonly defined as “the extent to which the members of a culture feel threatened by uncertain or unknown situations” (Hofstede, 2001: 161).

Within the educational context, low uncertainty avoidance societies tend to be quick to accept new products and technologies like e-mail and the Internet, while high uncertainty

avoidance societies are hesitant toward accepting new products and technologies (Hofstede & Hofstede, 2005).

As Saudi Arabia was recognized as a high uncertainty avoidance society, some participants were reluctant to use the technology for teaching. These participants are examples of those who described their negative attitudes toward using the technology in online teaching:

When I started teaching in the Saudi Electronic University, it was a bit new and confusing. And you know the human tendency to refuse the change. It was hard for me at the beginning to adapt to the new technology, which is the virtual classes. Now, it's exhausting.

(Participant #17)

I prefer teaching in the classroom because it's a different experience. You can move from one topic to another. It's very natural. [...] But my personal opinion, do I think online is better than in class? No. I think the interaction is important.

(Participant #28)

Thus, there was a hesitation from some instructors to teach online as they rather prefer the face-to-face classes.

In contrast, some other participants were willing to use technology for teaching. For example, Participant #7 noted that “I love technology, and I see that it’s the future for true learning.” Participant #1 also expressed his positive attitude toward technology and online teaching by clarifying that “I'm very comfortable with the new way of teaching. It's very convenient, actually, when you do your class, because you do it from the office or from the home, so it's very comfortable.” In addition, Participant #14 added that “I appreciate the availability and the convenience of the online tools. Personally, as a tech savvy, I'm open for new technologies and I actually seek new technologies.”

- **Long-Term Orientation vs. Short-Term Orientation**

Generally, in short-term orientation societies, people respect traditions while people from long-term orientation societies adapted traditions into the modern setting (Hofstede, 1997). The participants were asked about how traditional Saudi values align with modern Saudi society in terms of technology, Internet and education. Some of the participants believed that traditional Saudi values align with online learning, as Participant #11 noted. However, the majority of the participants outlined different points of view.

Most of the participants highlighted that it was typically the older generation that did not adapt with new technology and the Internet because they worried about the negative effects. As Participant #6 noted, this could partly be because the older generation has not kept up on the development of new technology. The “negative effects” of technology that the older generation may worried about contradict with the traditional Saudi values, which may classify the Saudi older generation as a short-term orientation society. On the other hand, that might not be the case with the young generation. For example, Participant #1 mentioned that there is a noticeable change even in the last decade. Another participant provided further explanation:

In the past there were some barriers, and the society was closed off, but they suddenly opened up to everything such as technology. Our society is very open to using technology if we’re talking about ourselves, and everything that we’re using like phones, programs, it’s all about the technology.

(Participant #10)

This change towards acceptance of new technology was largely driven by the relative youth of Saudi culture. As Participant #14 noted, the high percentage of people under the age of 35 in Saudi Arabia creates an environment that is open to trying new things. This classifies them as a long-term orientation society. Participant #28 noted the distinction

between generations, saying, “I think the new generation doesn’t wait for us. They have already adopted the technology and they are just moving forwards.” The Saudi young generation was capable of adapting technology with cultural values to create a modern Saudi lifestyle.

- **Indulgence vs. Restraint**

Indulgence society refers to people who are more optimistic and have positive attitudes, while restraint society refers to people who are more pessimistic and have negative attitudes (Hofstede et al., 2010). That dimension measures the perceptions of people’s happiness and how they would control their life (Minkov, 2009). With this in mind, the participants were asked to describe their feelings about teaching e-courses within the Saudi Arabian educational system.

Most of the participants expressed positive feelings toward teaching e-courses, which may classify them as indulgent. For example, Participant #1 indicated, “I’m very proud we reached this level of teaching. We are doing e-courses for the students, and giving more chances for the student to learn, and having big numbers to attend.”

Participant #19 also added, “I think that it is very great because it is available at any time.” In addition, Participant #26 expressed his positive feelings as a result of it being helpful in some specific circumstances:

I think it's great. I think it's very important to keep doing distance education. I mean, this education helps the Kingdom. For example, the war in the south, most of the students cannot go to the schools or to the universities. So, the distance education helps them to learn through online. So, the distance education I think it's necessary. It's very important. We have to have it.

(Participant #26)

Thus, the positive feelings reported towards e-learning are because it allows more students to receive an education, it offers more flexibility, and it is adaptable to unusual circumstances.

4.2.3 Learning Theories

This category gained the fourth highest number of codes with a total of 245 responses, or 13% (Figure 2). The five main subcategories are: behaviourist, cognitive, constructivist, pragmatist, and connectivist theories.

- **Behaviourist Theory**

Behaviorist theory “focuses on that which is observable: how people behave and especially how to change or elicit particular behaviors” (Harasim, 2012: 16). Course management and managing the students’ behaviour were very important in the virtual learning environment to ensure the quality of learning. In the next paragraphs, the participants reported their ways to manage the students’ behaviour in the online classes.

Online attendance was made compulsory in blended learning classes at SEU, which was not the case in other Saudi universities that offered distance learning programs. Students may face punishment at SEU if they refrain from attending electronic or non-electronic lectures (SEU, 2014). Participant #1 provides an explanation of the system for managing online attendance:

Virtual attendance is very compulsory and if you miss the virtual lecture, you will be marked absent. Only 15% absences of the face-to-face and virtual classes is allowed. Exceeding 15% of absences virtually and face-to-face [means] you will be denied from the subject.

(Participant #1)

To manage the attendance in the virtual classes, some of the instructors applied their own strategies, as one of the participants indicated:

I ask them yes or no questions, even if they don't know the right answer they can simply say 'we don't know'. [...] I feel that this method improves the attendance of the students, having real activity and not only attending as usernames.

(Participant #2)

However, online attendance was not a requirement in other distance learning programs.

Participant #28 clarified she can see which students are logged in, but there were no marks given for attendance.

Another aspect of classroom management is the submission of assignments. Many participants indicated that submitting work on time was a requirement whether in blended or distance learning programs. For example, Participant #6 said that “as for the assignments, they have a set time; for example, I’ll give them homework, and set a week for that homework to be delivered after that the system will close, and won’t accept any homework.” Similarly, Participant #28 described that process of submitting the students’ work “in Blackboard, there is an icon for assignments. So, I put whatever assignment up there, and I put the time limit, when it should start, when it should finish. Then, the students upload it.” Therefore, the Blackboard system allows the instructors to set firm deadlines.

Reading the required e-materials before class was particularly important in the blended learning programs, as many participants indicated. For example, one of instructors reported:

The weekly content is available for the student, and so we expect that the student would go over it and study the course. It’s updated weekly in an organized, and interactive manner. During the lecture, we go over the most important points, and then we have a discussion; the discussion is reliant on the student’s reading of the course, and extra materials.

(Participant #11)

Participant #6 added further clarification that “through the class discussion we can tell who read the materials before class and who did not.” As such, attendance was not sufficient in blended learning programs; it was also necessary to read the e-materials before class.

- **Cognitive Theory**

Cognitive learning theory focuses on the process of acquiring knowledge in terms of how the information is received, organized, stored, and retrieved by the students’ minds (Ertmer & Newby, 1993). In an online learning environment, the participants of this study used several strategies to assess the students’ learning acquisition.

To test the students’ understanding based on the materials delivered in distance and blended learning, the following structured strategies were used. In blended learning, Participant #11 noted that there are regular tests, quizzes, assignments, direct questions and a discussion board on the Blackboard. All those different activities are used to evaluate the students, in addition to the midterm and final exams. He also clarified the strategies used in these exams:

In general, the exams are done on campus, face-to-face, but other evaluating activities are done online. When designing the questions, the instructors make the same questions for all the branches whether they’re male, or female students. Thus, the questions are prepared by all of the branches' instructors the course, and are coordinated by the course coordinator, and a special committee, so that we make sure it covers all aspects, and is compliant with the guidelines, and we make sure that it achieves the course’s goals.

(Participant #11)

For distance learning programs like in KAU, they used almost the same structured strategies used in blended learning programs to evaluate the students’ learning acquisition. Thus, Participant #28 specified that “when we are given the course, we are

told, for example, ‘You must assign two quizzes and four assignments. One of them will be a group project and the others are individual assignments’.” Moreover, KAU (2015) provided detailed information about the evaluating activities used in the distance learning programs at KAU. Participant #28 also added that there is a focus on making sure all students receive the same content and are marked the same way so that it is fair to everyone, regardless of which section they are in.

Finally, the structure of the quizzes or test questions, which are used to measure and evaluate the students’ learning acquisition, varies from one college to another within the blended and distance learning programs. For example, one of the participants from the College of Health Science explained that they use primarily multiple-choice questions based on the textbook readings and following standard guidelines to fulfill learning outcomes and objectives (Participant #3). Another participant from the College of Science and Theoretical Studies explained that in addition to quizzes and exams, one of the assignments is an oral presentation (Participant #10).

- **Constructivist Theory**

Constructivist theory highlights that knowledge is constructed by the individuals through their interaction with others in the learning community (Harasim, 2012). In an online learning context, the tools in LMSs play a significant role to create a virtual learning community for the students, so that they can construct their understanding and enhance their critical thinking.

Using the online tools particularly in blended learning programs has helped to create a collaborative learning environment for the students. For example, Participant #10 noted that she used Blackboard tools like blogs, wiki, and discussion boards. Participant

#17 emphasized that the wiki on Blackboard helped to motivate students to create posts about the course subject. Instructors are required to use these tools, and vice-deans and other supervisors can monitor the extent to which tools like blogs and wikis are being used (Participant #14). It is clear that the participants believed that the online tools helped to create a collaborative learning environment which promoted critical thinking.

In addition to enhancing student understanding and promoting critical thinking, instructors also use tools to encourage collaborative learning. For example, Participant #3 noted that “once I post a question in the discussion board, I continuously follow with the students regarding the discussions. I will also be online in the discussion board to monitor what the student's activities are, what normally the student does.” Participant #17 also added that “if there's a discussion going on in the discussion board, I will usually be the icebreaker because students have a fear to be the one who speaks first.” Participant #8 revealed a different way to use the discussion board, by asking students to post relevant material and then having them use the digital library to find related articles to share as well. In addition to discussion boards, blogs can be useful for collaborative learning. For example, Participant #2 noted that she asks students to use blogs to record the steps they complete in their projects, and then commented on by the other students. Each of these strategies is used for the purpose of improving the analytical thinking of the students.

- **Pragmatist Theory**

Pragmatism learning theory “points to the importance of joining beliefs and actions in a process of inquiry that underlies any search for knowledge” (Morgan, 2014: 1051).

Therefore, the participants of this study were asked about what real-world training opportunities are provided for students in distance education.

The instructors at SEU used various strategies to connect class materials with real life experiences based on their specialities. For example, one of the participants described their experience within the law school:

In the class, whether it's face-to-face or virtual, I usually ask them to make a mock court. We make a court so I'm the judge, and they can be prosecutors, lawyers, or defendants, and we make a virtual case that the student can use to evaluate the material. We try to use those methods, so that the student is more engaged to the material, and can understand it correctly.

(Participant #6)

In the business school, one of the instructors mentioned that:

We have co-op training which lasts for no less than 10 to 12 weeks during the last semester of the programs. We make sure that the student goes through actual practice in the job market. He can train in one of the companies in his field to reflect what he has learned on the real world.

(Participant #11)

In the science and theoretical studies school, an instructor noted that:

I teach a course called technical writing. In this course, I teach them how to write a memo, how to write a letter, how to write an email. So, when I'm done with my class, I [show] students—and some of them already have jobs—if they want to ask for a break or they want to ask for a raise, how they can do that in a memo, how they can do that in a letter or an email. So, I can connect what I teach to their real-life situations.

(Participant #13)

However, some other instructors mentioned that the nature of their online courses did not allow them to make connections with real-life experiences (Participants #26 and #28). One participant revealed that they may upload a relevant video, but there is no other connection to content beyond the classroom (Participant #2). Thus, these participants revealed that course materials are not always connected with real-life experiences.

- **Connectivist Theory**

In connectivism learning theory, “the starting point for learning occurs when knowledge is actuated through the process of a learner connecting to and feeding information into a learning community” (Kop & Hill, 2008: 1). The participants of this study were asked about strategies they used in their teaching to connect students with professions outside of the classroom related to a specific topic that was given in class.

The responses showed that the strategy of connecting students with professions outside of the classroom was not yet applicable, whether in distance or blended learning classes. Many participants indicated that they have never connected the students with a professional group on Facebook, Twitter or even through MOOCs, for various reasons. The main reason was highlighted by Participant #22, who said that the Saudi society was not ready to accept and apply this theory within their educational system. He noted, “we have addressed connectivism theory in our [NCeL] conferences. [...] When we checked with the person who coined it and developed this theory, Stephen Downes, and his colleague, unfortunately, we discovered that we are still far away from connectivism theory.” Other participants mentioned different reasons for not using connectivist theory. For instance, Participant #12 indicated that his focus was simply on the class itself. Similarly, Participant #3 indicated, “As a teacher, I always encourage them to follow a formal way and a standard way of learning models. I don't encourage the students to follow an informal way of learning things through Facebook and other social networks.”

As the participants indicated that they were not applying connectivist theory in their online teaching, they also did not use MOOCs. Nevertheless, one of the best examples of connectivist teaching, OERs, has been introduced in Saudi Arabia. There

were some restrictions specifically applied to SHMS, the Saudi OER, in order to introduce it to Saudi society:

SHMS is not mainly for MOOCs. We checked with Stephen Downes, the first one to develop a MOOC course, and we talked with him. We think we are not ready to release a MOOC, a real MOOC, in Saudi Arabia. We have to have certain maturity for both digital learning and open online learning, with understanding what is exactly open education. This is where we went to support open educational resources. So, SHMS mainly supports now the smallest part of OERs.

(Participant #22)

One of the restrictions was that SHMS was first introduced through the universities, as noted by Participant #22. Another participant provided further detail about how SHMS OER works:

The idea is when a professor creates a resource, then another professor from another university can add on to that resource, can update that resource, can add value to it. And then share it again so others can benefit from this resource. So, this is the idea of SHMS, is building upon other people's work and update, and not start from the scratch, and share it with everybody, and maybe adding to the content.”

(Participant #25)

The responses of the participants indicated that the connectivist learning theory was introduced to the Saudi educational system through SHMS OER, but only in a limited way.

4.2.4 Pedagogical and Technical Support

This category gained the second highest number of codes with a total number of 370 responses, or 20% (Figure 2). The main subcategories are NCeL role and training, blackboard training and technical support, and skills required for online teaching.

- **NCeL Role and Training**

As mentioned earlier in this chapter, the NCeL was initially established by the Ministry of Education to provide technical and pedagogical support to Saudi universities.

Recently, it became an independent center and has extended the services provided to Saudi universities. The participants highlighted three main projects that the NCeL offered to support Saudi higher education technically and pedagogically.

Jusur LMS. It was one of the first services that the NCeL employed to support the delivery of distance learning in Saudi higher education. Participant #24 reported that:

When the NCeL started, there were maybe one or two universities that had a real experience with LMS. So, at that time, [the] NCeL decided to introduce an LMS that was easy to use, with a simple Arabic interface, fully Arabized, fully customized learning management systems, so the universities can easily adapt this technology into their systems.

(Participant #24)

At that time, the NCeL started to provide technical and pedagogical support about Jusur LMS to the universities by establishing a call center to provide technical support to faculties and students about using Jusur, as was shared by Participant #15. For the pedagogical support, the NCeL provided training and workshops to higher education staff on how to effectively use the Jusur system in delivering the e-content (Alahmari, 2017; Participant #25).

As more universities started to have their own LMSs and began to look for more features, the usefulness of Jusur diminished, and it was slowly phased out (Participant #24). Nevertheless, the participants noted that Jusur “did its job” (Participant #22) for the period when e-learning was first being introduced in Saudi universities.

eLearning Pioneer Program. In 2015, the NCeL entered a partnership with the Open Education Consortium to offer a year-long, comprehensive eLearning Pioneers Program to provide Saudi female faculty members and university leaders with skills in online and blending learning (Daly & Young, 2016). With that training, the female faculty members

and university leaders had the “opportunity to incorporate U.S.-based pedagogy and strategies into their institutions to better educate the Saudi population of girls and women” (Tam, 2015: 1).

The e-Learning Pioneer Program was attended by about 40 female pioneers representing all Saudi universities (Participant #22). The stages of the program started by online training conducted by the Open Education Consortium, followed by summer placements in the USA to look into the universities’ experience in the field of online learning. Lastly, the program required the participation in international e-learning conferences, as was shared by Participant #15. After program was completed, Participant #22 claimed that “we hope once the National Center gets its total autonomy to redo this again. We think that we need more female Pioneers to look after all issues related to teaching girls.”

SHMS Open Educational Resources (OER). Collaborating with the ISKME Company (well-known for its pioneering open education initiatives), the NCeL established SHMS OER, so that many Saudi universities cooperated with NCeL financially, in terms of being a member in SHMS, and by uploading resources in SHMS (Participant #25). The NCeL has adopted a number of activities and programs to enable faculty members at the universities to publish and invest in knowledge, through multiple levels of training sessions (NCeL, 2018b). At the initial stage of training, the NCeL focused on raising the awareness of the faculty members about the open educational resources (OER), as was shared by Participant #25. Then, the NCeL started to provide advanced training to the faculty members on how to share resources through SHMS. For example, in one of the SHMS training sessions, “about 250 trainees [were invited] to be trained over four types

of workshops on OER and all issues related to Open Education Resources” (Participant #22). The other service the NCeL provided for SHMS OER is the content quality team, which ensures that the content meets the quality standards before uploading it into SHMS (Participant #25). For all the services, including resources, tools, and practices, the NCeL did for SHMS OER, they received the Excellence Award in Open Education 2018 (NCeL, 2018a).

- **Blackboard Training and Technical Support**

After Juser LMS ended, SEU adopted the national license project for Blackboard, in which the Ministry of Education owned national license. Thus, SEU was responsible for providing the Blackboard training and support to their own staff and students, as well as to the other Saudi universities’ staff. The structure of the Blackboard department at SEU is based on two sections: one for pedagogical services (i.e., organizing workshops and training sessions) and the other for technical service (i.e., dealing with technical issues), as was noted by Participant #21.

For pedagogical support, at the beginning of each semester, the Blackboard trainers provide a face-to-face training course to all the faculty members based on their levels in utilizing the Blackboard tools and teaching online (for example, “beginner, intermediate or expert”) (Participant #19). Faculty members should continue the training until they reach the level of expert. Even those instructors who have been with the university for many years are still required to take the training every semester. Additionally, a recorded training course in Blackboard was made available to all faculty for self-learning (Participant #20).

For technical support, an online support center was made available on the university's website, so that instructors could open a ticket and indicate what issues they were having with Blackboard (Participant #1). In addition, each branch of SEU has a technical team available on-site, so that the response is faster to any technical issue that the staff and students may face (Ismail, 2015).

Since the adoption of the Blackboard national license, SEU delivered nine training sessions to the other universities to train them in using the Blackboard system and managing the educational e-content, (Participant #18). According to Aljabr (2018), "SEU trains 100 Saudi employees per year from the governmental universities in two sessions, 50 employees per semester (25 males and 25 females), at the rate of one male employee and one female employee from each university" (5). The first training session is held for universities' faculty members, while the second training session is for the administrators of the Blackboard system (Ibid).

In addition, each university in Saudi Arabia has its own distance learning deanship that offers pedagogical and technical support to its distance learning programs. For example, Participant #23 mentioned that the deanship of distance learning at Al-Jouf University has the instructional design unit (which assists the instructors in developing their e-courses based on learning theories and principles) and the training unit (which trains the instructors in how to use Blackboard from a technical perspective). The deanship of distance learning at King Abdulaziz University also has several units to manage the delivery of their programs. For instance, Participant # 27 mentioned that the distance learning deanship of King Abdulaziz University has four units: technical affairs unit (which is responsible for the Blackboard technical affairs), e-learning unit (which is

responsible for developing the e-curriculum), training unit (which is responsible for training the instructors in how to teach through Blackboard), and the quality unit, (which is responsible for developing and monitoring the quality of the e-content).

- **Skills Required for Online Teaching**

In this section, the participants were asked about which skills they think are most important for online teaching. Many participants indicated that acquiring technical skills is very important. Additionally, Participants #4 & #11 emphasized the importance of familiarity with the Blackboard tools, so that instructors can employ the tools effectively when delivering e-content.

Besides gaining technical skills, the participants mentioned other skills that they believe they are important in order to teach online efficiently. Unlike in class teaching, online teaching requires “clear communication” due to the lack of visual cues between the instructors and the students in the virtual classes, as was noted by Participant #17. Participant #10 mentioned that to avoid being overwhelmed by the demands of online teaching, time management is another essential skill. In addition, knowing English is a vital skill in online teaching, as Participant #10 noted that some of the interface in the Blackboard does not have an Arabic language capability.

4.2.5 E-learning Ethics

This category had the sixth highest number of codes with a total number of 217, or 12% (Figure 2). The five main subcategories are plagiarism & misconduct, students’ and instructors’ rights and responsibilities, copyright & privacy, diploma mills (bylaws), digital divide and uncertainty.

- **Plagiarism and Misconduct**

E-learning ethics issues such as plagiarism and misconduct have recently been recognized within the Saudi educational system. This was noted by many participants, including

Participant #2:

We have only started to care about these ethics recently because technology is still new in our Saudi society. As you know, at the beginning there is no control but when the problems increase, then they start to put policies and regulations.

(Participant #2)

The general educational system in Saudi Arabia (from grades 1 to 12) has little focus on educating the students about ethical issues like plagiarism, so they enter higher education with slight awareness about it, as was shared by Participants #14 and #23. Adding to that, almost all universities have the ethical code of conduct in general, but little particularly addressing the ethical issues related to online learning (Participant #22). In response, the leading universities in the field of online learning, like SEU, have started to raise the students' awareness and educate them about e-learning ethics from the orientation week and throughout all the stages of their education at SEU, as was noted by Participant #14.

According to the SEU's (2014a) regulations, the students will be subject to disciplinary sanctions if they commit any ethical offenses related to e-learning, such as plagiarism and scientific theft, and any violation of the intellectual property rights of the university. Some of the participants explained the methods that SEU uses to detect plagiarism. For example, every assignment submitted by students goes through a plagiarism check online, and there is a certain limit of how many similarities are accepted, for instance, 25%; anything over that is considered plagiarism and students receive zero (Participant #14).

In addition, some of the participants clarified how misconduct and unethical behavior were dealt with in distance and blended learning. A screen shot of the problematic discussion might be taken and sent to the higher level of administration (Participant #17). Participant #21 mentioned that the instructor could also block unwanted conversation during the virtual classes. If a student harassed someone or used the e-content inappropriately, they would be sent to the disciplinary committee at the university (Participant #27).

- **Students' and Instructors' Rights and Responsibilities**

The participants of this study provided a wide explanation about students' and instructors' rights and responsibilities in distance and blended learning programs.

To preserve the students' rights, all the universities in general and SEU in particular have their own ethical codes of conduct which contain the rules and principles of educational ethics to raise the students' awareness about it (Participant #4). Further, during the orientation week and throughout their studies at SEU, the students were educated about how to avoid any unethical behavior in the online learning environment (Participant #11). Even the syllabus contains a section related to the ethical concerns that students need to consider in that specific online course, as was indicated by Participant #9. Furthermore, the virtual classes are recorded to sort out any ethical issue that may occur in class, as was shared by Participant #14. Participant #14 also briefly summarized the students' responsibilities: "students are responsible for behaving as expected of students, not to cause any havoc, not to show any discriminating behaviors toward their classmates or toward their instructors."

To preserve the instructor's rights in distance education, some distance learning programs, like the one offered in King Abdulaziz University, require online instructors to sign a contract with the deanship, so that they follow the strategies and rules of distance education at that university, as was shared by Participants #26 and #28. However, Participant #2 indicated that the instructor's rights in online learning have not been specified until recently. For example, she mentioned that there is no way to prevent a student from recording her audio lecture and uploading it to YouTube without her permission. She added that "the students aren't aware that they may face legal issues about copyright" when they post a material online without the author's permission. Thus, the instructors are responsible for educating the students about the ethics of e-learning throughout the year, as was mentioned by Participant #4. An example of the instructor's responsibilities to raise the ethical awareness in class was noted by Participant #28, who mentioned that she always connects ethical issues (i.e., plagiarism, cyberbullying, hacking) to the religion and culture of Saudis by highlighting that "it's not just illegal, it's also not acceptable in our religion." Another example was mentioned by Participant #13, who noted that a section about the plagiarism and copyright should be included with each assignments' guideline in order to make the students consider those ethical issues and avoid them.

- **Copyright and Privacy**

As the students are still not fully aware about the rules of copyright, some distance learning deanships, like the one in King Abdulaziz University, arrange workshops about copyright to educate the students the ethical ways of using and citing others' work (Participant #27). Through SHMS OER, the NCeL also organized workshops about

copyright and sharing open resource for the faculty members at the universities to raise their awareness about copyright polices and principles (Participant #15). Participant #25 indicated that after the OER workshops were given to the faculty members, some of them were happy to share work through SHMS OER, while most were reluctant, as they worried about copyright issues and that someone may change their content. However, with the extensive training of licensing open resources that the faculty members received from NCeL, “now if you go to SHMS you'll find lots of users are authoring resources” (Participant #25).

In the Saudi society, there is often a fear of there being a loss of privacy when using technology, especially among women, as was noted by Participant #19; this is true of online learning technology as well. For example, during virtual classes, female students and instructors usually reject turning on the camera as a matter of preserving their privacy, as was shared by Participant #20. Further, Participant #27 commented that the administration of the universities regularly notifies female students and instructors not to turn on the camera during their virtual classes.

- **Distance Education Quality Concerns**

As mentioned earlier in the category “Development of Distance Education”, Saudi higher education witnessed an enormous expansion in opening distance learning programs at almost all the universities. The targeted students for those programs were mainly employees who were looking to upgrade their levels at their work (Participant #13). For example, Participant #22 noted that one of the requirements for a soldier to attain the rank of officer is to get a bachelor’s degree in any major; therefore, Arabic, Islamic and other theoretical studies were the core programs offered in distance learning. Furthermore, as

those distance programs charge tuition fees (unlike other face-to-face programs), the universities opened them widely. For example, one of the universities had about 70,000 students studying in distance learning programs, with less than 40,000 studying at their face-to-face programs (Participant #22). As Participant #7 commented, the main concern of those programs was “more of a financial matter” than a real teaching and learning, and most of the students were only doing it in pursuit of the certificate not knowledge.

In 2012, the NCeL released the first national bylaws to govern distance learning (Participant #22), describing its objectives as follows:

The bylaws regulate distance learning in higher education institutions in the Kingdom of Saudi Arabia to achieve the following: 1. Creating a systematic reference to distance education and distinguishing it from other types of education; 2. Ensuring the quality of distance education; 3. Supporting the development of distance education institutions and programs in the Kingdom to achieve the national development and community progress; 4. Providing opportunities for diversity in the provision of academic and training programs in higher education.

(NCeL, 2012: 7)

However, at that time, the Ministry of Education decided to stop all distance learning programs from all the universities, and “they gave universities from three to five years to phase out of those programs and stop the admission”; In Fall 2016, the universities stopped accepting admission in distance learning programs, and they have not been re-started (Participant #23). Participant #11 noted that “there wasn’t an immense interest in the quality of distance learning systems” and the attention was instead drawn toward the blended learning programs.

The national bylaws were reconsidered recently when the NCeL became independent of the Ministry of Education in October 2017, as Participant #22 mentioned. The current ongoing project of the NCeL is setting the bylaws and policies to manage

distance learning not only at the universities, but in all the governmental and private institutions that offer distance education. According to the NCeL (n.d.-a) the recent objectives are:

The National Center for e-Learning aims to control the quality of e-Learning by:
1. Setting regulations and quality standards of e-learning; 2. Control[ing] the quality of e-Learning programs; 3. Grant[ing] licenses for companies and governmental entities of e-learning programs to provide accredited certificates; 4. Qualifying for the licenses granted to the entities and companies providing e-learning programs.

(NCeL, n.d.-a: 1)

One can see there have been ongoing attempts to improve the quality of distance learning programs, both by halting admission to the programs and by setting national bylaws and policies.

- **Digital Divide**

Online learning provides the potential to deliver education to remote places in Saudi Arabia, thus reducing disparities across the various regions and areas (Unnisa, 2014). However, those remote cities and villages lack necessary infrastructure (Aljaber, 2018; Participant #1). Luppicini (2010a) defined the digital divide in Internet access as the gap between areas and people who have access to the Internet and those that do not.

According to Basahel and Basahel:

There is also evidence of a digital divide in SA. The Internet has not yet reached all potential users in the country. The availability of computer hardware is not uniform because while those who are technologically well-informed are able to access and use tablets and other mobile devices, others are still trying to acquire desktop computers.

(Basahel & Basahel, 2018: 293)

Thus, the digital divide in Saudi Arabia was not only about the gap of Internet accessibility between cities and remote areas, but also the level of technological literacy between individuals.

In the context of Saudi online education, most the participants of this study indicated that the old instructors may not have the interest to use the technology and the Internet in their teaching, because they were unwilling to change their way of teaching that they have followed since they started their career (Participant #24). On the other hand, young instructors showed interest and desire toward implementing the technology in their teaching (Participant #26).

- **Moral Code Uncertainty**

The participants were asked about the ethical rules set by the university or the instructor of using the discussion board, blogs, or any e-learning tool. Most were uncertain about that and provided the following responses. Participant #5 commented on that there was no need to set rules for ethics as the discussion between the students were all ethical and she cannot recall that anyone has behave unethically. Participants #1 and #10 also noted that they have not experienced any unethical behaviour. Participant #6 added that it is an obvious matter that the student has to follow a moral code because it is in their culture and traditions.

The participants were also asked about the improper use of the discussion board or blogs, like posting the class discussion online, and the ethical rules related to that behavior. They were uncertain and provided the following responses. For instance, Participant #7 mentioned that “honestly, that never happened in my class” and he did not know whether the university has rules to deal with these unethical behaviors. Participant

#4 added that “I never saw this in our discussion boards”; Participant #23 mentioned that “we didn't face anything related to that yet, I think this is part of our culture”; and Participant #3 noted that “as far as my experience, my students are very supportive and cooperative. Until now I haven't seen any issue.” Thus, one can see that ethical rules and policies related to these issues have not yet been developed.

4.2.6 Current Advantages and Challenges of Online Learning

This category gained the fifth highest number of codes with a total number of 248, or 13%, of the total responses (Figure 2). The five main subcategories are perceived benefits of distance and blended learning, challenge of change, operational challenges, cultural challenges, and acceptance of institutions and job market challenges.

- **Perceived Benefits of Distance and Blended Learning**

Distance learning and blended learning share some advantages. First, they both offer learning opportunities for large numbers of students who cannot attend full time face-to-face classes (SEU, n.d.-a). They also provide students and faculty members with the ability to communicate in a flexible manner through Blackboard (Participant #3). Further, in both distance and blended learning programs, the virtual classes should be recorded, so that the students can return to it whenever they need (Participant #18). Participant #25 also added that when the instructor teaches in an online format (whether distance or blended learning), he or she can reach more students than in face-to-face classes, further noting that even “shy and introvert students” can easily be reached online. In addition, Participant #15 shared a particular benefit of using the online tools in the Saudi culture is that she can work and cooperate with others whether they are males or females without the need to be in same place.

Distance learning has a unique advantage in terms of reaching students who are unable to travel to school. For example, distance learning allowed students at the Southern border to continue their education during the war with Yemen, when it was unsafe for the students to commute to their schools (Participants #7 and #26).

On the other hand, blended learning has several unique advantages for both the students and the instructors. According to Bardesi (2017), the students' demand for blended education is centered on its academic quality. Unlike distance learning, blended learning has credibility from Ministry of Civil Services and the employers, so that its graduates are equivalent to the traditional learning graduates in the marketplace (Participant #10). In terms of flexibility, SEU (the only university that currently offers blended learning programs in KSA) scheduled the face-to-face classes from 4 PM till 10 PM as most of their students work during the day (Participant #4). Moreover, blended learning builds a stronger relationship between the instructors and the students than in distance learning because they meet in the face-to-face sessions, as Participant #14 commented. In addition, the approach of blended learning requires 75% of the course work to be the students' responsibility, while the instructor is only facilitating the course, so that the students develop the skills of self-learning and critical thinking (Participant #8). Blended learning at SEU was also distinct because the program followed Western curriculums, collaborating with some well-known international universities to deliver their blended courses to the students. As Participant #16 stated, "our students are studying the same courses that the students at Franklin University and Colorado University are studying in America."

For the advantages perceived by the instructors, Participant #12 emphasized the flexibility of blended learning, as he can teach the students totally online at other branches at SEU, stating that “I am originally in the Al-Jouf branch, in the north of Saudi Arabia. Sometimes, I teach some classes in west part, or in the middle, or in the capital city.” Furthermore, blended learning enhanced continuous connectivity among the faculty members of SEU as they can meet virtually from all the branches at the same time (Participants #6 and #14).

- **Challenges of Change**

The transition from traditional learning to distance and blended learning brought challenges to both. Participant #21 mentioned that “the kingdom needs a couple of years forward to accept the changes taking place, and the movement from traditional learning to e-learning.” The participants of this study described the instructors’ and the students’ resistance toward learning through online platforms.

Some instructors fought the advancement of technology and were not willing to use it in their teaching, as Participant #19 commented. When they started to teach online, they were intimidated by that technology as they were not familiar with the tools (Participant #15). Participant #24 also observed that some of the old instructors were hesitant to change the way they have been teaching for a long time. Resistance may also have resulted from the leadership’s attitude toward it, as indicated by Participant #19; as Participant #23 stated, “it’s hard sometimes to convince the president or the vice president of a university about the idea of online education.”

On the students’ side, much of the hesitation toward online learning was because the general education (K-12) does not use much online tools in teaching (Participant #20)

commented. The students were also not familiar with the education system of an electronic university like SEU, where 75% of the course work should be on the students, because they were used to high school when the teacher was required to give them all of the information (Participant #2). In addition, the students found it challenging to transform even from distance learning to blended learning. As Participant #19 noted, the students' withdrawal percentage was very high in SEU at the start of each semester as the students thought that the instructional process in blended learning was the same as in distance learning.

- **Operational Challenges**

The participants described the operational challenges that faced both distance and blended learning in the Saudi higher education, as well as the separate operational challenges that faced distance and blended learning. The first operational challenge (faced by both distance and blended learning) was Internet connection, especially in rural areas and villages during the virtual classes, as was noted by Participant #27. The second operational challenge was limited flexibility given to instructors to structure their online courses. As Participant #28 shared, "I do think that there should be some standards, but I also think that there should be more flexibility, freedom, control and authority given to the instructors who teach these courses." The third operational challenge was a scarcity of instructional developers at the Saudi universities, who are responsible for creating the e-curriculum (Participants #19).

Some operational challenges were particularly related to distance learning in the Saudi universities. One of these challenges involved the quality of distance learning programs, as Participant #26 commented. Participant #22 noted that some operational

challenges also resulted from minimizing and merging the deanships for e-learning and distance learning at the Saudi universities after the Ministry of Education stopped distance learning programs:

King Saud University, one of the pioneer universities in distance learning, decided to merge the deanship for e-learning and distance learning in the deanship for IT and computers ... So, the deanship now looking after all IT-related things, but in terms of e-learning, digital learning, not that much, unfortunately.

(Participant #22)

On the other hand, there were some operational challenges that were specifically related to blended learning in SEU. The first challenge was teaching foreign curriculums, which could be hard for some of the students to comprehend (Participant #9). The other operational challenges mentioned by many participants was the length of the lectures at SEU. With only two 50-minute lectures per week, some instructors struggled to get all the information across to their students, as was shared by Participant #10. A final challenge was weak communication between the main branch of SEU in Riyadh with the other secondary branches, as Participant #16 stated.

▪ **Cultural Challenges**

Since the early days of distance education, the prevailing opinion of Saudi society was that it was less scholarly than traditional face-to-face education and provided fewer career opportunities (Al-Khalifa, 2009). Until recently, the cultural view still tended to favour traditional learning over distance and blended learning (Participant #1). That attitude might be largely a result of unawareness of the difference between distance and blended learning (Participant #10).

There were other cultural challenges that also played a factor. For example, for female instructors and students, turning on the camera during classes was considered one of the cultural limitations in online teaching, as Participant #17 noted that “as a conservative community, we are not allowed to open the video cameras”; Participant #10 noted something similar. The other cultural limitation was that even though it was permitted for male instructors to teach female students via online platforms, the opposite situation was not accepted (Participant #22).

In addition, there were some cultural considerations when teaching through MOOCs like Rwaq, as Participant #28 explained:

My Rwaq experience, I had nearly 3,000 students. I had males and females. I had people from Saudi, Egypt, Algeria and Europe, who are also Arabs. So, I have to speak Arabic very clearly. I have to notice that if I use any slang words that are very common in Saudi Arabia, it might not be common in other countries... Even if they speak the same language like Arabic with different dialects, or if you're speaking English as a second language, the instructor needs to appreciate these differences between students. Students from different cultures expect things to be delivered to them in a different manner.

(Participant #28)

Thus, cultural limitations and differences remained important in the online learning environment.

- **Acceptance of Institutions and Job Market Challenges**

Due to the stigma surrounding quality in the distance learning programs, they are perceived by the job market as being of lesser value than traditional learning programs (Alahmari, 2017). Consequently, its graduates are not given equal opportunities as of the graduates of traditional fulltime programs in the marketplace (Basahel & Basahel, 2018). That made the students prefer enrolment in traditional learning programs rather than distance learning, as was shared by Participant #9. Furthermore, the Saudi higher

education system now supports and encourages the transformation from distance learning to blended learning (Zawacki-Richter et al., 2015).

Even though the blended learning programs are approved by the Ministry of Education and the Ministry of Civil Service, the marketplace still view it as distance learning (Participant #14). Participant #2 emphasized this point:

I believe that the most important challenge is the acceptance of the marketplace for the outcomes of blended learning. We still feel that institutions aren't fully convinced that the graduates of blended learning are efficient enough to handle a job and to succeed in it. Government entities don't prefer blended learning graduates; they think that they are less efficient than the graduates of traditional learning programs.

(Participant #2)

Thus, it may take time for the difference between distance learning and blended learning to be clarified within the job market.

In summary, this chapter provided a description of the case study that interpreted the state of Saudi Arabian distance education, as well as an overview of the general findings based on the data collected and the coding schemes. This interpretation made use of the six identified categories, namely development of distance education, culture, learning theories, pedagogical and technical support, e-learning ethics, and current advantages and challenges of online learning. Each category provided important insights on the way distance education is delivered in Saudi universities. Further examination of the general findings will be made in the next chapter.

Chapter Five: Analysis

This chapter will begin by examining and analyzing the data obtained from the participants' interviews and supporting documentation as part of the coding process in the general findings (also referred to as the descriptive analysis). This allowed the researcher to build a contextual description of the case study. The description of the context explained the current status of distance education in Saudi higher education, which was necessary in order to complete the advanced analysis (also referred to as the pattern analysis). The advanced analysis makes use of five identified categories: evolving of distance education in KSA, the learning culture in Saudi distance education, the application of learning theories in distance education delivery in KSA, current opportunities and challenges for Saudi females in distance education, and the transformation of Saudi higher education through OERs.

5.1 Advanced Findings

In the advanced analysis, the researcher was able to discern important connections between the interview data and academic literature. This helped to strengthen the data analysis by deepening knowledge about key themes identified in the main findings. In particular, the interview data provided links between the findings of this study and other research that has examined all stages of Saudi distance education. To this end, this section builds on the contextual description and categories from the general findings. The results of the advanced analysis offer useful insight into the past and present phases of distance education in Saudi higher education in order to help identify new opportunities and challenges.

5.1.1 Evolving Distance Education in KSA

Since the early 1970s, distance education has gone through several stages in Saudi higher education, starting with the traditional method of correspondence studies and evolving to use the advances in technology to deliver those programs in the early 2000s. This was explained by Participant #23, who noted “In Saudi Arabia, we had distance education in the oldest form, which was correspondence distance education, and that was only in King Abdulaziz University. In 2003, some other universities [...] started thinking about establishing new distance education programs” and delivering them online. McLaren and Alanazy (2015) confirmed that “distance education in its traditional sense, learning via correspondence, has been available to Saudi students for some time. However, distance learning utilizing various technologies, mass media offerings and effective teacher-learner interactions is something new in most settings” (29). This development in distance education created the need to establish a special center dedicated to this new form of learning. As was indicated earlier in this paper, the purpose of establishing the NCeL in 2006 was to coordinate with the Ministry of Education and to manage the delivery of distance learning programs at the Saudi universities (Alebaikan & Troudi, 2010).

In October 2017, the NCeL became an independent center and was separated from the Ministry of Education (NCeL, 2017). Since that time, the NCeL has extended its service from supporting distance education at the universities to coordinating digital learning with all the entities under the Council of Economic and Development Affairs (CEDA), as was shared by Participant #22. Thus, one can see that there has been an ongoing understanding of the importance of creating an independent structure for managing distance and online learning at the universities in Saudi Arabia within this time

frame, and that the services provided by this center have changed as necessary. Recently, the NCeL has started to draw attention away from providing services (i.e., Jusur LMS) towards setting rules and bylaws to manage the quality of distance education. This was noted by Participant #24, who stated that “lately, the NCeL started to shift its focus from providing services to setting rules, policies and bylaws to help those deanships follow a standard of quality in their implementation of e-learning.” This shift lines up with the System Steering (System 5) of the Viable System Model, which describes how organizations deliberate, create policies, and makes decisions (Beer, 1981).

The Viable System Model (VSM) is a model that was developed by the cybernetician Stafford Beer in his book *Brain of the Firm* (1972). VSM “explain[s] *how systems are viable*---that is, capable of independent existence” (Beer, 1984: 7). Beer wanted to clarify the law of viability in order to facilitate the management task (Ibid). This model can interpret the process of the Saudi distance education’s viability as it is surviving in a changing environment. That can be seen in the three phases of distance education that Saudi higher education has gone through. In the first phase, distance education started in the form of correspondence programs during the early 1970s at some leading universities in order to reach people who were not able attend the face-to-face classes, whether due to their geographical location or full-time work. In the second phase, the technology and the Internet were utilized during the early 2000s to deliver the correspondence programs online. In the third phase, the Ministry of Education established the first blended learning university (SEU) and drew attention toward its high quality. This was especially important because of the association with the poor quality of the earlier correspondence programs. In fact, the quality was such a concern that the Ministry

of Education removed them from all Saudi universities in Fall 2016, and has not re-opened them. The Ministry of Education made an agreement with the Ministry of Civil Service to emphasize the high quality of blended learning, as it is the best form of distance education for the students' learning attainment, and in turn provides a better outcome for the job market. This explains how the distance education system in Saudi Arabia is viable and able to adapt to the changing environment, since VSM states that one of the most important features of successful organizations is that they are adaptable to their changing environment (Beer, 1981).

VSM consists of five interactive subsystems of any organization that is capable of maintaining its identity independent from other organizations within a shared environment (Ibid). Generally, systems 1-3 (autonomics) are intended to maintain a homeostatic internal balance within an organization under established criteria; system 4 (environment of decision) is mainly concerned with stating what has happened in the past (systems 1-3) and using that experience to handle the future demand of the organization; system 5 (the multinode) is concerned with balancing the autonomics and environment of decision to give policies and make decision for the purpose of maintaining the viability of the organization (Beer, 1981). Although all five subsystems of VSM are important in order to maintain the viability of any organization, only systems 4 and 5 are directly related to this study. System 4 relates to the current situation of Saudi distance education as it takes into consideration both the early stage of correspondence studies and the future effects of external changes (i.e., online tools and Internet), and then uses that experience to monitor how distance education needs to adapt to these future external changes in order to remain viable. System 5 clarifies how distance education in KSA keeps the

balance between its current status and the influence of the advanced external changes to provide policies and rules for the purpose of enhancing its quality and viability.

Therefore, the new commitment of the NCeL is to control the quality of online learning by setting regulations and quality standards, as well as to grant licenses for companies and governmental entities of e-learning programs to provide accredited certificates (NCeL, n.d.-a). To ensure the quality of the distance education programs, the bylaws state that “not less than 25% of the online course should be taught synchronously” (NCeL, 2012: 11). Participant #22 clarified:

Either it would be a virtual classroom or a synchronized teaching and learning approach where the instructor and the students attend a discussion board or any other synchronized online tool. They have to prove that 25% of the online course was done using synchronous teaching method, or they go and do it through virtual classroom.

(Participant #22)

Accordingly, the focus of this study was on blended learning within the Saudi higher education system. Zawacki-Richter et al. (2015) indicated that “the higher education system [in Saudi Arabia] is supporting and encouraging a transformation from a fully traditional system [distance learning] to a blended learning one [...] [the Ministry of Education] declared that only the SEU is allowed to offer distance education programs” (124). The SEU is a governmental university distinguished by its blended learning approach. Participant #6 indicated, “I think that in Saudi, the Saudi Electronic University has led the way. We know that many big universities in Saudi are offering distance education, but in my opinion the Saudi Electronic University excelled in this.” SEU requires face-to-face attendance to ensure the quality of learning that the students receive; its “educational style is 75% online and 25% face-to-face” (Participant #18). However, there are some cases where SEU does not require in-campus attendance for

certain courses, so they use the online tools to conduct synchronous virtual classes.

Participant #14 acknowledged:

In some cases where there are fewer than 10 students, for example, we dedicate a totally virtual class. And we also do this in some cases where we have shortages in faculty. We might assign someone who is in a different branch to teach students from a different branch, so this obviously must be conducted totally online. But in 80% of the cases, the normal situations are that they will have one session where they have to attend the university and a second session that is virtual.

(Participant #14)

For quality assurance, the Ministry of Education stopped admissions into all distance learning programs (advanced correspondence programs) at all the universities in the Fall of 2016 and has shifted the focus towards a blended learning approach, as was shared by Participant #10: “now, correspondence study is mostly abolished in the Saudi universities, and it’s all turned to blended learning.” Ultimately, the Ministry of Education and the Ministry of Civil Service only accredit the degree that is earned via blended learning programs, which are now only offered at SEU. Participant #6 confirmed that “the student will graduate from SEU with a degree the same as any other university, not like the correspondence programs.” This connects to the concept of the System Steering (System 5) of the Viable System Model, since the Ministry of Education controls policies and makes decisions about Saudi distance education and steers all the universities (Beer, 1981).

However, while the blended learning programs are accredited by the Ministry of Education and the Ministry of Civil Service, the job market still views blended learning graduates the same way it views distance learning graduates. For example, Participant #9 mentioned that “when I started to teach at SEU, these were questions I received a lot. Students asked, ‘Do you think we will get a job when we graduate because our diploma

will be from the Saudi Electronic University? Or will they consider it to be as if we have diplomas from distance learning?” Hence, one can see that it may take some time for the public (including employers) to perceive the difference between blended learning graduates and distance learning graduates.

Therefore, one of the significant advantages of the blended learning approach is centered on its academic quality, which in turn has increased the students’ demand for it (Bardesi, 2017). Blended learning also builds strong relationships between the instructors and the students as they have face-to-face and/or virtual classes every week. This was noted by Participant #14: “The relationship between me and the students is somewhat stronger because I can actually see them live.” Moreover, the blended learning approach gives more flexibility to the students who work during the day, as Participant #4 mentioned: “In our university [SEU], we have the classes in the evening at 4:00 PM till 10 PM. So, those students who are working can come to our university.”

In addition, for the purpose of improving the quality of distance education at Saudi universities, the Ministry of Education purchased the permanent license of the Blackboard system and made it available to all Saudi universities, as noted by Participant #19. As mentioned earlier in this chapter, SEU adopted that national license project for Blackboard, and thus, they cooperate with other Saudi universities by providing them with the required training and support. This was described by Participant #20:

SEU, in cooperation with the Ministry of Education, adopted the permanent license for Blackboard; this is a huge step in the educational context. As SEU is in charge of the Blackboard system, we have trainings each semester, and we hold workshops for male and female administrators and faculty members in the governmental universities. This training has been held through the last five years since the Ministry of Education bought the license.

(Participant #20)

As reported by Aljabr (2018), by purchasing the permanent license of the Blackboard system and making it available to all universities, all university students around the Kingdom are able to access one learning management system to unify the efforts and facilitate the transfer of experience between Saudi universities. This lines up with the essence of the learning conversation theory developed by Gordon Pask (1976), which explains how interactions between individuals lead to knowledge construction and demonstrate understanding.

Later, Diana Laurillard (1999) applied Pask's conversational framework to examine learning conversations revolving around human-computer interaction within the context of university, the higher educational sector, and to the learning society as a whole. In the context of the larger society, the university sector has played a vital role as the engine of advancement for the community (Ibid). Laurillard (1999) explained that “the more [the university] addresses the concerns of society in its research, and the more it widens access to all members of society to benefit from the fruits of that research, the more it supports a genuine ‘learning society’” (120). This can be applied to Saudi higher education, when the Ministry of Education bought the permanent license of the Blackboard so that all university students and instructors around the kingdom access one learning management system and exchange experiences. Thus, systems thinking (through the application of conversation theory) gives a structural form to the learning society, as it establishes what agencies must do, how they must relate to each other, and what counts as success (Laurillard, 1999). This also describes the role of the Blackboard department at SEU, which was to manage the students’ and the instructors’ access to the Blackboard

LMS across the country. This was noted by Participant #19, who said “our role in the Blackboard department is to train the faculty members from all the Saudi universities about the best practices of implementing the online learning system,” and to demonstrate how they can benefit from the available resources while building on each other’s knowledge. Participant #18 further clarified, noting, “if I, for example, teach mathematics, I can now share the teaching materials through the Blackboard with other instructors in my field at other universities around the Kingdom and benefit from their expertise.”

Therefore, one can see that the information in this section aligns with well-established social systems theories such as Beer’s Viable Systems Model and Pask’s Learning Conversation Theory. These theories help explain how the control and coordination of core resources like Blackboard, as well as rules and regulations, help to leverage the Saudi distance education system to make it more viable (with high quality and a good reputation) as a Blended Learning system.

5.1.2 The Learning Culture in the Saudi Distance Education

Saudi cultural values have significant influence in the educational context, as was clearly explained by Participant #11: “Of course all of the cultural values are taken into consideration. The instructor must boost those values, and not contradict them. Those are clear instructions for everyone to follow, those values must remain compatible.” This was an interesting finding that aligns well with theoretical explanations provided by Hofstede’s cultural dimensions.

Following the logic of Hofstede (1997, 2001), Saudi society was identified as a high power distance both in general and as well as specifically within the educational

context. The participants of this study indicated that the educational process was centred on the instructors, so that students depended on the instructor to be the source of information. For example, Participant #5 noted that “90% of the course on me [as the instructor], and 10% on the student.” Participant #2 also provided further explanation of the traditional learning culture in Saudi Arabia:

Instructors face a challenge in blended learning because the students aren't used to the idea that they have to depend on themselves to get information, or that they have to do everything electronically while the teacher is supervising them. Unlike the students who study in regular programs, students who study online need to work harder and independently to pass the courses. That creates a challenge for the instructors as they need to change the way students think about education.

(Participant #2)

The concept of “respecting” the instructors is an extension of general respect for one’s elders, which also aligns with the high power distance society in the educational culture. Basahel and Basahel (2018) claimed that “under Saudi social regulations, respect for one’s elders is encouraged. To ensure this, hierarchies are established and acknowledged in various places, including in homes, educational institutions, workplaces, and businesses” (299). Furthermore, Participant #1 emphasized that “we encourage cultural values like respecting each other.” In addition, Hofstede (2001) argued that most high power distance societies also maintain the collectivist culture’s values, meaning that “their education tends to be teacher centered, with little two-way communication” (235).

Furthermore, the culture of Saudi Arabia was recognized as collectivist. One of the most important features of collectivist culture in the classroom was “that the students do not speak up in class even when the teacher puts a question to the class” (Hofstede, 2001: 235). This was reflected in a comment from Participant #9, who mentioned that “no one from any of my classes told me, ‘No, I don't agree with you.’” However,

Hamdan (2014a) stated that the nature of distance education (self-learning) has contributed to change the Saudi learning culture toward being individualist. To build on this, Participant #19 indicated that “we are now testing the student-centered approach, where the student is the center of the educational process. I provide him with the sources and information and the teacher is a facilitator.” Participant #10 added that “we’re really trying to change that concept of a teacher-centered approach, and we’ve had some success.” This finding also aligns well with the theoretical concept of social construction of technology (SCOT).

SCOT explains the reciprocal relationship between technology and culture (Pinch & Bijker, 1984; 1987). The concept represents flexible and mutual interaction between technology and culture as it focuses not only on the social variation to construct the technology, but also on the variation in criteria for judging whether a technology “works” (MacKenzie & Wajcman, 1999). Thus, one can see the reciprocal relationship between technology and Saudi culture in the context of distance education. For example, it was shown that the environment of online learning has contributed to changing the culture of Saudi students from being collectivist to being individualist, where they are independent and take charge of their own decisions. This was demonstrated by many participants, including Participant #10 who mentioned that “online education is based on the student, and this wasn’t available before in our the traditional system. When the online educational system came along, it made the students self-reliant, so that they could experience self-learning. This is definitely an advantage.” On the other hand, Saudi culture still has an effect on the online learning environment. For example, one of the

participants gave further explanation about separating males and females in virtual classes, in accordance with Saudi tradition:

Even if the lectures are virtual, we take the culture into consideration. The system separates between males and females—they're even separated at the level of virtual classes. The course's lecturer has a special class for female students, and another one for male students following the regulations and cultural values.

(Participant #11)

With respect to the Saudi learning culture surrounding technology adaption, some of the participants admitted they experienced some hesitation towards the use of technology in online teaching. Following Hofstede's theory, this learning culture is characterized as a high uncertainty avoidance according to Hofstede's theory (Hofstede, 2001). At the same time, others expressed their willingness to incorporate technology, which classified their learning culture as a low uncertainty avoidance following Hofstede's theory (Hofstede, 2001). These different attitudes can be seen in comments made by Participants #28 and #7. Participant #28 noted that "I prefer teaching in the classroom because it's a different experience," while Participant #7 shared that "I love technology, and I see that it's the future for true learning." In addition, the participants made connections between how the older generation in Saudi Arabia was a short-term orientation society, while the younger generation was becoming a long-term orientation society. For instance, Participant #19 mentioned that "if the age of the person using e-learning technology is beyond 60 years old, there is often difficulty using the technology." Participant #6 added that "It could be that the older generation hasn't followed up on this technology and developments, and they're afraid of it because, as you know, this technology has side effects" which may contradict with the traditional Saudi

values. However, the younger generation showed that they can adapt the technology to comply with cultural values, as Participant #1 shared:

Now, we are becoming a more open society. It's not like 10 years ago. So, this kind of technology is helping people in Saudi to be engaged with e-learning [...] So, it's kind of like there are no barriers, actually, for them. They are kind of engaging more now and the values are remaining with them. It's not preventing them from online learning.

(Participant #1)

Participant #11 also indicated that “Now, society has developed an awareness more than ever that allows students to benefit from technology positively, and employ it in the best manner.”

Even though the culture has added values to the Saudi distance education, it has also created some barriers. As was stated by Al-Khalifa (2009), “distance education is often looked upon by academic staff as less scholarly, less rewarding, and offering fewer career advantages” (23). Building on this, Participant #1 noted that “many people believe more in traditional learning, and they are not fully accepting of the blended learning. So, they advise their sons or their friends and relatives to not do blended learning” as they viewed that “blended learning is not effective” and encouraged the people around them to “just remain with the traditional learning.” There are other cultural barriers that also have a significant influence on distance education. For example, one cultural limitation was that although it was allowed for male instructors to teach female students via online platforms, the reverse situation was not permitted; “girls could be taught by male instructors, but male students could not be taught by female instructors,” as Participant #22 commented. Another example for the cultural barriers was that female students and instructors were not permitted to turn on the camera during the virtual classes. Participant

#26 clarified that “from the female side, they are not allowed to show themselves in the camera, and also, they don’t want to show themselves.”

Besides the cultural barriers, there was also resistance to change in relation to distance education learning culture. Participant #19 claimed that “some instructors are fighting the advance in technology and are not willing to learn how to use it. This is the biggest challenge for me.” Participant #20 added that “some instructors were afraid to use the online tools because they don’t have much experience, especially when they’re old instructors. They didn’t use technology and they were hesitant about it.”

The interaction between technology and culture in this study has raised serious technoethical dilemmas (Luppicini, 2010a) connected to a digital divide between the younger and older Saudi generation. The digital technology divide refers to the gap between the individuals who have the technical skills or the desire to use the technology and those who do not (Luppicini, 2010b; Haythornthwaite & Andrews, 2011). Within the Saudi distance educational context, “digital divide” may exist between the old instructors who were unwilling to use the technology in their teaching and the young instructors who welcomed it. Indeed, it was reported by most of the participants of this study that the majority of the old instructors were not interested in utilizing the online tools when they teach, while the young instructors have the desire to do so. For example, Participant #6 mentioned that “most of the old instructors (who are 60 years old and over) are not interested in the online tools. That is because at the time they started teaching, they did not use the technology.” In contrast, Participant #26 indicated that “because there’s a connection between the new generation and technology, young instructors are highly involved with technology.” It is important to address this ethical issue in order to

recognize that not everyone has the same experience with technology, and so that there are different strategies needed to close the digital divide between older and younger instructors. For example, certain training aimed at older instructors is needed to help them to be more familiar with the technology.

In summary, this section demonstrates that learning culture and technology co-shape one another following the well-known social construction of technology (SCOT) model. It is clear that technology provides both new opportunities (for the younger generation, women, and people who work full time) and challenges (for the older generation, distance educational diploma holders from other institutions, time and marketing campaigns). Additionally, the findings highlight a perceived need for the public to adjust values so that blended learning is viewed as high quality.

5.1.3 The Application of Learning Theories in Distance Education Delivery in KSA

Although studies like this one can use learning theories to analyze distance education in Saudi Arabia, these theories are not necessarily recognized by the instructors who teach online. That is, although instructors use strategies, techniques, and tools that are part of learning theories, they do not do so because they are following steps within these learning theories; in fact, they may not even be aware that certain theories exist. The participants further clarified that learning theories were not clearly applied in both distance and blended learning at the Saudi higher institutions. For example, Participant #23 noted:

In distance learning programs, we cannot say they follow any learning theory except they follow the independent learning; that's it. Because there is no like real teaching, it's only learning by yourself. They give you the materials, and you go and study. So, the only thing is the independent study. I cannot say it's

constructivism because it's part of the independent learning as constructivism. But we cannot say that because this is unplanned.”

(Participant #23)

Participant #14 also indicated:

In terms of academic theories that we follow, there are not many to follow because it's a new trend within the industry. Just recently we had a conference held at the Saudi Electronic University. It was the first international conference on blended learning. And we have had numerous papers that are presenting different studies and different theories that could explain the factors influencing the performance of students, or the outcomes. And so, it is a developing field within the scientific school of thought.

(Participant #14)

However, it was found that the participants applied key characteristics of multiple well-established learning theories when they delivered their online courses, particularly in blended courses, whether they realized they were doing it or not.

Regardless of whether or not the instructors use these theories consciously, it is important to note that the institutions themselves apply these theories deliberately. The system of SEU (the only university that provides blended learning programs in Saudi Arabia up until the current time) is built collaboratively with several international universities, such as Colorado University, Franklin University, Ohio University, and Florida Institute of Technology, to deliver quality blended courses. Thus, they apply the techniques of multiple learning theories like managing the attendance of the virtual classes (behaviourist), assessing the students' comprehension (cognitivist), supporting the environment of critical thinking (constructivist), encouraging practical application (pragmatism).

One of the learning theories that can be observed within blended courses is behaviourism. The behaviourism learning theory focuses on the observable behaviour of

the learners (Harasim, 2012). It was necessary to follow these strategies to manage the course and the students' behaviour in virtual classes. For example, submitting work on time was a strict requirement in both distance or in blended learning courses. In blended learning courses, for instance, Participant #2 mentioned that "one of the policies that the SEU has is that all students should stick to the deadlines and we don't accept any late assignments. Late assignments mean a Zero score." In distance learning courses, Participant #28 mentioned that:

If I set up a quiz, the quiz had a specific time and date—for example, I give them 24 hours that they have to finish this quiz or answer these kinds of questions. Same thing with the forums. I ask them to contribute with something and I give a timeframe.

(Participant #28)

However, there were slight differences between managing the virtual classes in distance learning programs and the blended learning programs, particularly in terms of monitoring online attendance and reading the required e-materials before the virtual class. In blended learning courses, attending the virtual classes is obligatory, as was noted by Participant #6: "when the student is absent for four lectures he's denied immediately." In contrast, in distance learning classes, the students do not face any punishment if he/she does not attend the virtual class; as Participant #28 clarified, "there weren't any marks for attendance." Consequently, reading the assigned e-materials before attending the virtual class is needed in blended courses, while it does not matter in distance courses. Referring to a blended learning course, Participant #13 shared that "two days before the class, I post reading materials for them to read [...]. When I start the class, I ask them questions at the beginning to see if they have read the required reading materials." On the contrary, in distance learning classes, Participant #28 mentioned that "if the students want to prepare,

it's fine, but there is no required material that they need to read.” The differences in these approaches are a result of the mechanisms of each type of class. In blended learning, virtual attendance and reading the required materials are part of the strategy to replicate face-to-face meetings in a virtual setting. In comparison, distance learning programs simply deliver the content via technology, but there is no attendance component, and so students are not monitored on whether or not they complete the readings.

Following the strategies of the cognitivism learning theory, which focuses on the process of attaining knowledge (Ertmer & Newby, 1993), the participants of this study used several strategies to assess the students’ learning attainment in online courses, whether in distance or blended learning programs. These strategies might include considerations about the structure and number of assignments, quizzes, and tests. However, participants who teach in both distance and blended learning classes have all declared the same conclusion, namely that they apply unified assessments strategies given by their departments to ensure the quality of learning. For example, KAU (2015) provided detailed information about the evaluating activities used in the distance learning programs at KAU:

Class work: includes interaction with the instructor through the given activities available in the learning management system (30 points from the grand total) [4 assignments worth 12 marks, 3 points per assignment; 2 activities worth 12 marks, 6 points per activity; 3 discussions through the discussion forum worth 6 marks, 2 points per forum]. Final [in campus] examination: 70 points from the grand total.

(KAU, 2015: 1)

Similarly, in blended learning programs, each college follows a unified learning assessment to evaluate the students’ learning acquisition. For instance, one of the participants from the College of Health Science explained:

We have a standard guideline which has been provided by the College of Health Science. We strictly follow these guidelines, for example, when we structure the multiple-choice questions, which are the standard questions. And with that, the questions should be from the textbook that we are following. [...] And then we make sure all the questions are fulfilling the learning outcome and the learning objective. And then we upload it to the Blackboard.

(Participant #3)

Thus, one can see that structured guidelines to assess the students' learning were followed in most distance education programs at Saudi higher institutions to make sure that all the students in that program received the same content.

Another learning theory, constructivism, focuses on the construction of knowledge through the interactions of individuals in a learning community (Harasim, 2012). Adhering to this theory, the tools in LMS play a crucial role in online learning to create a virtual collaborative learning community for the students. Through the LMS tools (i.e., blogs, wikis, discussion boards), groups of students can work together to solve a problem or complete a learning task. Thus, the use of those online tools was made mandatory in online teaching, which was clarified by one of the participants:

Every instructor is required to use the Blackboard tools, and all the instructors are monitored by the college. I can, as a vice-dean, check how many blogs have been created, who created the most blogs in their courses, who is using wikis, who is not using any given tool.

(Participant #14)

In addition, the participants revealed that the online tools helped to create a collaborative learning environment, which in turn promoted the critical thinking of the students. For example, Participant #2 mentioned the process followed in using online tools like the discussion board.

In general, I use the discussion board with the students. We choose a general topic that is related to the given lesson and we open a discussion with a student, and we ask the other students to reply on the same post so that their critical thinking gets enhanced through the discussion that they have on the discussion board.

(Participant #2)

In particular, it was demonstrated that online tools like wikis have helped to create a collaborative learning environment in order to enhance certain academic skills like writing. For example, Alkateeb (2017) tested the influence of using the collective wikis in developing academic writing skills among English language learners in Saudi Arabia in blended learning programs. Through the use of wikis, the students were able to create their own content and incorporate their professors' and colleagues' interactive feedback to improve their academic writing skills, and gain the benefits of the knowledge exchange (Ibid). Likewise, Participant #10 noticed the positive influence of collaborative online tools like blogs and wikis in improving the students' academic writing in a blended course that she taught named "Technical Writing." She mentioned that "using the tools in the Blackboard created an interaction between us and the students, and amongst his classmates. Then, they can apply that in the right place, which is in the Blackboard tool for the purpose of reaching a proper design of writing." Thus, one can see that the interactive online tools help to nurture the collaborative learning environment for the students, so that they learn to value the contribution of their peers to enhance their knowledge.

The pragmatism learning theory, which focuses on the practical application of knowledge (Morgan, 2014), provides strategies that can be applicable in specific majors of blended programs. For instance, in law school, Participant #7 clarified that they have a virtual training court in which they play certain roles. He explained, "we divide the

students to prosecutors, defendants, and judges then let them practice those roles. That's close to reality, so we always make sure that they're connected to real-life experience."

Another example from the blended programs was in business school:

In post-grad, most of the critical thinking assignments need to revolve around a given industry or a given company within the Saudi Arabian context. So, they have to use real examples of real cases from the local environment, not from overseas.

(Participant #14)

Nevertheless, some other instructors, particularly those who teach distance courses, indicated that connecting their courses with real-world cases would not be possible due to the nature of the class. For example, Participant #26 mentioned that "it depends on the class. For me, I teach a basic course online. So, I don't need to use real-life experience." Participant #28 also mentioned that "in terms of our online course, there is not much to add from companies and so forth because it's a very much straightforward course." This can be related to the differences between the overall nature of the two programs. That is, most blended learning programs aim to better prepare students for the workplace, so it is beneficial to use real-life experiences. In contrast, the courses in the distance learning programs are primarily theoretical rather than practical, so it is unnecessary to connect the course materials to the real world.

Considering connectivism learning theory, which uses strategies that focus on connecting a group of learners to share information among themselves across the Internet (Kop & Hill, 2008), the participants of this study revealed that the concept of connecting students with professions outside of the classroom did not appear to be applied in Saudi distance education. This is because this theory is still very new in Saudi higher education, and the NCeL is working to educate the instructors about the rules and principles of

sharing open resources. This was confirmed by Participant #22, who indicated that, while connectivism theory was initially addressed with Stephen Downes (who developed the network-based MOOCs) in the fourth international conference, coordinated by NCeL (eLi 2015), nevertheless “we discovered that we are away from this connectivism theory.” Applying all the elements of connectivism learning theory will hopefully be part of the Saudi educational system at some point in the future.

Furthermore, the idea of applying open educational resources (OERs) in the Saudi higher education system was also addressed in three seminars (out of the thirteen seminars coordinated by NCeL) with the deans of distance learning from all the Saudi governmental universities (NCeL, 2018b). Therefore, the connectivism learning theory was introduced to the Saudi higher education through SHMS OER with limitations. The limitations were that SHMS OER was firstly introduced through the universities and then more recently through schools. This was noted by Participant #25: “we just recently started with K-12 sector. We started with higher education with universities and all the members of SHMS are universities.” She also added how SHMS works:

The idea is when a professor creates a resource, then another professor from another university can add on to that resource, can update that resource, can add value to it, and then share it again so others can benefit from this resource. So, this is the idea of SHMS: building upon other people's work and updating it, not starting from scratch, sharing it with everybody, and maybe adding to the content.

(Participant #25)

In summary, this section reported the learning theory-aligned strategies the participants employed (knowingly or unknowingly) with respect to online teaching. In particular, these theories were applied in the context of course management and managing the students' behaviour (behaviourist theory), testing the students'

understanding (cognitive theory), developing of higher-level thinking (constructivist theory), connecting the class materials with real-life experiences (pragmatism theory) and connecting students with professions outside of the classroom (connectivism theory).

These learning theories were applied more significantly within blended learning courses than within distance learning courses (correspondence studies).

5.1.4 Current Opportunities and Challenges for Saudi Females in Distance Education

In the past, girls faced difficulties in gaining higher education particularly in remote areas of Saudi Arabia, which indicated the need for distance education. Participant #22 mentioned that “In the remote areas and provinces, people were more strict and conservative, so they wouldn’t allow their girls to go with drivers, and women were not allowed, at that time, to drive.” In 2003, the Agency for Girls' Colleges considered ways and means of increasing the absorptive capacity of female students and overcoming the shortage of faculty members, as a result of increasing the number of girls’ colleges from 36 to 102 (Al-Kathery, 2006). The Girls’ Colleges Agency was one of the first educational institutions in Saudi Arabia to employ technologies to deliver their correspondence studies and reach a higher number of female students around the Kingdom (Ibid). They used very small aperture terminal (VSAT) broadcasting technology and the Internet to deliver their courses (Al-Khalifa, 2009).

Distance education in girls’ colleges went through many struggles until it gained the supervision of the Ministry of Higher Education, as Participant # 22 mentioned:

When the colleges moved under the supervision of Ministry of Higher Education, they discovered that they had more than 300,000 girls studying under corresponding studies. And so they used to give them very limited access via the Internet, and they used VSAT, which is Very-Small-Aperture Terminal, to deliver some courses to the girls’ colleges with a lot of disconnection.

(Participant #22)

It was also clarified by Participant #22 that one of the main reasons behind establishing the NCeL was to manage girls' distance education around the Kingdom of Saudi Arabia. He noted that "the main reason behind the whole thing regarding e-learning and distance learning was working directly with those colleges." Thus, the Ministry of Higher Education coordinated with the NCeL to improve the quality level of distance learning at the girls' colleges to be more in line with the other Saudi universities who were under the Ministry's supervision. Participant #22 further clarified: "the Ministry of Higher Education decided to look after this issue with the NCeL. So, we put together a report on the status of girls' distance learning and what could be done to improve this" (Participant #22).

Once girls' distance education was managed by the Ministry of Higher Education and the NCeL, it became possible for more female students to be educated who otherwise were not able to attend universities. Distance education allowed these women to overcome factors like early marriage, motherhood and family obligations, mobility restrictions, or working full time (Al-Asmari & Khan, 2014; Hamdan, 2014a). With the blended learning approach (which is now the only approved form of distance education in Saudi Arabia), women also find it convenient as they only need to commute to the university once or twice a week. This was also clarified by Participant #2:

I think that the greatest benefit of distance education for females is that, as you know, most females are either mothers, have careers or are housewives and are responsible for a family and children. So, going outside every day is extremely hard for them, which may prevent them from continuing their education. Lots of female students decide not to continue their studies because they say that they aren't able to find a balance between the university and house responsibilities.

(Participant #2)

Online learning also helped female students who lived in rural areas to pursue their studies, as was clarified by Participant #25: “I think technology is helping lots of females, mostly females in rural areas or in suburbs who cannot have the same opportunity or the same quality of opportunities as other privileged men or women can get in the big cities.” To gain a quality and accredited education through blended learning, Participant #10 illustrated that “our female students are having this great learning opportunity which is very impressive. I have a lot of students that come from villages, so the student comes once a week, and the rest she can study at home.” Through blended learning programs, females in the villages have the chance to not only be educated, but also to get a better quality and accredited education, which also makes it easier for them to be accepted in the workplace.

Furthermore, distance education breaks traditional face-to-face social gender barriers and can provide anonymity, which may benefit female students in the Saudi culture (Walabe & Luppicini, 2019). Female students can seek knowledge from either male or female instructors in virtual classes with no cultural restrictions. That was clarified by Participant #15, as she noted the consequence of using technology to have anonymous but effective communication:

With respect to our culture, I can work with anybody through these online tools. I don't need to be at the same space where I can work with anybody: male, female, and do a very great work without actually being in the same place.

(Participant #15)

This shows clearly that one of the benefits of using the online tools is that female students feel freer and tend to be more willing to contribute in the learning environment as individuals, regardless of the gender of other participants. As stated by Chester and

Gwynne (1998), anonymous online contexts can enhance student participation, particularly for students who are constrained by race, age, and gender. Thus, distance education promotes effective communication among female students and male instructors which would not be possible in a face-to-face learning context because of religious and cultural limitations (Walabe & Luppicini, 2019). For example, Participant #24 described how some cultural limitations were overcome through the online learning environment:

Since we have the culture of having males and females separated, female students benefited a lot from online learning. That is because sometimes we have male specialties while we don't have female specialties, or we have shortage of female instructors in some subjects. With online learning, this barrier will be broken, and female students can be reached.

(Participant #24)

However, face-to-face learning is not always possible if the instructor is male and the students are female, even in blended courses. If this situation arises as a result of a shortage of female instructors or if the only specialist in the field is male, then the course becomes entirely virtual, because female students are not permitted to meet face-to-face with their male instructors. While this does not replicate the benefits of face-to-face communication in fully blended learning, this accommodation allows female students to participate and freely interact with their male instructor through the Blackboard. This situation was discussed by Participant #4, who asserted, "when I teach girls, all the classes should be virtual. I don't think there are any challenges. It's really a beneficial thing as they can easily interact with me and ask their questions through virtual media."

Furthermore, it is not only female students who benefit from the context of distance education; female instructors can also experience positive changes. For example, male and female instructors at SEU can have synchronous virtual meetings together from

all branches of the university across the Kingdom of Saudi Arabia and female instructors can make the same contributions as their male counterparts. Participant #2 noted:

Our meetings are unified between male and female instructors. The meetings are done electronically through virtual meetings. All of us meet in a single meeting virtually. We don't need to meet in a single real place because, as you know, in our culture we can't do that, but through electronic systems that we use in the university we are able to do it.

(Participant #2)

In addition, female instructors have shown their initiatives toward online teaching. Tony Bates, a Canadian consultant who runs many e-learning workshops and provides e-learning training across Saudi Arabia, was one of the first international experts to highlight their initiatives:

I believe the future of Saudi higher education, and especially the successful implementation of e-learning, will be driven by women faculty, despite the difficulties they face. The women faculty I worked with showed great determination and a commitment to change which was not always present with the male faculty.

(Bates, 2009: 16)

That was also emphasized by Participant #13, who noted that “my female colleagues are very smart, hardworking, helpful and more interested in teaching than my male colleagues.”

To advance female instructors in the field of online teaching, the NCeL (in a partnership with the Open Education Consortium) invited female instructors from all the Saudi universities across the country to take part in a year-long, comprehensive eLearning Pioneers Program. About 40 female pioneers representing all Saudi universities participated in that program (Participant #22). The program began with online training given by the Open Education Consortium, which was followed by summer

placements in the USA to explore the universities' experience in the field of online learning (Participant #15). In the final phase, the program required participants to contribute to international e-learning conferences. Participant #22 noted, "at the end, we required them to attend conferences. They attended two conferences, one of them in the United States, and the other one is in Berlin." According to Daly and Young (2016) "the core of the program is built on sharing the principles of online learning in the U.S. and providing mentoring and internships to prepare female faculty and university leaders with skills in online and blending learning" (2). In the end, one of participants reflected on her experience of the program:

The program was a very great chance for me to enhance my personal skills, teaching skills or even my time management skills ... it widens my vision toward the online courses, it is a great chance for me to meet such brilliant tutors and Saudi ladies across universities.

(Daly & Young, 2016: 23)

From the extensive training of the eLearning Pioneers Program, Saudi female faculty members have gained the opportunities to incorporate U.S.-based pedagogy and strategies into their online teaching to better educate the Saudi population of girls and women (Abdul-Alim, 2015).

Despite the advantages of distance education that Saudi female students and instructors can attain, it also has drawbacks that were mainly created by the culture. As was mentioned earlier in "The Learning Culture in the Saudi Distance Education" section, female students and instructors were not permitted to turn on the camera during the virtual class, as noted by Participant #10: "we can't turn on the camera during virtual class, and being seen by the students is against the culture." Indeed, women are often careful when using technology out of concern for their privacy, as was indicated by

Participant #19, who stated “it is possible to penetrate your privacy.” However, this may hinder students from learning effectively, particularly when the lesson requires them to have the camera on, and also limits the relationship between instructors and students. This was indicated by Participant #28, who said, “I would have loved to at least see my students and for them to see me, so there is some kind of interaction between both of us.” Participant #26 also added that “turning off the camera will decrease the interaction between the teacher and the students. If the teacher's using the camera, this will help the students to see the facial expression of the teacher and learn more.” In addition, even though female instructors can use the LMS tools to have virtual meetings with the male instructors and make their own contributions, they cannot use the same tools to teach male students, since “girls could be taught by male instructors, but male students could not be taught by female instructors” (Participant #22).

In summary, this section provides valuable insights about the current opportunities and challenges that the Saudi females have received from distance education in general and blended learning in particular. One can see that distance education has the potential to provide Saudi females from different circumstances (i.e., who live in remote areas, have family obligations, or work full-time) equal opportunities in accessing higher education compared to Saudi males or to privileged females living in the cities. Distance education also made it possible for the female instructors to join synchronous meetings with their male counterparts and make their contributions through the online tools. However, distance education (whether fully virtual or blended learning) has some obstacles for women which are mainly generated by the culture. For the purpose of protecting their privacy, Saudi females are not usually willing to utilize the

online tools that may show them to the other side of the communication, even if the other side is a female, which may reduce the interaction between the both sides. The different limitations for women than men can be more pronounced within blended learning, where the male students can use video communication and meet face-to-face with their instructor, but female students are limited to virtual classes without video. The restrictions on camera use remain true for female students whether the instructor is male or female. Male students can be taught by male instructors only, and have freedom to choose whatever tool they like during their classes.

5.1.5 Transforming Saudi Higher Education Through OERs

As indicated earlier in the responses related to the connectivism learning theory (in the “Application of Learning Theories in Distance Education Delivery in KSA” section), the strategy of connecting students with groups of learners and professions via the Internet was new in Saudi higher education. The concept of connectivism learning theory was only addressed by Stephen Downes, who was a connectivist and one of the originators of the first MOOC, in 2015. MOOCs (Massive Open Online Courses) are considered the fundamentals of open education while Open Educational Resources (OER) make learning available to all people regardless to their demographic, economic, and geographical constraints (Nobre et al., 2018). As noted by Participant #25, while MOOCs do not operate within Saudi Arabia: “the idea of Saudi SHMS OER was introduced in 2015 at the fourth international conference of NCeL. Since then, we started to give workshops, prepare educators and raised awareness about OER, but we didn't launch SHMS officially until 2018.” The idea of applying OERs in the Saudi higher education system was also discussed in three seminars (out of the thirteen seminars coordinated by NCeL) with the deans of distance learning from all the Saudi governmental universities (NCeL, 2018b).

A conclusion was reached to introduce SHMS OER to Saudi society with some limitations. It was noted by Participant #22 that after “we checked with Stephen Downes, the first one to develop a MOOC course. We think we are not ready to release a real MOOC, in Saudi Arabia. [...] So, SHMS mainly support now the smallest part of OERs.”

SHMS OER was first introduced to universities and then schools, as Participant #15 noted that “universities and also the school districts (K to 12) are recently participating in SHMS.” The NCeL was responsible for introducing SHMS OER to the Saudi educational system, and they organized workshops and training programs about managing open educational resources and open licenses that aimed to enrich the educational content (NCeL, n.d.-c). For example, the NCeL grants the RABH License (knowledge without borders) for educators who pass the four training levels: Level 1 (SHMS member) provides training on OER foundation skills, Level 2 (SHMS certified member) provides training and assessment on OER foundation skills, Level 3 (SHMS specialist) provides training on multimedia tools for creating OER, and Level 4 (SHMS certified specialist) provides training and assessment on multimedia tools for creating OER (NCeL, n.d.-d).

At the initial stage of SHMS OER, the NCeL conducted training programs to raise awareness about open educational resources. This strategy was noted by Participant #22, who indicated, “we think we need at the beginning to share whatever we have already, and then later, we can go into enhancing the experience of teaching and learning with less teaching, more learning. So, this is what exactly SHMS is addressing.” The NCeL also conducted training programs about copyright and the principles of sharing open resources for the instructors at the universities and teachers at schools. Participant #25 explained

why this was so important: “we're trying to encourage them to license their work under an open license and sometimes it's hard for them. They're worried about copyright issues. They're worried about someone taking their work or playing with it or modifying it.” She added that NCeL went through stages in order to prepare the educators to learn and accept the policies of how to share their resources with others:

So, we gave them the option of if you're going to work with us, at least make your resources available under the most restricted creative commons, which is the license that only allows others to share the resource and not to modify it. So, Alhamdulillah, we found educators who were actually excited to share their work and who were looking for ways to share their work.

(Participant #25)

The role of universities and educational institutions in contributing to the enrichment of SHMS, the national program of open educational content, was significant. For example, King Abdulaziz University, King Faisal University, Prince Sattam University, Tabuk University and the Saudi Electronic University have received the excellence award from the NCeL in enriching the SHMS platform with educational resources (NCeL, n.d.-e). Building on this, Participant #26 stated that “most of the universities joined the SHMS platform and uploaded materials through SHMS to share those materials with other universities. King Abdulaziz University participated in that platform and Alhamdulillah, we got an award for it.” Similarly, Participant #15 noted that “King Abdulaziz University is very active in SHMS.” Although there were a lot of noticeable contributions done to raise the awareness of the Saudi educators about open educational resources, Participant #25 mentioned that “I would like to see more awareness raised regarding open license. I would like to see more professors sharing their resources and opening them widely and allowing others to modify their resources and using the open creative common license more.”

To sum up, as one can see that the Saudi learning society has gradually perceived the perspectives of sharing open educational resources through SHMS OER. The NCeL has provided several workshops and training programs to prepare educators in how to license their work through SHMS and makes it open for others to build on it. Even through SHMS has only covered a small part of OERs and introduced it to the Saudi learning system, there were signs of readiness to establish a real OERs model that includes MOOCs in the near future.

Chapter Six: Discussion

This chapter provides a brief summary of the research's main findings, followed by a discussion of e-collaborative learning principles, the mutual interaction between the Saudi culture and e-collaborative models, and ethical dilemmas within the Saudi distance education.

6.1 Summary of the Findings

The central question that this study considered was “How is e-learning delivered in Saudi Universities (SU), and how do current models accommodate social, cultural, and ethical challenges in the delivery of e-learning in the Kingdom of Saudi Arabia?” In the early 1970s, distance education started to be applied in some leading Saudi universities using printed books and documents, and then the educational broadcasting satellite. In the early 2000s, the advancement of technology allowed these correspondence courses to be delivered via the Internet. Also known as distance learning programs, admissions were stopped on the correspondence programs in Fall 2016 at all Saudi universities due to lack of quality. In 2011, the Ministry of Education established a new form of distance education called a blended learning approach, and founded a special university to deliver blended learning programs, which was known as the Saudi Electronic University (SEU). Until recently, this university was the only governmental university that delivered blended learning programs in the Kingdom. Thus, the current blended learning model that is applied at SEU is renowned for its high academic quality, particularly in contrast to the previous correspondence models that were applied in most of the Saudi universities. Unlike the earlier distance learning or advanced correspondence programs, the blended learning model is now accredited and approved by the Ministry of Education and the Ministry of Civil Service because it has demonstrated a real learning and teaching model

of distance education. This model includes face-to-face lectures, simultaneous virtual lectures, and concurrent asynchronous electronic activities through Blackboard. These different teaching elements increased the students' demand for blended learning because this model provided continuous interactions with their instructors and peers, causing students to no longer feel isolated like they did in distance learning programs.

Furthermore, some participants noted that the graduates of blended learning are more desirable on the job market compared to distance learning graduates. As Participant #7 asserted, "most of the companies in the marketplace don't accept distance learning graduates because they don't think that they are well-qualified; instead, they prefer to hire blended learning graduates."

The study also examined the question, "How do current models accommodate social, cultural, and ethical challenges in the delivery of e-learning in the Kingdom of Saudi Arabia?" The current model of distance education in Saudi Arabia is the blended learning model, which takes into consideration the social, cultural and ethical challenges in the delivery of its online classes. The blended learning model mainly accommodates the social challenges when coordinating face-to-face and virtual class time. Because a high proportion of the students who study in blended learning programs are full-time workers, classes, whether face-to-face or virtual, are scheduled from 4 PM to 10 PM (after working hours). In terms of the cultural challenges, the practice of separating males and females during classes is important in most educational settings in Saudi Arabia. This was noted by Participant #11: "the cultural values must remain compatible even in virtual classes." Thus, a male instructor gives separate virtual lectures to male and female students at different times. Additionally, interactive online tools that have cameras are not

used when teaching female students, whether the instructor is a male or female; this accommodation preserves the females' privacy according to Saudi cultural values. Finally, the blended learning model at SEU has also started to raise the students' awareness about the ethical challenges (i.e., plagiarism, copyright and academic theft). These issues are emphasized during the orientation week as well as throughout all the students' learning levels, in workshops, online tutorials, course syllabus, and assignment outlines.

6.2 E-Collaborative Learning Principles

This study also analyzed the responses to the research questions, "How do current distance education models and principles guide the e-learning delivery in SU?" in general and "How do current Saudi Arabian e-learning principles of the Ministry of Education guide e-learning delivery in SU?" in particular. As mentioned earlier in this study, Saudi distance education went through three phases: the early correspondence programs (printed documents), advanced correspondence programs (also called distance learning studies), and most recently, blended learning programs. It was clear that the first and the second phases of distance education in Saudi Arabia focused more on applying behaviorist theory (i.e., focusing on observable behaviour like the necessity of submitting the assignments, quizzes and other online activities on time) and cognitive theory (i.e., focusing on the process of acquiring knowledge; assessing the learning attainment) to deliver knowledge to the students. This finding agrees with Bates (2015), who clarified that most traditional distance education models applied the objectivist learning approach, which was influenced by the behaviorism and cognitive theories (Vrasidas, 2000; Harasim, 2012). In other words, an objectivist learning approach is a teacher-centered learning approach that aims to represent and transfer knowledge from the teachers to the

learners (Yang & Liu, 2007). It was obvious that from the responses in this study and the document analysis that the advanced correspondence programs used this technique, as there was a notable emphasis on the role of the teacher to transfer knowledge to the students through the technology. For instance, as was stated by Participant #28:

When I'm doing an online course, I have a hundred-plus students, and I have a very structured course that I have to deliver. So, I think at that point, even if I don't want it, it becomes teacher-centered. Or even not teacher-centered, it becomes a curriculum-centered approach.

(Participant #28)

This approach tends not to develop the students' creativity or independent thinking, which are important skills for modern learners to attain.

However, in the third phase of distance education in Saudi Arabia (the blended learning phase), there is a significant interest from the Ministry of Education toward applying the constructivist learning approach, which is influenced more by the theories of constructivism, pragmatism and connectivism. In a constructivist learning approach, learning is an active process with learners perceived as designers building their own knowledge structures, rather than absorbing knowledge transmitted by the instructor (Harpe & Fiona, 2009). The blended learning model has demonstrated a shift from a teacher-centered approach to a learner-centered approach in the learning process within Saudi distance education. This is acknowledged to be the main philosophy followed in blended learning strategy:

Saudi Electronic University aims to provide quality educational services in a learner-centered environment. The University has adopted a flexible model of blended learning that meets the needs of learners in a technological environment that utilizes ICTs, supports self and collaborative learning, and decreases the learner's isolation in the distance learning environment by combining direct (face-to-face) education (in both simultaneous and asynchronous contexts) in a blended model that combines their respective advantages.

Participant #17 also indicated that SEU ensured a learner-centered approach by having the instructor deliver the basic information (about 30% of the course), and then making the students be responsible for the rest of the work themselves, with the instructor available to answer any questions that may arise. This clarifies how the blended learning model has contributed to shift the Saudi distance education system from passive learning following a teacher-centered approach to an active learning experience following a learner-centered approach.

This study examined the different principles used within the strategy of a learner-centered approach. Online tools have been used in blended learning to sustain continuous interactions between the instructor and the students as well as to promote interactions among peers outside of the face-to-face classroom. The instructors at SEU have also utilized the online tools (i.e., discussion boards, wikis, blogs) to connect knowledge with real-life experience (following the strategy of pragmatism learning theory). For example, the school of law at SEU uses “a virtual mock court” to provide the students with a more practical experience in addition to the face-to-face class and the actual court. Another example of incorporating practical experience is using wikis to improve the students’ academic writing at the School of Science and Theoretical Studies at SEU. The participants from this school clarified that these tools have helped the students to improve their academic writing skills as students are able to integrate the continuous feedback of their instructors and peers into their writing.

In addition, although the connectivism learning theory was only recently introduced to the Saudi higher educational institutions through SHMS OER, the

university instructors around the Kingdom are gradually collaborating to build on each other's works for the purpose of developing creative digital content and support education. Since its official deployment at the start of 2018, SHMS now contains about 367141 resources (NCeL, n.d.-d) that were created collaboratively by university instructors and schoolteachers. This finding aligns with Tony Bates' (2015) statement that the concurrence of the constructivist learning approach along with the evolution of the Internet has led to the development of online collaborative learning models.

A collaborative online community can also be found on the Blackboard platform, which was bought by the Ministry of Education and distributed to all the Saudi governmental universities. This was indicated by Participant #18, who noted that "as an instructor, I can share my teaching material with other instructors around the country through the Blackboard, so that it is an easy and more interactive way." In addition, Aljabr (2018) reported that all the Saudi universities accessing one learning management system creates an environment of knowledge sharing and experience transferring between them. This finding aligns with the learning conversation theory that highlights the significance of individual interactions to construct knowledge and promote understanding (Pask, 1976).

In practice, one of the struggles of the blended learning model is that it limits access for some students. This is particularly true for female students, as this learning approach requires face-to-face attendance for 25% of each course given, and many female students will not be able to attend face-to-face classes for the reasons discussed previously. Replacing the face-to-face attendance in the blended learning model with virtual classes or any synchronous online activities would open a wider door for female

students, and make the blended learning model more accessible to them. However, despite these limitations, the blended learning model nevertheless has a better reputation than the previous two models within Saudi distance education (early correspondence programs and advanced correspondence programs).

The blended learning model can be used in conjunction with the previous models (early correspondence programs and advanced correspondence programs) in order to satisfy the special needs of individuals who are unable to fully participate in the blended learning system. In this way, higher education can reach those who would otherwise be unable to access it because of the limitations of different geographical locations, as well as cultural and gender constraints. Leading universities in distance education such as King Abdulaziz University (KAU), King Faisal University (KFU) and King Saud University (KSU) have made a significant effort to develop their distance education models (early correspondence programs and advanced correspondence programs) since they first began in the early of 1970s. This older technology of the previous two models can be used to add value and increase accessibility to the more recent technology of blended learning. The advantages of using and adapting old technology instead of replacing it were highlighted by Wilbur Schramm (1973) in his book *Big Media, Little Media*. Additionally, educators and policymakers must decide where to best invest their resources in order to provide the greatest benefit to students. Schramm (1973) notes that, “The shape of the decision before policy planners and educators in developing countries is therefore whether to invest in a Big Medium like television or a Little Medium like radio, a Big Medium like films or a Little Medium like filmstrips; among either the Big Media or the Little, which medium or media; and, indeed, whether it is justifiable in a

given situation to put money into any new medium rather than into the improvement of teachers and/or texts” (5).

6.3 The Mutual Interaction between the Saudi Culture and E-Collaborative Models

This study also considered how Saudi culture influences e-learning delivery in Saudi Arabia, as the characteristics of learning communities are reliant on a society’s culture. There are two distinct kinds of relationships between technology and culture (Turkle, 2005). First, technological determinism—that is, when technology develops on its own—impacts and changes culture by pushing social development forward (Ibid). In contrast, there is also social construction, in which technology is deliberately constructed and shaped as part of society (Ibid). Therefore, the connection between technology and culture can be interpreted as a reciprocal relationship, in which the two components depend on each other and together form an inseparable relationship (Herdin et al., 2007). This reciprocal relationship can be explained by the Social Construction of Technology (SCOT) Theory (Pinch & Bijker, 1984; 1987). Emancipative educational technology also follows the SCOT model and acknowledges the importance of using technology appropriately to ensure that the needs and interests of all users are satisfied. Boyd (1991) stated that “computer conferencing in particular is best suited to provide emancipative educational learning situations” (84). In agreement with this theory, this study has demonstrated that there is a mutual relationship between the Saudi culture and online community models (employed in blended learning approach) in the delivery of Saudi distance education. The reciprocal relationship between the Saudi culture and online community models will be illustrated through a discussion of its use in online learning.

First, this study explored how culture has an influence on the Saudi online learning to answer the research question “Based on Hofstede’s cultural dimensions, how does each dimension influence the delivery of distance education in SU?” In particular, Hofstede’s cultural dimensions of power distance, individualism vs. collectivism, masculinity vs. femininity, uncertainty avoidance, and long term vs. short term orientation showed significant influence on online learning in Saudi Arabia. Like any Arab culture, the Saudi culture is generally classified as a collectivist and high power distance society (Hofstede, 1983), particularly in the educational setting. That is because the teacher is viewed as the main source of information the students should depend on during their learning process. For example, Participant #16 mentioned that “the main focus is on the instructor and his performance.” That has been indicated in this study when students started their blended learning programs at SEU and expected the instructors to be their only source of information. For the dimension of masculinity vs. femininity, the culture in Saudi Arabia still has an influence while conducting synchronous online class, so that male and female students remain separate. As Participant #26 indicated, “we manage virtual classes the same as face-to-face classes. Male instructors teach male students and female instructors teach female students. In cases when a male instructor teaches female students, he gives them the virtual class separately from male students.” In addition to this separation, female instructors and students do not utilize all the online interactive tools in the Blackboard such as the camera tool. As the participants in this study noted, this is considered to be part of the culture to preserve their privacy. For example, Participant #20 believes that it is positive that neither female students nor faculty are obliged to use the cameras, further asserting that “it’s no one’s right to tell me to use that tool because I

wear the hijab and won't allow it. Some things are clear and we're well aware of them.” There is a complexity of unique needs and interests within the population that distance education models do not address. For example, while women are now able to drive to attend face-to-face classes, this does not mean that there are similar shifts in other areas of their lives. For example, it is still considered an unacceptable cultural practice for a woman to turn on the camera during a virtual class because it is considered an invasion of the woman's privacy.

In addition, uncertainty avoidance and long term vs. short term orientation dimensions of Saudi culture notably influence the online learning context. There was no consistency in terms of uncertainty avoidance, as some participants hesitated while others were willing to adopt online teaching. However, most eventually lean toward the blended learning approach because they see it as the best form of distance education. For example, Participant #25 mentioned that “you can't replace the face-to-face sessions. Thus, I do prefer the blended learning format where some of the course is done through face-to-face classes and some of it through online learning format.” Participant #14 also built on that, saying, “the blended learning method can solve a lot of issues created in the totally online teaching method. One of them is the social aspect. In blended learning, I have the relationship with my students as I can see them face-to-face.” Clearly, even though some of the participants were hesitant to teach online (i.e., Participant #28 mentioned that “I think face-to-face interaction is important”), others were willing, they all agreed that the online session should be complemented with face-to-face classes, and blended learning is the best way of distance education.

When considering long term vs. short term orientations, the participants of this study made a connection between this dimension and the age of the people. It was indicated that the older Saudi generation reflected a short-term orientation society, as members of this generation often worried about the “negative effects” of technology and whether it may go against the culture. Thus, it is necessary to raise awareness about the right use of technology, as was elaborated by Participant #6: “I was sitting with my father. He’s old and he wondered how can I give lectures while I’m at home, but when I explained it to him, he understood. We just need to spread awareness about technology.” In contrast, the new generation is becoming a long-term orientation society as they are adapting the technology with their cultural values to create a contemporary lifestyle. They know how to utilize advances in technology in such a way as to not contradict with their religious and cultural values. For example, Participant #26 noted that “today, the young generation is using mobile phones, iPads and a lot of other devices. They don't need any help with that.”

On the other hand, this study also illustrated that online learning has had an influence on changing the Saudi culture. This finding aligns with the finding of Hamdan (2014a), who indicated that online learning has contributed to changing the Saudi learning culture from being collectivist and mainly depending on the teacher throughout the learning process to be individualist and self-reliant. In particular, the principles of the blended learning approach, applied at SEU, have encouraged the students to be independent and the center of learning while the instructors are only facilitating the course. The influence of online learning on culture was also seen in establishing effective communication between female and male instructors of blended learning at SEU, as they

collaborate and work together through the Blackboard tools. Female students can also have effective communication and participation through the tools with their male instructors.

In fact, online learning benefits both female students and instructors in the Saudi universities in general and in the Saudi Electronic University in particular. That is because Saudi female students might find it helpful to pursue their education online due to family obligations that would make it difficult or impossible to attend face-to-face classes on a regular basis. For female instructors, they also can develop and upload their materials online, as well as conduct their virtual classes while they are at home. This particularly helps both female students and instructors to overcome the cultural obstacle of “mobility restrictions”, as they are more attached to their homes.

Indeed, the interaction between Saudi culture and online learning has produced a unique blended learning model that adapts to the cultural values to provide a quality learning experience. Unlike distance learning (advanced correspondence programs), the blended learning model involves continuous interactions among students and with their instructors through the face-to-face class and via the interactive online tools, so that they do not feel isolated like they used to in the distance learning model. The mutual interaction between culture and online learning has also helped to develop the students’ communication skills and encouraged them to be more independent and responsible. All of these features have helped the blended learning graduates to be more desired for recruitment in the marketplace, compared to distance learning graduates.

Blended learning continues to evolve in Saudi Arabia. At an international conference on blended learning coordinated by SEU in November 2017, several

recommendations were made. One such recommendation noted that it is highly important to adopt a national policy and a coherent framework for blended learning that will have an impact on the quality of the learning outcomes in educational institutions, and drive it to achieve its objectives. Another recommendation emphasized a need for coordination between educational institutions in the Kingdom of Saudi Arabia under the umbrella of the Ministry of Education. This coordination would allow them to develop an ideal national pattern of blended learning that serves the learning process and ensures the achievement of educational outputs through which a knowledge economy can be achieved (SEU, 2017a). This implies that the Ministry of Education will continue to work with the universities to develop a national policy for blended learning models to ensure a quality learning form of distance education.

6.4 Ethical Dilemmas within the Saudi Distance Education

This study also examined the question, “What are the main ethical, social, and cultural concerns in the current Saudi e-learning delivery?”

To answer the first part of the question, it was indicated that the general education (Grades 1 to 12) in Saudi Arabia has made limited efforts toward educating students about ethical issues like plagiarism and copyright. Therefore, when students get to university, they come with inadequate knowledge about ethics in education. They lack understanding of how to cite other people’s work, write references and avoid copyright issues. Many participants of this study emphasized this fact, and noted that they have faced a great deal of difficulty in their attempts to raise the students’ awareness about these ethical issues in distance and blended courses. For example, Participant #23 declared that “the most prevalent ethical issue is plagiarism, because our students are not

educated enough to realize these ethical problems in online courses. Thus, we made a campaign for this to make students aware about the danger of this behavior.”

Because these issues are not clarified during the general education years, the universities that offer distance learning programs (i.e., KAU) and blended learning programs (i.e., SEU) have started to raise the students’ awareness about these e-learning ethics. For example, KAU organizes workshops about the rules of copyright and proper references and citation. Additionally, SEU educates the students about plagiarism, copyright, academic theft firstly during the orientation week as well as throughout their studies at the university. As stated in SEU’s (2014a) rules and regulations, committing any ethical offenses (including plagiarism, scientific theft, or violating intellectual property rights) would result in disciplinary sanctions. SafeAssign was also made available in the Blackboard, and the students submit all their assignments through this tool to check for plagiarism.

The NCeL has also conducted several workshops to promote understanding of copyright and the rules of sharing open resources through SHMS OER within Saudi society in general and the universities’ faculty in particular. While there initially was a hesitation toward accepting the idea of sharing and modifying open resource, now the number of users authoring resources has dramatically increased on the SHMS website. This was a consequence of the extensive training and workshops about licensing and sharing open resources that the NCeL has coordinated.

However, this study observed that many faculties consider it to be unnecessary to set ethical rules to manage online discussions involving both instructors and students because they believe that ethical issues are already regulated by Saudi culture and

religion. For example, Participant #6 described the nature of the online discussion: “it’s an obvious matter: the student has to follow a moral code because it’s in our culture, and traditions, that’s how we’re raised. I’d make them aware of this, but sometimes it’s not needed because they’re aware of it.” It was also indicated that other unethical behavior (i.e., harassment, cyberbullying, hacking, privacy) rarely occurred during the online class discussion as they interpreted that avoiding these unethical behaviours is part of the Saudi religion and culture. For instance, Participant #28 revealed that she always reminds the students about avoiding unethical behavior in the online class in this way: “it’s not just illegal, it’s also not acceptable in our religion.” Because of this, instructors should make the students aware of their obligations to their classmates and connect this to the notions of ethics outlined in the Qur’an and Hadith, which is the collection of the Prophet Muhammad’s sayings. This finding aligns with study of Muhammad et al. (2013) and Titi et al. (2013) that incorporate ethical rules and guidelines in online learning from the main source of Islam (the Quran and the Hadith), which placed great importance on the adherence of moral values. These Islamic rules put the foundation for the code of conduct in life in general and in distance education in particular, as using the technology in education is a new trend in Saudi Arabia and it may need time to establish its own rules. As stated by Al-Khalifa (2009), Saudi Arabia has been slower than many countries to move into online learning due to its very short history of using technology for education. That was also mentioned by Participant #2 that:

We have only started to care about these ethics recently because technology is still new in our Saudi society. As you know, at the beginning there was no control but when the problems increased, then they started to put policies and regulations in place.

(Participant #2)

Furthermore, the National Cyber Security Center (NCSC) was only established in Saudi Arabia in October 2017 to support the national cyber security posture across the Kingdom. Thus, maintaining the Internet security is new matter for the authorities in Saudi Arabia. The main tasks of the NCSC are to provide defense systems, technology and guidance to protect communication systems against attacks to confidentiality, integrity, processes, and availability in the nation's communications infrastructure (NCSC, n.d). All of these factors contributed to making Saudi society not fully aware of potential Internet ethical issues, whether specifically in the educational context or in general.

In addition, there are other ethical concerns that emerged in Saudi online learning, namely the negative public perceptions of distance education, the non-recognition of distance learning degrees and the digital divide. Distance learning programs were lacking quality as there was no real teaching and learning. For that reason, the Ministry of Education has stopped the admission in those programs since Fall 2016. Since then, the focus has shifted towards emphasizing the quality of education through a blended learning approach, which is the only accepted form of distance education in Saudi higher education; this was also demonstrated in Zawacki-Richter et al. (2015). Unlike the distance learning approach, the blended learning approach allows for more effective interactions between the students and their instructors, which creates a quality learning experience. In addition, the NCeL has developed national bylaws to govern and manage the quality of distance education at the Saudi learning institutions. Therefore, the main objectives of the NCeL are to control the quality of online learning programs and to grant

licenses for companies and governmental entities of e-learning programs to provide accredited certificates (NCeL, n.d.-a).

The non-recognition of distance learning degrees had a negative effect on both male and female students. However, females felt the effects more deeply because more women than men held distance education degrees, as was stated by many participants, such as Participant #2, #14, #17 and #25. Women from rural areas within Saudi Arabia tend to belong to tribes who are more conservative and who retain a powerful connection to the land. This means that distance education was the best option for them to be able to pursue their higher education without having to leave their families or their region. As such, having their degree not recognized by the employers created a major obstacle for them.

The digital divide is another important ethical issue that is related to Saudi distance education. It is worth mentioning that the early correspondence programs addressed an existing digital divide of girls who were living in remote areas without access to traditional higher education by providing them with the opportunity to take courses remotely. The current digital divide refers to the recognized disparities of Internet accessibility between different regions as well as gaps in the acquired technical skills between different age groups. This study noted that there are differences in the Internet accessibility between cities, villages, and remote areas, which may create a digital divide in their accessibility to learning. For example, Participant #10 noted that:

I get a lot of e-mails from students who live in villages saying that 'I can't attend the virtual lecture because the Internet is not letting me log in'. Unfortunately, I can't even help the students with anything, because they are in a situation that I can't change.

(Participant #10)

The literacy level in technical skills and the age of people revealed another digital divide in this study, so that older generation may lack the knowledge, skills and willingness to use the technology compared to the younger generation. These findings align with the studies of Aljabre (2012) and Basahel & Basahel (2018).

However, there are improvements being made to some aspects of the digital divide. Recently, the issue of Internet bandwidth and speed in villages has been gradually improved, as Participant #1 mentioned that “the Internet infrastructure has been developed in villages during the past two years.” However, it has not yet reached the level of the Internet speed at the cities. While larger cities in Saudi Arabia are preparing to have an early adoption of 5G networks by the end of 2019 (CITC, 2018), small and remote areas are still behind in terms of both Internet access and bandwidth speed. According to the Communications and Information Technology Commission annual report (2017), a project was launched that served to provide very small communities of less than 5,000 inhabitants with voice and Internet access through wireless networks. The target of that initiative is to increase the coverage of wireless broadband networks in remote areas in order to cover 70% households. While this shows that 30% of those areas still do not have access to the Internet, there is a hope that they will be covered in the near future.

The age-related aspect of the digital divide is also being addressed. The Blackboard team provides pedagogical and technical training to all the faculty members regardless of their age, whether in the workshops, training sessions, or in the online tutorials. In the one-to-one support, the Blackboard team gives older instructors extra

training on how to teach using the online tools effectively whenever they come and ask for help. That one-to-one training has helped to improve these instructors' technical literacy skills, as was noted by Participant #20: "I'm not seeing what I used to see before, like fear of the technical problems. Now with the training and practice they have received, they're more aware of the tools and they're less afraid." However, this could be expanded further. There should be training courses and workshops designed particularly to train older instructors and students. These directed courses would be helpful because they would be able to address issues that demotivate them from using technology and work on ways to overcome these issues.

E-learning has also contributed to changing the social and cultural experiences of high school graduates and higher education within Saudi Arabia. The academic literature indicated that online learning helped to accommodate the revolution of the youth population in Saudi Arabia and the dramatically increasing number of high school graduates, as there was limited space in conventional face-to-face programs (Ghamdi et al., 2011; Alturki, 2014; Hamdan, 2014a; Aljaber, 2018). In addition, this research has highlighted more social concerns in the current Saudi online delivery (blended learning style). While conventional face-to-face programs in Saudi universities require students to apply within three years of graduating from high school, blended learning programs at SEU have no such requirement. This means that students may be accepted into blended learning programs regardless of when they graduated high school. Furthermore, blended learning programs do not require a high GPA or the completion of a skills test, unlike conventional universities. These factors allow for education to be accessed by a much wider population. In particular, many participants noted that full-time workers, people

who live in remote areas that do not have local higher educational institutions, and females with family obligations make up a large percentage of distance education students seeking quality learning.

For the academic year of 2018/2019, SEU granted admission for 12,500 male and female students to bachelor's degree programs in all its branches around the Kingdom. Significantly, this included 44 students who were entering the program directly from high school, having graduated with a GPA of 100% (SEU, 2018). This shows that blended learning programs are perceived as having high academic quality, since these high school graduates would be able to be accepted into any program, but have chosen blended learning.

In summary, this chapter defined the three models of distance education that have been employed in the Saudi higher education: the early correspondence learning model, the advanced correspondence learning model, and the current blended learning model. It also explained how the social, cultural and ethical challenges have been accommodated into blended learning model to deliver quality learning that suit the Saudi learners.

Chapter Seven: Conclusion

This final chapter provides a discussion of the significance and contribution of the study.

The chapter also presents a reflection on the limitations of the study, before ending with suggested recommendations for future research.

7.1 Significance and Contribution of the Study

This qualitative study has provided an overview of current trends in Saudi online learning from the perspectives of the higher institutions' instructors and expert designers, with a purpose of capturing the insider perspectives that were not public knowledge.

Understanding these perspectives could help to shape the future developments of distance education in Saudi Arabia.

Moreover, this research is also significant in terms of its theoretical and practical contribution to the existing academic literature. The way this study connected the learning approaches and the influences of culture to theories is important because it shows practical ways that these theories are applied, as well as some of the limitations of these theories in a real-world context. The theoretical contribution such as the academic support of learning theories (behaviourist, cognitivist, constructivist, pragmatist, connectivist) describes the two distance education models used in the Saudi higher education from its early establishment at the beginning of the 1970s until the current time. These two models are: 1) the objectivist learning model (focusing on behaviourist and cognitivist learning theories), following a teacher-centered approach, and 2) the constructivist learning model (focusing more on constructivist, pragmatist and connectivist theories), following a learner-centered approach. The theory of the Viable System Model (VSM) also describes the viability of Saudi distance education through its three phases, as it has survived in a changing environment: 1) the early correspondence

studies that began in the early 1970s, 2) the advanced correspondence studies (by utilizing the Internet and technology) that originated at the beginning of the 2000s, and 3) the blended learning studies that started in 2011 at SEU. In addition, the theory of Hofstede's cultural dimensions and Social Construction of Technology (SCOT) reveal complex interactions between Saudi learning culture, technology incorporation, and ethical issues.

This study's contributions have also shown ways that women are able to participate within education while remaining within a certain cultural framework, which might be useful as a model in other contexts (i.e. in other workplaces in Saudi Arabia, or in other countries that share the same culture). The online tools have been used in a way that preserves the females' privacy and anonymity while still learning and contributing as instructors. These tools allow women to interact online freely and effectively. Women also find learning through the online tools is convenient as they can make a better balance between their family obligations and pursuing their studies. Further, they find it a convenient way of learning if they are full-time workers. Female instructors can also interact with their male counterparts through the online tools and are able to be involved in virtual meetings with male instructors and administrators. This allows them to contribute and share their own opinions.

This study has also made important contributions to the understanding of ethics in online learning within the Saudi Arabian context. As Saudi Arabia has a short history of online learning, few studies have addressed the ethical concerns in relation to e-learning contexts (Hamdan, 2014a; Alghamdi et al., 2018). Given the paucity of these studies for Saudi Arabia, this study draws from the general discourse regarding ethical

considerations of online learning and examined them within the Saudi learning culture. During this period of time, it has been found that Islamic ethics are mainly considered in the Saudi online learning as both Islamic ethics and online learning ethics set guidelines to fulfill and protect the rights of humans in Saudi society. For example, the instructors usually remind students how ethical issues like plagiarism, copyright, privacy, harassment, cyberbullying and hacking are not acceptable in Islam. Furthermore, the National Cyber Security Center (NCSC) was only established at the end of 2017 to enhance knowledge of cyber risks and raise awareness among the Saudi society. This study demonstrates that, because Saudi citizens are only just becoming aware of the potential risks of technology and e-learning, Saudi society is not yet fully aware of potential Internet ethical issues. Consequently, the students come to study online with lack of recognition of the e-learning ethics which may increase the possibility of them being involved in that risk. Adding to that, this study highlights an issue of digital divide that appeared in the Saudi distance education when the technology was utilized. This divide was shown in the differences of Internet accessibility and speed between various areas (i.e., villages and cities) in Saudi Arabia, as well as age groups in terms of technical skills literacy and willingness to adopt technology.

In addition, the findings of this research will assist online learning practitioners in Saudi Arabia to design more effective distance education models by ensuring that the cultural and ethical perspectives are sufficiently incorporated in the online learning models. In addition, the findings of this research will also benefit the market of e-business. There are some aspects of e-learning that will also be applicable in e-business, including those components that coincide with the Saudi learning culture. Thus, e-

business practitioners can use the example of e-learning (as analyzed in this study) develop effective online models for tools to be used within Saudi Arabia as well as within other countries that have similar cultures.

7.2 Limitations

There were some limitations to this study. The first limitation is related to the lack of focus in this research on the role of Information and Communication Technologies (ICTs). Rather than examining deeply the technical aspects of online models, this study instead focused on the influence of other factors on the creation of online models, such as culture and ethics. Because of this, the role of Information and Communication Technologies (ICTs) needs further discussion in future research.

Subsequent limitations involve constraints on the interview process, in terms of the interview subjects as well as the method of conducting these interviews. First, besides the expert designers from the National Center for E-learning (NCeL), the researcher was only able to conduct interviews with instructors and expert designers from two universities that offer distance education programs, namely the Saudi Electronic University (SEU) and King Abdulaziz University (KAU). Emails seeking permission to conduct interviews were sent to many other universities, but the researcher received no response from them. Similarly, another limitation is that despite many invitation emails being sent to recruit participants, the researcher received an agreement of only 4 employees from the NCeL and 3 employees from KAU. Furthermore, of the SEU branches who did respond, the big branches (i.e., Riyadh, Dammam, Jeddah) had few or no responses to the invitations sent to the instructors, while smaller branches (i.e., Abha and Madina) had more responses from the instructors. All of these issues resulted in a

narrow view of the experiences of instructors, as it is likely that more instructors from these universities, as well as other instructors from different universities or branches, would have had unique challenges and observations. An additional limitation of the study is that it was difficult to obtain insider (published) documents concerning the strategies and principles used by the Saudi universities to deliver online learning from the interviewees. The researcher received only a few documents, as most of the participants stated that they did not feel comfortable sharing them. Because of this, the researcher had to explore the posted information and published documents on the NCeL, SEU and KAU websites, as well as other peer reviewed articles and articles available on Google and the databases.

The final limitation of this study is that, as a female researcher, conducting face-to-face interviews with male participants was not possible as the researcher was not able to have access to the male campus at the Saudi universities. A solution to this cultural constraint was online interviews. To maintain consistency in the data collection method, the researcher also conducted online interviews with female participants. Similarly, the camera was not used in any of the interviews, even with female participants, in order to keep the cultural values and to avoid invading each other's privacy. Another cultural constraint that was encountered was receiving less detailed responses from some of the male participants. This is consistent with Saudi cultural values, as some people (whether men or women) choose not to extend the conversation with individuals of the opposite gender. Because this researcher is female, some male participants chose to respond with the minimal amount of information necessary and did not provide any extra details, while the female participants were more likely to provide more expansive answers.

7.3 Future Research

The topics in this section are recommendations for future research in order to further enhance understanding about ways of delivering effective online learning. While this researcher conducted interviews only with instructors and expert designers who engaged in delivering the e-content, future research initiatives should consider interviewing the students as well in order to find out the ways that they prefer to learn online. Moreover, this qualitative research conducted interviews and analyzed supporting documentation to examine the state of distance education delivery in Saudi Arabia; thus, it is recommended for future research to use other data-gathering techniques like focus groups and participant observation to dig more deeply in the topic. Conducting mixed method research is also recommended for future studies to include quantitative method and spread a wide amount of surveys to all the entities involved distance education, including instructors, designers, administrators, and students. Furthermore, additional research is recommended to further explore the current model of distance education in Saudi Arabia (blended learning) and examine ways of incorporating more elements of other online collaborative models used in other countries that are considered advanced in this field. In addition, it is recommended to do more research about online learning ethics in the Saudi distance education and compare it with the online learning ethics used in big online universities like Athabasca University in Canada or the Open University in UK.

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Appendices

Appendix A: Permission Text (English and Arabic)

University of Ottawa|Université d'Ottawa

Electronic Business Department



uOttawa

Permission Text

Dear (name),

My name is Eman Walabe, and I am a PhD candidate in Electronic Business at the University of Ottawa, supervised by Professor Rocci Luppicini. I would like to invite you to participate in my study by conducting online interviews of individuals who work at your institution. The purpose of my research is to explore the delivery of e-learning in Saudi Arabian universities. The study aims to contribute knowledge to the domain of Saudi distance education, and to provide lessons learned, best practices and recommendations that can be used to enhance the delivery of online education with respect to the Saudi culture.

I would like to meet with (instructors in your university who have a minimum of two years experience of teaching online) and (expert designers and instructional developers from National Center for e-Learning– NCeL in the Ministry of Education who have a minimum of two years experience involving the delivery of online learning). The interviews will primarily be one hour, one-on-one interviews conducted online via Skype or any other online means by the researcher (myself), during which I will be asking a series of questions and inviting the participants to freely and openly discuss and share their knowledge, experience and views on the delivery of Saudi distance education. I would like to ask if you have any suggestions of individuals who fit these criteria and who might be willing to participate in the study. Any recommendations would be greatly appreciated.

Yours sincerely,

Eman Walabe

Appendix A: Permission Text (Arabic Copy)

طلب إجراء بحث

المكرم/ المكرمة

السلام عليكم ورحمة الله وبركاته

اسمي إيمان ولابي, طالبة دكتوراه في قسم إدارة الأعمال الإلكترونية بجامعة أوتواوا, تحت إشراف البروفيسور روكي لوبيتشيني. أود دعوتكم للمشاركة في دراستي وذلك بإجراء مقابلات عبر الانترنت مع أفراد يعملون في الجامعة/ المركز لديكم. الغرض من هذه الدراسة هو التعرف على اساليب تقديم التعليم الإلكتروني في الجامعات السعودية. وتهدف الدراسة إلى المساهمة بالمعرفة في مجال التعليم عن بعد في السعودية وتقديم الإستنتاجات وأفضل الممارسات والتوصيات التي يمكن إستخدامها لتعزيز وسائل تقديم التعليم الإلكتروني داخل منظومة الثقافة السعودية.

أود إجراء مقابلات مع (أساتذته من جامعتكم ذوي خبره لا تقل عن عامين في التدريس عبر الانترنت) و (خبراء تصميم وتطوير التعليم عن بعد في المركز الوطني لديكم. وأن تكون لديهم خبرة لا تقل عن عامين في تقديم وتطوير التعليم عن بعد في المملكة). سوف تكون مدة المقابلة ساعة واحدة, تُجرى بشكل فردي من قبل الباحثة (إيمان ولابي) عبر الإنترنت بواسطة سكايب أو عن طريق أي وسيلة أخرى يفضلونها. سوف أطرح خلالها مجموعة الأسئلة وأدعو المشاركين إلى مناقشة مفتوحة لاستفيد من معرفتكم, خبراتهم وآرائهم بشأن تقديم التعليم عن بعد في المملكة العربية السعودية. أتمنى مساعدتكم في إقتراح أشخاص تنطبق عليهم هذه المعايير وتكون لديهم رغبة المشاركة في هذه الدراسة. شاكره ومقدرة مساعدتكم لي.

مع فائق الإحترام والتقدير,

إيمان ولابي

Appendix B: Recruitment Text (English and Arabic)



University of Ottawa|Université d'Ottawa

Electronic Business Department

Recruitment Text

Dear (name),

My name is Eman Walabe, and I am a PhD candidate in Electronic Business at the University of Ottawa, supervised by Professor Rocci Luppicini. I would like to invite you to participate in my study by conducting online interviews via Skype or any other online means. The purpose of my research is to explore the delivery of e-learning in Saudi Arabian universities. The study aims to contribute knowledge to the domain of Saudi distance education, and to provide lessons learned, best practices and recommendations that can be used to enhance the delivery of online education with respect to the Saudi culture.

The interviews will primarily be one hour, one-on-one interviews conducted online by the researcher (myself), during which I will be asking a series of questions and inviting you to freely and openly discuss and share your knowledge, experience and views on the delivery of Saudi distance education.

Your participation in this study will be voluntary and there are no known risks and/or discomforts associated with this study.

I wish to thank you for considering participating in the study. Your participation would be greatly appreciated. If you have any questions or require further information, please do not hesitate to contact me.

Yours sincerely,

Eman Walabe

Appendix B: Recruitment Text (Arabic Copy)

طلب اجراء بحث (للافراد)

المكرم/ المكرمة (.....)

السلام عليكم ورحمة الله وبركاته

اسمي إيمان ولابي, طالبة دكتوراه في قسم إدارة الأعمال الإلكترونية بجامعة اوتاوا, تحت إشراف البروفيسور روكي لوبيتشيني. أود دعوتكم للمشاركة في دراستي وذلك بإجراء مقابلات عبر الانترنت مع أفراد يعملون في الجامعة/ المركز لديكم. الغرض من هذه الدراسة هو التعرف على اساليب تقديم التعليم الإلكتروني في الجامعات السعودية. وتهدف الدراسة إلى المساهمة بالمعرفة في مجال التعليم عن بعد في السعودية وتقديم الإستنتاجات وأفضل الممارسات والتوصيات التي يمكن استخدامها لتعزيز وسائل تقديم التعليم الإلكتروني داخل منظومة الثقافة السعودية.

سوف تكون مدة المقابلة ساعة واحدة, تُجرى بشكل فردي من قبل الباحثه (إيمان ولابي) عبر الإنترنت وخلالها سوف تُطرح عليكم مجموعة من الأسئلة لمناقشتها معكم والإستفادة من معرفتكم, خبراتكم وبيان آرائكم بشأن أساليب تقديم التعليم عن بعد في المملكة العربية السعودية.

ستكون مشاركتكم في هذه الدراسة تطوعية, ولا توجد أي مخاطر معروفة أو مضايقات مصاحبة لهذه الدراسة.

كما أتقدم إليكم بالشكر والتقدير على استجابتكم للمشاركة في هذه الدراسة وسوف تكون مشاركتكم محلاً للإهتمام والتقدير. اذا كان لديكم أي استفسار عن مزيدٍ من المعلومات أرجو عدم التردد في التواصل معي على الإيميل.

مع فائق الإحترام والتقدير,

إيمان ولابي

Appendix C: Interview Protocol (English)

Interview Protocol 1: Instructors

Date: _____

Time and length: _____

Place: _____

Interviewee: _____

Occupation of interviewee: _____

Coordinates of interviewee: _____

Introduction

Assalamu Alaikum and thank you for taking the time to sit down and talk with me today. Before we start, do you have any questions regarding the study or the information in the consent form?

I will briefly go over some key aspects of the study with you before we begin the interview. The purpose of the study is to explore the delivery of e-learning in Saudi universities (SU) and the e-learning models used in SU. The study aims to contribute knowledge to the domain of the Saudi distance education, and to provide lessons learned, best practices and recommendations that can be used to enhance the delivery of online education within the context of Saudi culture.

I am meeting with you so that we can actively discuss the topic of the delivery of distance education in SU. This interview is meant for you to express yourself freely and openly, and share your knowledge, experience, views, and opinions on the topic. I want to develop an in-depth understanding of the delivery of online learning in SU, and it is therefore very important that you respond fully, thoughtfully, and honestly to my questions. The interview will take approximately one hour of your time.

I am audio-recording this session so that I can later study what you have said, but please be assured that our discussion will not go beyond the scope of this study; anything you say here today will be held in strict confidence. Also, your name and identity will remain anonymous and will not be revealed in the final research report.

Questions

Please take a moment to introduce yourself.

- 1) Tell me a bit about your background and how you got involved in teaching in SU.

- 2) What has been your role in the development of distance education at SU?
- 3) How has distance education been developed in SU since its establishment in 2003?
 - Probes: Can you describe the factors that shaped distance education (DE) development, in terms of the leadership roles, collaboration, government funding, and other types of support resources?
- 4) What learning theories or instructional design do you follow and how do they influence your course design?
 - Probes: Could you explain what strategies you use in your teaching related to course management and managing the students' behaviour? For example, online attendance, submitting work on time and reading the required e-materials before class.
 - Could you explain what strategies you use in your teaching related to testing the students' understanding in class based on the materials you delivered? For example, quizzes, tests. How would you structure the quiz or test questions?
 - Could you explain what strategies you use in your teaching related to enhancing the students' critical thinking? For example, using discussion boards, group work or creating blogs.
 - Could you explain what strategies you use in your teaching in terms of connecting what they learn in class with real-life experiences? For example, visiting or drawing on examples from the real world, such as companies, organizations, or science labs. Or, what real world training opportunities are provided for students in distance education?
 - Could you explain what strategies you use in your teaching to connect students with professions outside of the classroom related to a specific topic you gave them in class? For example, connecting them with a group in Facebook, Twitter or even MOOCs that discuss the topic you gave them in class in more professional way?
- 5) What do you believe are the challenges in the current DE delivery at your institution?
- 6) What do you think are the most important skills required for online teaching?
- 7) What are the e-learning pedagogical and technical services offered in your university? How are pedagogical and technical aspects of the e-courses delivery Managed? and by whom?
 - Probes: How are the e-learning pedagogical and technical services provided? Is there a centralized unit or some other method? Please elaborate.

- Can you explain how they support the programs in terms of pedagogical and technical assistance?

8) How do you believe Saudi cultural values affect the delivery of distance education in SU?

- Probes: In your opinion, what are the benefits and challenges of DE for female students/ teachers? Can you give an example?
- Could you explain how you manage your online courses to accommodate cultural values?
- Could you explain your teaching style and how it relates to information sharing and testing? For example, do you prefer a teacher-centered learning approach to delivery or student-centered approach? Do you emphasize individual work or group work? Please give an example.
- Can you explain your attitude toward the adoption of technology to online teaching? For example, willingness, tech savvy, desire?
- How do traditional Saudi values align with modern Saudi society in terms of technology/Internet/education? In other words, what are the challenges in navigating Saudi traditional values in current DE delivery?
- Could you explain how do you feel about teaching e-courses within the Saudi Arabian educational system today?

9) How do you believe the demographics of Saudi society affect SU distance education?

- Probes: for example, in terms of geography, age, gender and income?

10) How does SU address E-learning ethics within their policies and how are they implemented? For example, what are students' and professors' rights and responsibilities? Required forms? Provisions for ethical conduct? How is unethical behavior dealt with?

- Probes: if it is the professors' responsibilities to enhance the students' awareness about e-learning ethics, what is your own way of presenting e-learning ethics to the students? Could you give an example?

11) Could you provide me with any related documents concerning the strategies and principles used by the SU to deliver online learning?

Conclusion

This concludes the interview. Thank you very much for your time. Is there anything that you would like to add or amend?

As indicated in the consent form, I will later be asking you to verify the accuracy of some of the information that you have given during this interview session. An electronic

document will be sent to you by email between////////and reviewing the information should take less than fifteen minutes of your time. I will also be giving you a preliminary copy of my thesis research in an electronic format prior to any form of publication. In the meantime, please do not hesitate to get in touch with me if you have any questions regarding my project.

Finally, is it okay for me to get in touch with you over the telephone or by email if I need to clarify or expand on certain points discussed today?

Interview Protocol 2: Instructional developers and Expert Designers

Date: _____

Time and length: _____

Place: _____

Interviewee: _____

Occupation of interviewee: _____

Coordinates of interviewee: _____

Introduction

Assalamu Alaikum and thank you for taking the time to sit down and talk with me today. Before we start, do you have any questions regarding the study or the information in the consent form?

I will briefly go over some key aspects of the study with you before we begin the interview. The purpose of the study is to explore the delivery of e-learning in Saudi universities (SU) and the e-learning models used in SU. The study aims to contribute knowledge to the domain of the Saudi distance education, and to provide lessons learned, best practices and recommendations that can be used to enhance the delivery of online education within the context of Saudi culture.

I am meeting with you so that we can actively discuss the topic of the delivery of distance education in SU. This interview is meant for you to express yourself freely and openly, and share your knowledge, experience, views, and opinions on the topic. I want to develop an in-depth understanding of the delivery of online learning in SU, and it is therefore very important that you respond fully, thoughtfully, and honestly to my questions. The interview will take approximately one hour of your time.

I am audio recording this session so that I can later study what you have said, but please be assured that our discussion goes no farther than this room; anything you say here today will be held in strict confidence. Also, your name and identity will remain anonymous and will not be used in the final research report.

Questions

Please take a moment to introduce yourself.

- 1) Tell me a bit about your background and how you got involved in your work as an expert designer or instructional developer in the National Center for e-Learning (NCeL) at the Ministry of Education.

- 2) What has been your role in the development of delivering distance education (DE) at NCeL?
- 3) How has the delivery of distance education been developed in NCeL since its establishment in 2006?
 - Probes: Can you describe the factors that led to its development, in terms of the DE models used as well as leadership of individuals, collaboration, government funding, and other types of resources?
- 4) What learning theories and instructional design principles do you follow and how do they influence the DE delivery in SU?
- 5) According to the NCeL website, a number of Saudi universities (but not all of them) receive assistance from your centre in terms of planning e-learning courses and providing educational tools. How does this work and which institutions have received support in the past or currently?
 - Probes: What type of support?
- 6) In almost every university in Saudi Arabia, there are e-learning deanships to manage technical aspects and pedagogical approaches of e-learning in their university. Could you explain the relationship between NCeL and these e-learning deanships? How has it changed since 2006?
 - Probes: Some of the universities have both NCeL and an e-learning deanship. Could you please explain how you allocate the responsibilities of assisting the e-learning delivery in these universities with the e-learning deanship they have at their site?
- 7) NCeL provides the Jusur LMS tool to Saudi universities to deliver their online learning. Could you please explain how this tool works and how it compares to other options available? What other options are you aware of? Why would they choose another tool?
- 8) In addition to Jusur LMS, what other assistance or support does the NCeL provide Saudi universities in delivering and managing online education?
 - Probes: For example, workshops, conferences, other programs, etc.
- 9) In your experience, how do aspects of Saudi culture affect the delivery of distance education in the Saudi universities?
 - Probes: In your opinion, what are the benefits and challenges of DE for female students/teachers? Can you give an example?
 - Could you explain how you manage distance education delivery in SU to meet the unique service and support needs of individual institutions?

- Could you explain how work is allocated between you and others within the ministry in term of delivering and managing distance education? Please give an example.
- Could you explain your attitude toward the adoption of technology to deliver distance education to meet the needs of students' diversity and cultural values?
- How do traditional Saudi values align with modern Saudi society in terms of technology/Internet/education? In other words, what are the challenges in navigating Saudi traditional values in current DE delivery?
- Could you explain how do you feel about the impact of e-learning on the Saudi Arabian educational system today?

10) How do you believe the demographics of Saudi society affect SU distance education?

Probes: for example, in terms of geography, age, gender and income?

11) What are the main ethical issues that arise in e-learning and how does NCeL deal with ethical problems that arise?

Probes: plagiarism, and conflicts between students and teachers. Could you give an example?

Could you provide me with any related documents concerning the role of NCeL in Saudi online delivery service and support?

Conclusion

This concludes the interview. Thank you very much for your time. Is there anything that you would like to add or amend?

As indicated in the consent form, I will later be asking you to verify the accuracy of some of the information that you have given during this interview session. An electronic document will be sent to you by email between/////////. Reviewing this information should take less than fifteen minutes of your time. I will also be giving you a preliminary copy of my thesis research in an electronic format prior to any form of publication. In the meantime, please do not hesitate to get in touch with me if you have any questions regarding my project.

Finally, is it okay for me to get in touch with you over the telephone or by email if I need to clarify or expand on certain points discussed today?

Appendix D: Interview Protocol (Arabic)

Interview Protocol 1: Instructors

بروتوكول مقابلات مع الأساتذة

- التاريخ:
- الوقت والمدة:
- المكان:
- المشارك:
- وظيفة المشارك:
- تنسيق المشارك:

المقدمة

السلام عليكم ورحمة الله وبركاته. شكرا لكم على منحي من وقتكم للجلوس والتحدث معي اليوم. قبل أن نبدأ، هل لديكم أي استفسار يتعلق بهذه الدراسة أو عن المعلومات المذكورة في نموذج التفويض؟

سوف أوضح بإختصار بعض الجوانب الرئيسية للدراسة قبل أن نبدأ المقابلة. الغرض من هذه الدراسة هو التعرف على أساليب تقديم التعليم الإلكتروني في الجامعات السعودية. وكما تهدف الدراسة إلى المساهمة بالمعرفة في مجال التعليم عن بعد في السعودية وتقديم الإستنتاجات وأفضل الممارسات والتوصيات التي يمكن إستخدامها لتعزيز وسائل تقديم التعليم الإلكتروني داخل منظومة الثقافة السعودية.

أنا في مقابلة معكم اليوم حتى نخوض في مناقشة مثمرة حول موضوع أساليب تقديم التعليم عن بعد في الجامعات السعودية. الهدف من هذه المقابلة هو أن تعبر لنا عن نفسك بحرية وخلالها سوف نتبادل المعارف والخبرات والآراء حول هذا الموضوع. أريد الخوض في التفاصيل الدقيقة لفهم أساليب تقديم التعليم الإلكتروني في الجامعات السعودية، ولذلك فمن المهم جداً الإستجابة الكاملة للأسئلة المطروحة. وسوف تستغرق المقابلة حوالي ساعة واحدة من وقتك.

سأقوم بتسجيل هذه المقابلة صوتياً حتى أتمكن من دراسة ما ذكرته في وقت لاحق، ولكن يرجى التأكد من أن نقاشنا سوف يعقد في سرية تامة. مع العلم أن إسمك وهويتك ستظل مجهولة ولن يتم إستخدامها في تقرير البحث النهائي.

الأسئلة

من فضلك عرف بنفسك.

- (1) أخبرني باختصار عن خبراتك وكيف أصبحت عضوية تدريس في الجامعات السعودية؟
 - (2) ماهو دورك في تطوير التعليم عن بعد في الجامعات السعودية؟
 - (3) في نظرك كيف تم تطوير التعليم عن بعد في الجامعات السعودية منذ تأسيسه عام 2003؟
- توضيح: هل يمكنك وصف العوامل التي ساهمت في تطوير التعليم عن بعد من حيث الأدوار القيادية، والتعاون، والتمويل الحكومي أو أي نوع آخر من أنواع الدعم؟
- (4) ماهي النظريات التعليمية أو مبادئ التصميم التعليمي الذي تتبعه وما مدى تأثيره على تصميم وتخطيط مقرراتك؟

توضيحات:

- هل من الممكن أن توضح لنا الإستراتيجيات التي تستخدمها في تدريسك فيما يتعلق بإدارة المقررات وكذلك إدارة سلوك الطلاب؟ على سبيل المثال الحضور عبر الإنترنت، تسليم العمل في الوقت المحدد وقراءة الأوراق المطلوبة إلكترونياً قبل موعد المحاضرة.

- هل من الممكن أن توضح لنا الإستراتيجيات التي تستخدمها في تدريسك فيما يخص تقييم فهم الطلبة في المحاضرة بعد الانتهاء من تقديم الدرس لهم؟ على سبيل المثال، امتحانات دورية، تقييم مستمر، و الاختبارات النهائية. وماهي الطريقة التي تتبعها في صياغة أسئلة الاختبارات؟

- هل من الممكن أن توضح لنا الإستراتيجيات التي تستخدمها في تدريسك بخصوص تطوير الفكر البنّاء لدى الطلاب؟ على سبيل المثال لوحات المناقشة (المنتديات الإلكترونية)، العمل الجماعي أو إنشاء مدوّنة إلكترونية (blogs).

- ماهي الإستراتيجيات التي تستخدمها في تدريسك التي تربط بين ما يتعلمه الطلاب في المحاضرة مع تجارب الحياة الواقعية؟ على سبيل المثال زيارة أو الأخذ بأمثلة واقعية من شركات، مؤسسات أو مختبرات علمية. أو ماهي فرص التدريب المتاحة للطلاب للتعليم عن بعد في العالم الواقعي؟

- هل من الممكن أن توضح لنا الإستراتيجيات التي تستخدمها في تدريسك من حيث ربط الطلاب مع متخصصين خارج الفصل والتي لها علاقة بموضوع معين دُرّس بالفصل؟ على سبيل المثال ربطهم بمجموعة متخصصة في الفيسبوك، تويتر أو حتى موكس (MOOCs) والتي تُناقش موضوعاً معين تم تقديمه في الفصل بطريقة أكثر مهنية.

(5) باعتقادك ما هي التحديات التي تواجه التعليم الإلكتروني بجامعةك في الوقت الحالي؟

(6) برأيك ما هي أهم المهارات المطلوبة للتدريس عبر الإنترنت (أو عن بعد)؟

(7) ماهي الخدمات التربوية والتقنية للتعليم الإلكتروني المقدمة في جامعك؟ وكيف يتم إدارة الجوانب التربوية والتقنية في تقديم المقرر (أو المادة) الإلكتروني/ة؟ ومن قبل من؟

توضيحات:

- كيف يتم تقديم الخدمات التربوية والتقنية في التعليم الإلكتروني؟ هل هناك إدارة مركزية لتوفير تلك الخدمات أم هنالك طرق أخرى؟ أرجو إعطائي بعض التفاصيل.

- هل يمكنك شرح كيف يتم دعم تلك البرامج تربوياً وتقنياً؟

(8) باعتقادك كيف تؤثر القيم الثقافية السعودية على تقديم التعليم الإلكتروني بالجامعات السعودية؟

توضيحات:

- برأيك ماهي فوائد وتحديات التعليم عن بعد للطلّابات والمعلمات؟ هل من الممكن سرد بعض الأمثلة؟

- هل من الممكن أن توضح لي كيف تُدير مقرراتك الإلكترونية في ظل الحفاظ على القيم الثقافية؟

- هل من الممكن أن توضح لي أسلوبك في التدريس وما مدى ارتباطه بتوصيل المعلومات وتقييمها؟ على سبيل المثال، هل تفضل النهج التعليمي الذي يركز على المعلم لتقديم المعارف والمعلومات أو أنك تفضل النهج التعليمي الذي يركز على الطالب؟ هل تؤيد العمل الفردي أم العمل الجماعي؟ هل لديك أمثلة على ذلك؟

- هل من الممكن أن توضح لي وجهة نظرك تجاه استخدام التكنولوجيا للتعليم عن بعد؟ مثلاً من حيث الجاهزية والرغبة في استخدام التكنولوجيا.

- ما مدى توافق القيم السعودية التقليدية مع المجتمع السعودي الحديث من حيث التكنولوجيا/ الإنترنت/ التعليم؟ وبعبارة أخرى، ماهي الصعوبات (التحديات) التي يواجهها التعليم عن بعد حالياً في ظل القيم التقليدية في المملكة؟

- ما هو انطباعتك حول تدريس المقررات عبر الإنترنت في النظام التعليمي السعودي اليوم؟

9) باعتقادك كيف تؤثر التركيبة السكانية للمجتمع السعودي على التعليم عن بعد في الجامعات السعودية؟

توضيحات: على سبيل المثال، من حيث العوامل التالية: الجغرافيا/ العمر/ الجنس أو الدخل.

10) كيف تراعي الجامعات السعودية أخلاقيات التعليم الإلكتروني في سياستها وكيف يتم تنفيذها؟ على سبيل المثال ماهي حقوق ومسؤوليات أعضاء هيئة التدريس والطلبة؟ وما هي النماذج الضرورية؟ وكيف يتم التقيد بالسلوك الأخلاقي؟ وكيفية التعامل مع السلوك غير أخلاقي؟

التوضيحات: إذا كانت توعية الطلاب بأخلاقيات التعليم الإلكتروني من مسؤولية الأساتذة فماهي طريقتك في إبراز أخلاقيات التعليم الإلكتروني للطلاب؟ هل لديك أمثلة على ذلك؟

11) هل من الممكن تزويدي بأي وثائق متعلقة بإستراتيجيات وقواعد أساليب تقديم التعليم الإلكتروني المستخدمة من قبل الجامعات السعودية؟

الخاتمة

وبذلك تنتهي المقابلة. شكراً جزيلاً على منحي من وقتكم. هل هناك أي شيء تود إضافته أو تعديله؟

كما ذكر في استمارة التفويض، سوف أطلب منك لاحقاً التحقق من دقة بعض المعلومات التي قدمتها خلال المقابلة. وبناءً على ذلك سيتم إرسال وثيقة إلكترونية إليك عبر البريد الإلكتروني بين و كم نوه أن وقت المراجعة سوف يستغرق أقل من خمس عشرة دقيقة من وقتك. وكذلك سأقدم لك أيضاً نسخة أولية إلكترونية من رسالتي قبل نشرها. وفي خلال هذه الفترة، أرجو منك عدم التردد في الاتصال بي إذا كان لديك أي استفسار بخصوص بحثي.

وأخيراً، هل من الممكن التواصل معك عبر الهاتف أو عن طريق البريد الإلكتروني إذا كنت بحاجة إلى توضيح أو شرح بعض النقاط التي نُوقشت اليوم؟

مع جزيل الشكر

Interview Protocol 2: Instructional developers and Expert Designers

بروتوكول مقابلات مع مطوري التعليم وخبراء التصميم

عرف بنفسك من فضلك.

(1) اخبرني باختصار عن خبراتك وكيف عملت كخبير تصميم ومطور للتعليم بالمركز الوطني للتعليم الإلكتروني والتعليم عن بعد بوزارة التعليم؟

(2) ماهو دورك في تطوير التعليم عن بعد بالمركز الوطني؟

(3) ماهي مراحل تطوير أساليب تقديم التعليم عن بعد في المركز الوطني منذ تأسيسه عام 2006؟

توضيح: هل يمكنك توضيح العوامل التي ساهمت في تطويره من حيث النماذج والإستراتيجيات المستخدمة في تقديم التعليم عن بعد ، والأدوار القيادية، والتعاون، والتمويل الحكومي أو أي نوع آخر من أنواع الدعم؟

(4) ماهي النظريات التعليمية ومبادئ التصميم التعليمي الذي تتبعه وما هو تأثيرها على أساليب تقديم التعليم عن بعد بالجامعات السعودية؟

(5) حسب المعلومات المتوفرة على موقع المركز الوطني، يتلقى العديد من الجامعات السعودية مساعدات من مركزكم وذلك لوضع خطط للمقررات الإلكترونية وتوفير الأدوات التعليمية اللازمة. فكيف يتم ذلك؟ وماهي المؤسسات التي تلقت الدعم منكم؟ سواء في الماضي أو الوقت الحاضر؟
توضيح: وما هو نوع الدعم الذي قدمتموه؟

(6) يوجد تقريباً في كل جامعة في المملكة العربية السعودية عمادة التعليم الإلكتروني لإدارة الجوانب التقنية والنهج التربوي للتعليم الإلكتروني في جامعتهم. هل من الممكن أن توضح لي العلاقة ما بين المركز الوطني وهذه العمادات؟ وماهي التحولات التي طرأت على هذه العلاقة منذ تأسيس المركز الوطني عام 2006 إلى الوقت الحاضر؟

توضيح: بعض الجامعات يوجد لديها دعم من المركز الوطني و عمادة التعليم الإلكتروني. هل من الممكن أن توضح لنا كيفية توزيع المسؤوليات / أو المهام في عمادة التعليم الإلكتروني بالجامعات السعودية لدعم تقديم التعليم الإلكتروني؟

(7) يتم تزويد الجامعات السعودية بنظام جسور من قبل المركز الوطني قصد تقديم التعليم الإلكتروني. هل من الممكن أن توضح لنا الآلية المتبعة في تطبيق هذا النظام؟ وماهي أوجه المقارنة بين نظام جسور والأنظمة الأخرى المتوفرة لدى الجامعات؟ ولماذا يتم اختيار نظام آخر؟

(8) بالإضافة إلى نظام جسور ماهي المساعدات أو نوع الدعم الذي يقدمه المركز الوطني للجامعات السعودية وذلك لتقديم وإدارة التعليم عبر الإنترنت؟

توضيح: على سبيل المثال ورش عمل، مؤتمرات أو أي برامج أخرى، إلخ.

9) من خلال تجربتك كيف تؤثر جوانب الثقافة السعودية على أساليب تقديم التعليم عن بعد في الجامعات السعودية؟
توضيحات:

- برأيك ماهي فوائد وتحديات التعليم عن بعد بالنسبة للطالبات والمعلمات؟ هل من الممكن سرد بعض الأمثلة؟
- هل من الممكن أن توضح كيفية إدارة تقديم التعليم عن بعد للجامعات السعودية وذلك لتلبية الخدمات والدعم المطلوب لكل جامعة على حدى؟
- هل من الممكن أن توضح لنا كيفية توزيع الأعمال بينك وبين الموظفين الآخرين الذين يعملون في الوزارة من حيث تقديم وإدارة التعليم عن بعد؟
- هل من الممكن أن توضح موقفك تجاه تبني التكنولوجيا لتقديم التعليم عن بعد وذلك لتلبية الاحتياجات المتنوعة للطلاب وقيمهم الثقافية؟
- ما مدى توافق القيم السعودية التقليدية مع المجتمع السعودي الحديث؟ وماهي الصعوبات (التحديات) التي تواجهونها حاليا في تطبيقها على أساليب تقديم التعليم عن بعد في المملكة؟

- هل من الممكن أن تفسر وجهة نظرك حول تأثير التعليم الإلكتروني على النظام التعليمي السعودي اليوم؟

10) باعتقادك كيف تؤثر التركيبة السكانية للمجتمع السعودي على التعليم عن بعد في الجامعات السعودية؟
توضيحات: على سبيل المثال، من حيث الجغرافيا، العمر، الجنس والدخل.

11) ماهي المشكلات الأخلاقية الرئيسية المرتبطة بالتعليم الإلكتروني؟ وكيف يتم التعامل معها من قبل المركز الوطني؟

توضيح: السرقة الأكاديمية والخلافات ما بين الطلاب والأساتذة. هل من الممكن سرد بعض الأمثلة؟

12) هل من الممكن تزويدي بوثائق تبرز دور المركز الوطني في دعم وخدمة أساليب تقديم التعليم الإلكتروني السعودي؟

Appendix E: Documents List

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Appendix F: Coding Rule Book

Category	Subcategory	Definition	Examples	Coding Rules
The Development of Distance Education	Early Development of Distance Education in KSA	Describes the history of distance education and its development at KSA.	Correspondence programs, leading universities, distance learning deanships, NCeL, the independency of NCeL.	Implies the history of distance education at KSA and how it was developed over time.
	The Transition from Distance Learning to Blended Learning in Saudi Universities	Describes the stages that distance education went through at the Saudi universities.	Stopping distance learning programs, quality of distance learning programs.	Illustrates the reasons behind the shift from distance learning to blended learning programs in the Saudi higher educational system.
	Government Funding & Services	Clarifies the sources of the government's funding and services to support distance education at the Saudi universities.	SEU, NCeL, Jusur LMS, iEN, SDL, SHMS, 4 International Conferences (eLi), Blackboard.	Illustrates financial support of the Saudi government for distance education.
	Collaboration	Clarifies the 3 subcategories of collaboration: Overseas and Local Institutions, NCeL Collaboration with E-learning Deanships, Individual's Contribution & Cooperation.	Foreign institutions, seminars, people who held top positions in colleges and departments.	Understands the different levels of collaborations mentioned in the definition.
	Leadership Roles	Clarifies the role of high-level leaders to support and develop distance education in KSA.	Royals, the Ministry of Education, universities, individual leaders.	Illustrates the support of high level of leadership, such as the royals, the Ministry of Education, universities and individual leaders to develop distance education in SKA.
	Power Distance	Shows that the "Educational system focuses on top level"	Depending on the instructor as the only source of information,	Illustrates that teachers centered the educational process in high

Culture		(Hofstede, 2001: 107).	“respect” is a very important value in high power distance societies.	power distance societies. The attitude of “respecting” the instructor is a cultural value that needs to be considered in the educational environment.
	Individualism vs. Collectivism	“Describes the relationship between the individual and collectivity which prevails in a given society” (Hofstede, 1980: 213).	Individualist, collectivist, self-learning, self-reliant, student-centered approach, teacher-centered approach.	Understands the characteristics of the Saudi culture, at the educational context, and classifies it whether it is individualist or collectivist.
	Masculinity vs. Femininity	Refers to the dominant gender role pattern in most traditional and modern societies (Hofstede, 1980).	Masculine society, feminist society, opportunities and challenges for female students and instructors in Saudi Arabia.	Illustrates the characteristics of the Saudi culture, at the educational context, and classifies whether it is a masculine or a feminist society.
	Uncertainty Avoidance	Describes “the extent to which the members of a culture feel threatened by uncertain or unknown situations” (Hofstede, 2001: 161).	High uncertainty avoidance society, low uncertainty avoidance society.	Illustrates the characteristics of the Saudi culture, at the electronic educational context, and classifies it whether it is a high uncertainty avoidance society (reluctant to use the technology for teaching) or a low uncertainty avoidance society (not reluctant to use the technology for teaching).
	Long Term vs. Short Term Orientation	A short-term orientation society respected tradition while a long-term orientation society adapted traditions	A short-term orientation society, a long-term orientation society.	Illustrates the characteristics of the Saudi culture, at the electronic educational context, and

		into the modern context (Hofstede, 1997).		classifies it whether it is a short-term orientation society or a long-term orientation society.
	Indulgence vs. Restraint	Relates to the feeling of subjective happiness or unhappiness and the extent to which people control their own lives (Minkov, 2009).	Indulgence, restraint, positive feeling toward teaching e-courses, negative feeling toward teaching e-courses, the war in the south and distance education.	Illustrates the participants' feel about teaching e-courses within the Saudi Arabian educational system today, and classifies it whether it is indulgence (positive feeling) or restraint (negative feeling).
Learning Theories	Behaviourist	Emphasizes producing observable and measurable outcomes in learners (Ertmer & Newby, 1993).	Online attendance, submitting work on time and reading the required e-materials before class.	Illustrates the strategies used in e-teaching related to course management and managing the students' behaviour.
	Cognitive	Emphasizes how learners perceive, process, memorize and retrieve the information that they collect from the learning environment (Morrison et al., 2004).	Quizzes, tests, structuring the quiz or test questions.	Illustrates the strategies used in e-teaching related to testing the students' understanding in class based on the materials delivered.
	Constructivist	States that individuals learn by constructing their own knowledge and understanding of the world based on their own experiences and their reflections of those experiences (Harasim, 2012).	Discussion boards, group work, creating blogs.	Illustrates the strategies used in e-teaching related to enhancing the students' critical thinking.
	Pragmatist	"Emphasize[s] the practical application of ideas by acting on them to actually test	Visiting or drawing on examples from the real world, such as companies,	Illustrates the strategies used in e-teaching in terms of connecting what the students learn in

		them in human experiences” (Gutek, 2013: 76).	organizations, or science labs.	class with real-life experiences.
	Connectivist	Describes the way in which people learn and work in a networked context (Siemens, 2004).	Connecting the students with a group in Facebook, Twitter or even MOOCs that discuss the topic given in class in more professional way.	Illustrates the strategies used in e-teaching to connect students with professions outside of the classroom related to a specific topic given in class.
Pedagogical and Technical Support	NCeL Role and Training	Highlights the three main projects (Jusur LMS, eLearning Pioneer Program, SHMS OER.) that NCeL offered to support Saudi higher education technically and pedagogically.	Jusur LMS, eLearning Pioneer Program, SHMS Open Educational Resources (OER).	Illustrates the technical and pedagogical support offered by NCeL to the Saudi universities.
	Blackboard Training and Technical Support	Describes the pedagogical and technical support that the Blackboard department at SEU offers to assist the delivery of distance and blended learning.	Saudi national license of Blackboard, workshops, training sessions, technical support center.	Illustrates the pedagogical and technical support that the Blackboard department at SEU provide to their staff and other universities’ staff.
	Skills Required for Online Teaching	Indicates the most needed skills to teach online.	Technical, communication, and time management skills.	Illustrates the most important skills for online teaching.
E-learning Ethics	Plagiarism & Misconduct	Describes the cases when plagiarism and misconduct may occur in online learning.	Unethical behavior, disciplinary committee.	Illustrates the methods used to detect plagiarism and misconduct, and the regulations used to deal with these ethical issues.
	Students’ and Instructors’ Right and Responsibilities,	Describes the rights and responsibilities of both the instructor and the students in distance learning context.	Ethical code of conduct, orientation week.	Illustrates the principles followed in online learning environment to preserve the students’ and the instructors’ rights,

				as well as indicates their responsibilities in that environment.
	Copyright & Privacy	Presents the awareness of the students and instructors about copyright and privacy ethical issues in distance learning environment.	Copyright workshops and training, SHMS OER, sharing open resource, preserving privacy.	Illustrates the methods used to educate and train the students and instructors about copyright policies. Illustrated how privacy is a matter for Saudi society when using the technology.
	Diploma Mills (Bylaws)	Presents the situation of the institutions that provide illegitimate academic degrees and diplomas for a fee.	Not real teaching and learning, certificate-oriented, bylaws, quality standards of e-learning.	Illustrates cases when the higher educational institutions focus on granting degrees for fees rather than providing real teaching and learning.
	Digital Divide	Describes “the digital divide in Internet access which refers to the gap between those you have access to the Internet and ‘those that do not’; there is also the digital technology divide which refers to the gap between those who are able to use digital technology and those are not” (Luppicini, 2010b)	Lack of necessary infrastructure, technological literacy.	Illustrates the gap of the Internet accessibility between major cities and remote areas in Saudi Arabia; it also illustrated the level of technological literacy between individuals.
	Uncertainty	Describes the instructors’ attitudes toward connecting the ethical rules with the students’ misbehavior in online learning.	I haven't experienced any unethical behaviour, we didn't face anything related to that yet.	Illustrates the situations when the instructors are not certain about the needed e-learning ethical rules related to some online misbehaviors made by the students.

Current Advantages & challenges of Online Learning	Perceived Benefits of Distance and Blended Learning	Describes the advantages received from distance and blended learning for both the students and the instructors.	Flexibility, continuous connectivity, the skills of self-learning.	Illustrates the benefits gained from both distance and blended learning together, as well as from each of them in particular.
	Challenge of Change	Describes the challenges occurred in the Saudi learning environment as a result of the transformation from traditional to online learning.	Resistance, hesitation, unfamiliarity.	Illustrates the instructors' and the students' resistance toward learning through online platforms.
	Operational Challenges	Describes the operational challenges that faced by both distance and blended learning in Saudi higher education.	Internet connection, limited flexibility, lack of quality.	Illustrates the operational challenges that faced by both distance and blended learning in general, as well as the operational challenges faced by each distance and blended learning in particular.
	Cultural Challenges	Describes the cultural limitations in the Saudi online learning and in the Arab world.	Distance education is less scholarly than traditional face-to-face education, unawareness of the difference between distance and blended learning, Arabic with different dialects.	Illustrates how online learning is viewed in Saudi society compared to traditional face-to-face learning. It also illustrates the cultural considerations when teaching through MOOCs.
	Acceptance of Institutions and Job Market Challenges	Describes the job market's rejection of the graduates of distance and blended learning programs.	Lesser value than traditional learning programs, accreditation, marketplace.	Illustrates the reasons that made the job market reject the graduates of distance learning programs, as well as their confusion between distance and blended learning graduates.

Subcategory	Sub-subcategory	Definition	Examples	Coding Rules
Early Development of Distance Education in KSA	Female Access in Saudi Distance Education	Describes the reasons behind establishing distance learning programs to educate Saudi girls at all over the Kingdom (including remotes areas).	Girls' colleges, distance education at the girls' colleges, NCeL's role in managing girls' distance education.	Understands the connection between girls' higher education in KSA and the establishments of distance learning programs.
The Transition from Distance Learning to Blended Learning in Saudi Universities	Blended Learning in KSA	Defines the blended learning approach used in SEU (the only specialized university in blended learning in KSA).	Blended learning approach, SEU, fully virtual classes.	Understands the characteristics of the blended learning approach applied in SEU.
	Fully Online Courses	Describes how some of the regular programs at the Saudi universities started to convert some of their face-to-face courses to fully online course.	The general courses, Islamic and Arabic courses, face-to-face courses, fully online courses.	Illustrates the strategies and the processes used to convert some of the face-to-face courses at the regular programs to fully online format.
Collaboration	Overseas and Local Institutions	Shows how the Saudi universities collaborate at an international and a local level.	Partnerships, foreign institutions, Franklin University, Ohio University, Colorado State University, Florida institute of technology, Blackboard.	Understands the extent of the Saudi universities' collaboration with other international and local institutions.
	NCeL Collaboration with E-learning Deanships	Describes how NCeL collaborates with the deans of e-learning at the Saudi universities to	Seminars, international conferences, workshops and training, excellence award.	Illustrates the level of collaboration between NCeL and the deans of e-learning at the Saudi universities, in

		promote online learning.		terms of conducting seminars, conferences, workshops and training.
	Individual's Contribution & Cooperation	Clarifies the contributions and cooperation of individuals holding positions in distance and blended learning institutions in KSA.	Instructors, people who held top positions in colleges and departments, Blackboard trainers, NCeL employees.	Illustrates significant contributions of respective individuals to develop distance learning in Saudi higher education.
NCeL Role and Training	Jusur LMS	Jusur Learning Management System, a tool owned by the Ministry of Education and managed by NCeL.	Governmental universities, technical services, pedagogical services.	Illustrates the role of NCeL in offering Jusur LMS to the Saudi universities.
	eLearning Pioneer Program	A year-long comprehensive training offered by NCeL to female faculty members from almost all the Saudi universities.	Open Education Consortium, female instructors, internship, international e-learning conferences.	Illustrates the role of NCeL in offering eLearning Pioneer Program to the Saudi female faculty members.
	SHMS Open Educational Resources (OER)	A national OER platform owned by the Ministry of Education and managed by NCeL.	ISKME Company, OER Commons.	Illustrates the role of NCeL in managing SHMS and training the faculty members in how to share open resources.

Appendix G: Ethical Approval

File Number: H06-17-03

Date (mm/dd/yyyy): 07/19/2017



Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

Ethics Approval Notice Health Sciences and Science REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
Rocci	Luppicini	Arts / Communication	Supervisor
Eman Ahmad	Walabe	Telfer School of Management	Student Researcher

File Number: H06-17-03

Type of Project: PhD Thesis

Title: E-Learning Delivery in the Saudi Arabian Universities

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
07/19/2017	07/18/2018	Approval

Special Conditions / Comments:
N/A

Appendix H: Consent Form (English and Arabic)



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Electronic Business Department

Consent Form

Title of the Study: E-Learning Delivery in the Saudi Arabian Universities

Eman Walabe

PhD candidate, Electronic Business Department, University of Ottawa, Canada

Supervisor: Rocci Luppicini

Associate Professor, Department of Communication, University of Ottawa, Canada

Telephone: 613-562-5800 ext. 8971

Email: rluppici@uOttawa.ca

Invitation to Participate: I am invited to participate in the abovementioned research study conducted by Eman Walabe in the context of a PhD thesis under the supervision of Professor Rocci Luppicini.

Purpose of the Study: The purpose of the study is to explore the delivery of e-learning in the Saudi universities. The study aims to contribute knowledge to the field of Saudi distance education, and to provide lessons learned, best practices and recommendations that can be used to enhance the delivery of online education within the context of Saudi culture.

Participation: My participation will primarily consist of taking part in a one hour, one-on-one interview conducted online by the researcher during which I will be asked a series of questions and invited to freely and openly discuss and share my knowledge, experience and views on the delivery of Saudi distance education. The interview will be audio-recorded. The interview will be scheduled to take place based on my availability, whether before, during or after my working hours at a location of my choice. I will also be asked to verify the accuracy of the information that I have given during the interview session. An electronic document will be sent to me via email between 21-02-2018 and 21-04-2018 and I will be asked to review the information, which will take less than fifteen minutes of my time.

Risks: My participation in this study will require that I share my knowledge, experience and opinions on the aforementioned topic. There are no known risks and/or discomforts associated with this study. With regards to the technical security risks, the interviews will

be conducted via Skype and the interview transcripts will be sent to me via email in a password-protected document. I understand that Skype conversations can be susceptible to hacking and that transcripts or other information sent by email can be intercepted.

Benefits: The expected benefits associated with my participation are the chance to share my knowledge, experience and perceptions about the delivery of distance education in Saudi Arabia, and the opportunity to participate in a qualitative case study research. My participation in this study will contribute to the advancement of knowledge of distance learning towards online collaborative learning in Saudi higher education. I will also be given a preliminary copy of the PhD thesis in an electronic format prior to any form of dissemination or publication that may be used as source in my own work.

Confidentiality and Anonymity: I have received assurance from the researcher that the information I will share will remain strictly confidential. I understand that the contents will be used only for the data analysis and writing of this study and that my confidentiality will be protected, since only the researcher and her supervisor will have access to the information that I will share. Anonymity will be protected in the following manner: my name and work place will not be associated with the research findings in any way, and my identity as a participant will be known only to the researcher. Anonymous quotes might be used in the publication of the results.

Conservation of Data: The data collected in the form of an audio recording of the interview session, a transcript of the session, and researcher notes will be kept in a secure manner in hard copies in the researcher's home and the supervisor's office in a locked filing cabinet. An electronic copy will be saved on the researcher's personal computer and hardware in a password-protected folder. Only the researcher and her supervisor will have access to the data collected and this data will be conserved for a minimum of five years after the end of the study.

Voluntary Participation: I am under no obligation to participate in this study. If I choose to participate, I can withdraw at any time and/or refuse to answer any questions, without suffering any negative consequences. I also have the option of withdrawing data after the interview.

Acceptance: I, _____, agree to participate in the above research study conducted by Eman Walabe from the Electronic Business Department at the University of Ottawa, under the supervision of Professor Rocci Luppicini.

If I have any questions about the study, I may contact the researcher.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON, K1N 6N5.

Telephone: 613-562-5387

Email: ethics@uottawa.ca

There are two copies of the consent form, one of which is mine to keep.

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____

Appendix H: Consent Form (Arabic)



University of Ottawa | Université d'Ottawa

Electronic Business Department

نموذج تفويض

عنوان البحث: أساليب تقديم التعليم الإلكتروني في الجامعات السعودية
إيمان ولابي, طالبة دكتوراه في قسم تقنية الأعمال الإلكترونية بجامعة أوتاوا بكندا.

المشرف على الدراسة: روكي لوبيتشيني

أستاذ مشارك في قسم الاتصالات بجامعة أوتاوا بكندا.

هاتف: 8971 0016135625800 تحويلة

البريد الإلكتروني:

rluppici@uOttawa.ca

دعوة للمشاركة: أنا مدعو للمشاركة في الدراسة البحثية المذكورة أعلاه التي أجرتها إيمان ولابي في سياق رسالة دكتوراه تحت إشراف البروفيسور روكي لوبيتشيني.

الغرض من الدراسة: الغرض من هذه الدراسة هو التعرف على أساليب تقديم التعليم الإلكتروني في الجامعات السعودية. وكما تهدف الدراسة إلى المساهمة بالمعرفة في مجال التعليم عن بعد في السعودية وتقديم الإستنتاجات وأفضل الممارسات والتوصيات التي يمكن إستخدامها لتعزيز وسائل تقديم التعليم الإلكتروني داخل منظومة الثقافة السعودية.

المشاركة: سوف تكون مشاركتي عبارة عن مقابلة لمدة ساعة واحدة, تجري بشكل فردي عبر الانترنت من قبل الباحثه وخلالها سوف تُطرح علي مجموعة من الأسئلة أُدعى فيها إلى مناقشة مفتوحة لمشاركة معرفتي, خبراتي وارائي بشأن أساليب تقديم التعليم عن بعد في المملكة العربية السعودية. وسوف تُسجل المقابلة صوتيا. مع العلم أن تحديد وقت المقابلة سيكون بناء على رغبتي وسيكون ذلك قبل, بعد أو خلال ساعات الدوام الرسمي وكذلك في المكان الذي أحدده. كما سيُطلب مني التحقق من دقة المعلومات التي قدمتها خلال المقابلة. وسيتم إرسال وثيقة إلكترونية اليّ عبر الإيميل بين تاريخ 2018-02-21 و 2018-04-21 لمراجعة المعلومات في مده لا تزيد عن خمس عشرة دقيقة.

مضمون المشاركة: ستكون مشاركتي في هذه الدراسة عبارة عن تعاوني والإدلاء بمعرفتي, خبراتي وارائي حول الموضوع المذكور اعلاه. بحيث انه لا يوجد اي مخاطر معروفة أو مضايقات مصاحبة لهذه الدراسة. أما فيما يتعلق بالمخاطر الأمنية المرتبطة بإستخدام التقنيات المعلوماتيه, سيتم إجراء المقابلات عبر سكايب وسترسل إليّ نصوص

المقابلة عبر البريد الإلكتروني في وثيقة محمية بكلمة مرور. وأدرك أن محادثات سكايب يمكن أن تكون عرضه للقرصنة وكذلك النصوص والمعلومات الأخرى المرسلة عبر البريد الإلكتروني.

الفوائد: الفوائد المتوقعة لمشاركتي هي فرصة لتبادل المعارف والخبرات والتصورات حول أساليب تقديم التعليم الإلكتروني في المملكة العربية السعودية والمشاركة في هذه الدراسة النوعية. وسأساهم مشاركتي في هذه الدراسة في تطوير التعليم عن بعد خصوصا في مجال التعلم التعاوني عبر الإنترنت في التعليم العالي السعودي. وسوف أحصل أيضا على نسخة إلكترونية من رسالة الدكتوراه قبل نشرها والتي يمكنني إستخدامها كمرجع في عملي.

السرية والخصوصية: ستكون المعلومات التي سأقدمها في هذه الدراسة سرية للغاية بتأكيد من قبل الباحثة. وسيتم استخدام المعلومات المقدمة من قبلي في تحليل البيانات وكتابة هذه الدراسة فقط. حيث أن الباحثة ومشرفها هم فقط من سيطلع على المعلومات التي سوف أقدمها. كما سيتم الحفاظ على سرية الهوية بالطريقة التالية: لن يتم ربط اسمي ومكان عملي بنتائج البحث بأي شكل من الأشكال, ولن يتم التعرف على هويتي كمشارك إلا للباحث. كما سيتم استخدام علامات الإقتباس المجهولة في نشر النتائج.

حفظ البيانات: سيتم حفظ البيانات التي تم جمعها على شكل تسجيلات صوتية, نسخ خطية والمذكرات بطريقة آمنة على شكل نسخ مطبوعة في بيت الباحثة وكذلك في خزانة مغلقة بمكتب المشرف تطبيقا لنظام الجامعة في كندا لحماية المعلومات. وسيتم أيضا حفظ نسخة إلكترونية على الكمبيوتر الشخصي للباحثة وكذلك في أداة تخزين في مجلد محمي بكلمة مرور. وستحفظ الباحثة والمشرف فقط بهذه البيانات خلال خمس سنوات بعد إنتهاء الدراسة.

المشاركة الطوعية: إن مشاركتي في هذه الدراسة ليست إلزامية حيث انه يمكنني الإنسحاب في أي وقت او رفض الإجابة على أي سؤال دون أي عواقب سلبية. وكذلك يمكنني طلب سحب البيانات بعد المقابلة.

القبول: أنا..... أوافق على المشاركة في الدراسة المذكورة أعلاه التي ستجريها الباحثة إيمان ولابي من قسم تقنية الأعمال الإلكترونية في جامعة أوتاوا تحت إشراف البروفيسور روكي لوبيتشيني.

أستطيع التواصل مع الباحثة إذا كان لدي أي استفسار حول الدراسة.

إذا كان لدي أي استفسار بخصوص السلوك الأخلاقي لهذه الدراسة يمكنني التواصل مع موظف بروتوكول الأخلاقيات البحثية, بجامعة أوتاوا, قاعة تباريت, شارع 550 كمبرلاند.

مكتب 145, أوتاوا, أونتاريو

الرمز البريدي:

هاتف:

البريد الإلكتروني:

هناك نسختان من استمارة الموافقة استطيع الإحتفاظ بواحدة منهم.

توقيع المشارك:

توقيع الباحثة:

Appendix I: Table 1 (Participants' Background)

	Current Position/ Institution	Province	Gender	Nationality	Years of Experience in Online Learning
Participant #1	Lecturer at SEU	South	Male	Saudi	2 years
Participant #2	Lecturer at SEU	West	Female	Saudi	4 years
Participant #3	Lecturer at SEU	South	Male	Indian	3 years
Participant #4	Lecturer at SEU	South	Male	Indian	4 years
Participant #5	Lecturer at SEU	South	Female	Jordanian	5 years
Participant #6	Lecturer at SEU	West	Male	Saudi	3 years
Participant #7	Professor at SEU	Center	Male	Saudi	5 years
Participant #8	Professor at SEU	West	Female	Indian	3 years
Participant #9	Lecturer at SEU	North	Male	Saudi	6 years
Participant #10	Lecturer at SEU	West	Female	Saudi	6 years
Participant #11	Dean and Department Chair at SEU	Center	Male	Saudi	6 years
Participant #12	Lecturer at SEU	North	Male	Saudi	3 years
Participant #13	Teaching Assistant at SEU	West	Male	Saudi	2 years
Participant #14	Vice Dean at SEU	Center	Male	Saudi	3 years
Participant #15	Consultant at the National Center for e-Learning	Center	Female	Saudi	12 years
Participant #16	Professor at SEU	East	Female	Egyptian	4 years
Participant #17	Lecturer at the SEU	Center	Female	Saudi	4 years
Participant #18	Blackboard Supervisor at SEU	Center	Male	Saudi	6 years
Participant #19	Blackboard Administrator at SEU	Center	Male	Saudi	5 years

Participant #20	Blackboard Administrator at SEU	Center	Female	Saudi	5 years
Participant #21	Blackboard Administrator and Technical Support at SEU	Center	Female	Saudi	5 years
Participant #22	Director at the National Center for e-Learning	Center	Male	Saudi	12 years
Participant #23	General Supervisor at SEU	North	Male	Saudi	5 years
Participant #24	IT Manager at the National E-learning Center	Center	Male	Saudi	12 years
Participant #25	Consultant at the National E-learning Center	Center	Female	Saudi	5 years
Participant #26	Vice Dean at King Abdul-Aziz University	West	Male	Saudi	2 years
Participant #27	Unit Head at King Abdul-Aziz University	West	Male	Jordanian	9 years
Participant #28	Professor at King Abdul-Aziz University	West	Female	Saudi	2 years