Faculty Members' Perception of E-learning in Higher Education in the Kingdom of Saudi Arabia (KSA)

by

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ABSTRACT

The purpose of this study was to investigate faculty members' attitudes toward e-learning in higher education in the Kingdom of Saudi Arabia and the factors influencing their attitudes. This study examined differences in attitude between faculty members based on age, gender, education level, nationality, and teaching experiences. This research was limited to two universities from different locations in the KSA. A survey questionnaire was used in this study to collect the data.

The results showed that there is a difference between the levels of e-learning based on different components of identity. The gender perceptions were the first indication of differences, with perceptions by females being more positive than that of males. This was followed by age differences in which the ages under 44 had a stronger perception of e- learning than those over the ages of 45. The educational level was also noted as being affected by the perceptions of e-learning being stronger with those who had a Bachelor's degree. The results showed that faculty members who had less teaching experience had a stronger perception than those who had been teaching for more than 10 years. Nationality was also influenced in terms of the positive outlook by non-Saudi. There was an overall positive outlook toward e-learning by faculty members with the belief that it is a tool which enhances learning. When responding to questions about the challenges and obstructions of e-learning, participants revealed that a lack of tools and knowledge created impediments to teaching e-learning courses.

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CHAPTER ONE

INTRODUCTION

The rapid growth in technology has had critical implications for education systems worldwide. The little existing knowledge of education systems is undergoing rapid obsolescence, and moreover, the population is increasing to the point where education systems are facing a great challenge of becoming out of date. This, therefore, calls for "better systems without drastically increasing the cost" (Awalt, 2003, p. 67). One possible solution to this outcome is to develop a system of education designed to use new technology. Traditionally, e-learning was primarily designed to serve older students who may have missed an opportunity for higher education (Al-Fadhli, 2009). However, things have changed in recent years whereby e-learning is the preferred mode of study for many students, not only older ones but also younger learners. "In this regard, e-learning is shaking up education as it is offering a solution to distance, time, and education gaps as well as cost problems" (Garry, 2007, p. 2).

In this study, e-learning (EL), online learning (OL), and distance learning (DL) all refer to the same process. Garry (2007) wrote "Online learning or e-learning is a field of education that focuses on dissemination of academic knowledge and information to different geographical locations" (p. 2). As a formalized teaching system specifically designed to be carried out remotely, distance learning has become a very popular learning element in all universities around the world. Facilitated through the Internet and Web portals, distance learning has been a significant trend in the repertoire of learning opportunities that will be provided by most educational institutions in the future. More than ever, it is clear that "e-learning is an important

element of future education as it provides a comfortable, easy, fast, and affordable learning environment" (Awalt, 2003, p. 67).

The recent and evolving way of learning in the global classroom has been realized in quite a number of universities, particularly in developed countries. Awalt (2003) mentioned e-learning as an emerging global network typically used for teaching and training. Given the expansion of e-learning, this study investigated university faculty members' perceptions of e-learning, and the problems they face in implementing e-learning with regard to leadership concerns of access to e-learning in the Kingdom of Saudi Arabia's (KSA) higher education specifically.

Participants from two universities in the KSA shared their e-learning and technology experiences and various demographic variables (i.e., age, gender, education level, nationality, and faculty teaching experience). Their perceptions of e-learning experiences were measured on a five-point Likert scale. The following e-learning attitudinal constructs were investigated: perceived self-efficacy, perceived enjoyment, perceived usefulness, behavioral intention to use e-learning, perceived e-learning technology tools satisfaction, and multimedia instruction. Additionally, the perceptions of faculty members toward e-learning challenges facing Saudi universities were measured.

Statement of the Problem

Scholars have long tried to understand how faculty members in universities perceive e-learning and what factors influence their perceptions. This question has attracted attention because e-learning technologies can greatly improve the work of educators. This question is especially important in the KSA where e-learning is a relatively new concept, having emerged approximately 15 years ago.

Existing studies indicated that faculty perceptions of e-learning are dependent on the following factors: (a) "technical competence; (b) awareness of the benefits of e-learning; and (c) the educational background of a teacher" (Al-Fadhli, 2009, p227; Paravantis, 2010, p56). Furthermore, some researchers argued that age or gender can shape a faculty member's perceptions or attitudes toward e-learning (Wong & Hanafi, 2007). Overall, understanding of these factors can greatly help administrators of educational institutions when considering the implementation of e-learning. In addition, knowledge of these variables can help us better identify challenges facing the implementation of e-learning in higher education in the KSA.

E-learning can bridge achievement gaps that exist as a result of socioeconomic factors, such as cost, within some communities in the KSA by enabling students to receive training and instruction at home (Al-Khalifa, 2008). In Saudi Arabia, universities have spent many millions of dollars to bring in new technologies and to develop e-learning. Additionally, the government has opened several new colleges and universities in different locations in the KSA. As these new technologies and facilities were brought into the KSA university education systems, however, they have not completely answered all socioeconomic factors inhibiting achievement.

Unfortunately, some faculty members are still not completely aware of e-learning and how to utilize technologies effectively (Al-Sarrani, 2010). For that reason, researchers should investigate faculty members' perceptions to determine why they do not use e-learning. However, a few studies have investigated faculty members' perceptions in different locations (Alajmi, 2010; Almuqayteeb, 2009; Al-Sadoon, 2009; Alsirani, 2010). This study adds new data about e-learning and faculty members' perceptions with new locations not previously studied. More research is needed to investigate faculty members' perceptions of e-learning and technology in

Saudi Arabia. This study identified the factors that affect faculty members' perceptions and why some faculty members do not use technologies such as e-learning.

Purpose of the Study

The purpose of this study was to investigate faculty members' perceptions of e-learning in higher education in the KSA as well as the factors influencing their perceptions. In addition, this study identified faculty members' technology and computer experience. In addition, it examined differences in perceptions among faculty members based on age, gender, level of education and teaching experience. Finally, this research identified the major challenges and obstructions facing the implementation of e-learning by faculty members in the KSA.

Importance of the Study

This research is important to faculty members in the KSA and the world at large, because it highlights perceptions held by higher education faculty members concerning e-learning in the KSA (Almohaisen, 2007). Research on e-learning in higher education in the KSA has received little attention in the recent past. This is largely due to the fact that e-learning is a new addition to the system. Accordingly, the findings of this study clearly enrich the base of knowledge that exists in this field.

E-learning offers learners the ability to gain knowledge and skills with regard to computers and the Internet that can be transferred and applied to other facets of student life; for instance, participating in a business meeting via video conferencing (Allen, 2005). Also, the technology used in an e-learning program allows students to have the flexibility to schedule a time that is convenient for them. For example, if students have another obligation such as work or a family situation that would cause

them to miss a traditional class, they can reschedule the class in an e-learning environment.

In Arab countries with gender inequalities, for example, e-learning is a viable method to ensure that both men and women experience equal educational opportunities (Alharbi, 2002). Obstacles that hinder the success of e-learning are identified in this study. If faculty members' perceptions of e-learning were positive , they would support implementing e-learning at universities. However, those who had negative perceptions toward e-learning would not support implementing e-learning. Also, if their perceptions were negative, some of the possible factors that may have contributed to this negativity were revealed in the study. This study also recommends an e-learning training program to develop positive perceptions among faculty members. On the same note, challenges that are expected in the course of implementing the new model among the faculty were established, which should help administrators apply appropriate strategies. Alajmi, (2010) and Al-Kethery, (2006) indicated that there have been extrinsic and intrinsic challenges to implementing new e-learning and technological platforms in education. The positive perceptions held by members of any given faculty were brought to force, and hence, create a window through which appropriate e-learning strategies can be implemented.

This research study also assisted in describing whether groundwork toward the implementation of an e-learning program is necessary. The faculty undertook necessary measures in preparing for a new program (e-learning). Such preparations included sufficient training for faculty members before the program began as well as introducting them to the real working environment so that they can familiarize themselves with work in advance. According to Roy (2010), pre-training in both the technical and educational areas of e-learning is crucial. Faculty members who have

participated in pre-training activities have scored higher marks in schools that have already adopted the new technology (Delgado-Almonte, Andreu, & Pedraja-Rejas, 2010).

This research study equally, though indirectly, brings to light the perceptions of faculty members with regards to e-learning. The knowledge of faculty members' perceptions is of great significance in understanding their level of use e-learning in their teaching strategies (Gormley et al., 2009). It is also possible to attain this platform given that teachers and trainers in the faculty appropriately act as the link between researchers and learners themselves. It is notable that much attention be given to the learners' attitudes toward any educational program because it significantly affects their performance.

The results of this study also aid in revealing areas of strengths and weaknesses in implementation of e-learning at the KSA University and address those weaknesses accordingly. For example, the aspects of the program that enhance the achievement of the educational goals and those aspects deterring the achievement of education goals are identified. If, for instance, the perceptions of the faculty members had a negative impact on the e-learning program, then it would mean that the possibilities of using e-learning to meet the educational goals would be adversely affected and, therefore, remedial measures would be necessary (Delgado-Almonte et al., 2010). Ho (2009) asserted that technological environmental aspects have "tangible effects on learning outcomes" (p. 581). This view is supported by Kelley (2010), who argued that adopting new technology would improve the outcome of education.

The results of this study are also instrumental in initiating similar programs in other faculties of higher learning in the Kingdom of Saudi Arabia. The findings of

this study are highly likely to enhance identification of appropriate steps that ought to be followed based on responses from faculty members. A more high-tech approach for implementation of a similar program with other faculty members in the KSA in higher education can be adopted to assist in addressing some of the previous challenges within the university system of the KSA.

Blake (2009) posited that the availability of learning resources has far-reaching effects on the learning process. This present study was used as an integral tool to assess whether resources in terms of computers and other technological infrastructure are adequate. For e-learning to be sustained, adequate and modern resources are essential from the very beginning of the program. Hence, a faculty within an institution of higher education was in a better position to make an informed decision on whether to acquire new resources or improve those that are already in use.

This study also addressed the effects of gender, age, level of education, nationality, and teaching experience on faculty members' overall perceptions of e-learning at KSA Universities. Also, this study provided important information for university administrators in the KSA about the most important challenges and obstructions that face faculty members when applying e-learning in their colleges and universities.

Research Questions

This study addressed the following research questions:

1. What are faculty members' perceptions of e-learning in KSA higher education?
2. Are there statistically significant differences in faculty members' perceptions of e-learning based on demographic characteristics (i.e., gender, age, education level, nationality, teaching experience)?

3. What challenges and obstructions face faculty members in the implementation of e-learning at KSA universities?

Significance of the Study

The findings of the study are instrumental to future adoption of technology in many Arab countries including the KSA. Policy makers can make use of the perceptions that are held by faculty members and other members, as brought to light by this study, to inform their formulation of policies toward e-learning. The policies thus address the needs for and requirements of technologies for faculty members and students in universities. In addition, the findings can also be used as a guide for other research in this field that may occur in the future. Future researchers may use these findings to contextualize their studies because this study identifies areas that need future attention, lacunas, and gaps that should be filled by future researchers. The results of this study provide new data about faculty members' perceptions of e-learning based on some demographic characteristics from different locations in the KSA.

Limitations and Delimitations of the Research

This research was limited to two universities from different locations in the KSA: Northern Border University (NBU) and Al Jouf University (ALJ) in the KSA. The study was also limited to the 2011 academic school year. This study examined the differences between faculty members based on the demographic characteristics of gender, age, education level, and teaching experience. The results generalize limited to only faculty members in the NBU and AJU population in the KSA. Other education systems were not studied given the limited time and resources of the study.

Definition of Terms

Blended Learning (BL) or Hybrid Distance Learning: Refers to a combination of the synergy brought by utilizing both traditional form of training, also known as classroom learning, and e-learning (Dziuban, Moskal, & Hartman, 2004). Blended learning is a way of integrating learning methods to enhance effective learning. This is accomplished by combining both classroom learning and e-learning. Equally, this is learning that has the classroom training as its hub. This can be explained using these examples: A new employee orientation process can be conducted in a class. However, the employees might be required to go home and complete the remaining part of the process by sending their answers via electronic mail and electronic checklists (Wilson & Smilanich, 2005).

Digital Library: This is a type of library in which documents are stored in electronic formats. These collections of materials are available through computers that access the Internet and also through the Internet-enabled phones. The terms electronic-library can be used synonymously to refer to a digital library. Furthermore, technology is vital in order to link resources from different stores. The original goal of digital libraries is to make sure that the information acquired by users is as universally available as possible (Association of Research Libraries, 1997).

E-Learning (EL), Distance Learning (DL) or Online Learning (OL): The process of using technology to deliver learning where the instructors and the students are not physically in the same place but rather use electronic means to deliver and participate in learning. This is a learning method whereby the learners and faculty members are at a distance, and it integrates "voice, video, networking and computer technologies" for its accomplishment (Sloan, 2005, p. 9). Networks such as satellite, wireless cable,

and cable modems are known to link both the students and the instructors (Sloan, 2005).

Faculty Members: Academic members who are teaching classes at colleges or universities, including professors, instructors, teachers, and lecturers.

Instructional Technology: This is the use of various teaching tools not restricted to computer and computer software to improve learning. Technology describes all the tools that a student requires for effective learning. Some of these tools are calculators, CD players, cameras, and even projectors (Mills, 1987).

Interactive Video Conferencing (IVC) or Interactive Video Television (ITV): This refers to a form of telecommunication technology that allows people at different locations to interact with each other. It is known for its use with audio in-person, presentation, white-board or smart-board and video transmissions concurrently. Interactive video conferencing serves a group of people but not an individual (Jerry, 2002).

Internet: This is an information system that covers the whole globe and is linked easily by use of the Internet Protocol (IP) or computers (Gayle, 2005). Computers connected over the Internet can send or receive any type of information: texts, videos or even computer programs (Radcliff, 2002).

Online Course: This refers to a course whereby both the instructor and the students can be at a distance, and all the materials needed are stored on the Websites. Online courses are known to utilize a course-management technology. The faculty members should determine the most appropriate time and place for their courses based on the courses' requirements (Kolby, 2006).

Perceptions: Refers to someone's feelings of like or dislike, favorable or unfavorable, toward an item. It includes also the positive, negative, and neutral points of view toward something, an object (Allen, L., 1983). Dooley & Murphy (2001) define the Faculty Perceptions of E-Learning as "The opinions, attitudes and beliefs held and exhibited by faculty members in relation to the regular use of e-learning resources." In this study, perception "relates to an individual's feelings about, attitudes toward, or awareness of, understanding others, interpreting objects, events, and processes, and identifying with Environments" (Hongbo, 2006, p. 30). It also means faculty members' perceptions or attitudes about e-learning environments in higher education in the KSA.

Technology: The use of scientific techniques, crafts, and tools for communicating and solving problems (Gayle, 2005).

CHAPTER TWO

LITERATURE REVIEW

E-learning, also known as distance learning or online learning, refers to a system of imparting knowledge through teaching from a distance where technology is used. In most cases, the student is physically absent from the classroom but through technology, virtually interacts with the instructors and tutors (Warschauer, 1997). Generally speaking, e-learning provides access to learning in situations where both the source of information and the recipient, usually the student, are separated by time, distance, or both (Cooke, Crawaford & Warner, 2009).

E-learning came to light thanks to advancements in technology that produced personal computers (PC), CDs, and the Internet. Several organizations in and out of government have employed e-learning with various degrees of success to impart new skills and knowledge to their workforce and make other relevant parties aware of what transpires within the organization (Cooke et al., 2009).

According to Bannan-Ritland (2002), it is worth noting that the incorporation of such technological innovation in education was necessitated by the desire to counter the effect of geographic distance hindering knowledge acquisition, to provide convenience, to overcome the problem of inadequacy of resources, to diminish overpopulated educational institutions, and to augment traditional teaching methods, among others (Coventry, 2002).

Historically, the concept was assumed to date back to 1728, when an advertisement in the *Boston Gazette* showed a shorthand teacher was looking for students to take lessons on a weekly basis (Garrison, 1990). The postal service was the tool used to carry out the initiative throughout the 19th century. The University of London believes it was the first university to offer distance learning courses

(Garrison, 1990). In the United States, a concept of extended training was developed by the University of Chicago's first president, which was later implemented by Columbia University as well. In 1911, the University of Queensland followed suit (Meredith, 2002). Since then, countless institutions of higher learning have incorporated the concept of distance learning into their systems.

Currently, numerous public, private, for profit, and not-for-profit organizations have embraced e-learning throughout all levels of education. The sharp increase in the rate of adoption of such an innovation leaves little or no doubt that perceptions of the relevant parties are positive toward e-learning (Papert, 1993).

The notable approache to e-learning include computer-based learning (CBL), where computers are used as basic and key components of fostering education and training. In this context, e-learning not only refers to use of computers in classrooms but also to their use in a structured setting to enhance teaching. Because of advanced technological innovations, computers have also changed from heavy and cumbersome ones to light, portable, handheld devices (Panagiotes, 2011). These can be used in classrooms or in homes, with or without an Internet connection.

Computer-based training (CBT) refers to self-paced forms of learning usually accessible through computers or other hand-held devices. Basically, this approach can be thought of in the context of reading online texts, question banks, and use of a variety of other media. These media include text sound, graphics, and images (Cooke et al., 2009). Some of the Web-based Training (WBT) is different from WBT CD-ROM on the basis of how information is delivered. With WBT, the Internet is exclusively used in conveying the information; while in WBT CD-ROM, CD-ROMs are employed to deliver information (Panagiotes, 2011). The concepts employed in CBT include use of multiple choices, drag-and-drop, simulation, and use of a radial

button. CBT provides a user-friendly environment that brings satisfaction as it supplements traditional training forms (Cooke et al., 2009).

The main difference between CBT and WBT is that WBT does not depend on the computer platform or the computer hardware. The WBT can be regarded as CBT when used from a CD-ROM instead of the Internet connection (Cooke et al., 2009).

Al- Khalifa (2008) stated that e-learning systems only concentrate on the process of learning, and since many people now have access to computers and internet, education can be easily accessed. Almegren (2007) emphasized the value of e-learning to make education accessible to people who would otherwise have missed the opportunity. This new technology enhances student capabilities of accessing better learning resources.

Many faculty members and students in the Arab countries including the KSA experience complications in obtaining higher degrees from their individual universities because of a variety of difficulties, physical or financial, that limit their ability to attend the traditional classes. The higher associated costs of attending traditional classroom environments, including time, money, and possible logistical complications, affect their ability to develop their training skills and further their education (Al-Kethery, 2006).

Technologies Used to Deliver Information

It is worth noting that distance learning entails the use of a number of technologies in transmitting and sharing of information. Such technologies are broadly categorized into synchronous and asynchronous. As the name implies, synchronous technologies are in use when all participants are present, synchronously, at a given time (Tufted, 1990). It resembles a traditional learning method although the learners may be in remote locations. With this kind of technology, a timetable is

drafted and given to the relevant participants. As suggested by Winograd and Flores (1988), the most widely used media are web conferencing and video conferencing. Others include internet, radio, telephone, and direct-broadcast satellite.

As Woodruff and Mosby (1996) noted, asynchronous video is a mode of sharing knowledge in which those taking part can access learning materials at different times based on their convenience; hence, there is flexibility for the participants in different remote locations, since, with this type of technology, learners are not required to be together at the same time. Among technologies that support this initiative are message boards, video, e-mail, audio recording, fax, voice mail, and print material to mention but a few (Touchstone & Allison, 2003). These two instructional modes can be used in combination, and the synergy generated has shown that distance learning is being embraced not only in developed countries, but also in developing countries at a rapid rate (Smith, 1990).

Benefits of E-Learning

According to Abrani (1996), the adoption of e-learning has been hailed for the numerous advantages that it brings. For instance, it expands access to education and training, and the whole concept helps meet the demand for knowledge acquisition despite distances and differences in individual schedules. Additionally, it helps address the problem of inadequate classroom space and other facilities. Implementation has led to bypassing capacity constraints and alleviating inadequacies that institutions of higher learning are facing almost everywhere (Galbreath, 1995).

As mentioned by Allen (2005), this approach makes it possible for learners to share information that will facilitate general educational conferencing. It has been shown that when students share personal work, individuals benefit from learning from the work of their classmates. Students can live and study from anywhere, and faculty

members gain from these advantages too. The approach demonstrates that one does not need to travel to or live in the city where the schools are located, which can help both students and faculty members avoid the costs that would have been incurred.

Benefits of E-learning in the KSA

Prior to evaluating the faculty members' perceptions of this new learning environment, it is essential to examine the benefits of e-learning as an educational tool in the KSA. Where earlier there was a sluggish rate at which the KSA was adopting this technology, nowadays it is rapidly growing in sectors of learning because of the benefits it offers to students and teachers as well as education systems administrators (Hussein, 2011). However, faculty members in the KSA must continue to transition from conventional methods of teaching toward the more constructive and interactive pedagogy capable of enabling students to exploit the full benefits from e-learning (Al-Kethery, 2006; Almohaisen, 2007).

In addition to continued expansion of the benefits of e-learning that have revolutionized the learning processes in the KSA, there is also a need to encourage teachers to become active participants in designing and implementing e-learning processes, a move which will bring a sense of belonging and ownership to these processes. This will therefore promote the aspect of teachers being proactively involved and supportive of e-learning initiatives, a key factor to the realization of the goals of e-learning in the KSA (Almohaisen, 2007; Hussein, 2011). Moreover, e-learning requires an establishment of an adequate infrastructure to enable the timely delivery of course materials to students by their teachers as well as to increase the facility of teachers' support of their students (Alharbi, 2002). Thus, considering the benefits that accrue from embracing e-learning in the KSA and evaluating them against their costs, it becomes evident that this is a timely idea whose implementation

is overwhelmingly favorable in the balances. This being the case, evaluation of the faculty member's perceptions of it is warranted (Alharbi, 2002).

E-learning in the KSA

The educational processes in the Kingdom of Saudi Arabia (KSA) have undergone numerous changes during the last century. What has followed is an embracing of e-learning, the usage of which has been greatly promoted by the ease of internet accessibility in the KSA (Alharbi, 2002). The introduction of e-learning has changed most of the educational processes in the KSA, moving them from printed learning through many other changes to more recent forays into e-learning interactivity, all of which is greatly attributable to the ongoing technological changes making e-learning more and more ubiquitous. Almohaisen (2007) reiterated that e-learning would totally transform the teaching process, but the rate at which this will be achievable will be mainly dependent on the perceptions of the faculty members. The present research focused on these perceptions of e-learning, identifying the challenges faced by faculty members in their universities.

This adoption of e-learning technology has been inevitable due to the impact it has had on the educational systems in the KSA as well as worldwide. E-learning is totally reshaping today's educational systems in the KSA by offering students new and exciting ways of learning while at the same time giving the teachers new ways through which they can teach and impart knowledge, and likewise providing administrators with new ways to organize the educational system (Abouchedid et al, 2004; Almohaisen, 2007).

Prior to evaluating the faculty members' perceptions, it was essential to examine the benefits or importance of e-learning as an educational tool in the KSA. Despite the earlier sluggish rate at which the KSA was adopting this technology, it is

now rapidly growing in sectors of learning due to the benefits it offers students, teachers, as well as education system administrators (Hussein, 2011). However, the teachers in the KSA must transition from conventional methods of teaching toward embracing more constructive pedagogy capable of enabling the students to exploit the full benefits of e-learning (Al-Kethery, 2006; Almohaisen, 2007).

In addition to embracing the benefits of e-learning that have tremendously revolutionized the learning processes in the KSA, it is also necessary to encourage teachers to become active participants in designing and implementing the e-learning processes, a move that will bring a sense of belonging and ownership to the process. This will, therefore, promote involvement and support of e-learning initiatives, a key factor to the realization of the goals of e-learning in the KSA (Almohaisen, 2007; Hussein, 2011). Moreover, e-learning requires the establishment of an adequate infrastructure to enable the timely delivery of the course materials to the students by their teachers as well as promoting the teachers' support to students (Alharbi, 2002). Thus, considering the benefits which accrue from embracing e-learning in the KSA and evaluating them against the costs, it has become evident that this is a timely idea whose implementation is likely inevitable. Hence, evaluation of the faculty members' perceptions of this idea is greatly warranted.

Gaging the perceptions or opinions of faculty members of e-learning in the KSA is a crucial step in the attempt to successfully adopt e-learning. Therefore, it becomes critically important to determine the faculty members' level of interest toward embracing e-learning in educational institutions, as well as their perception of whether e-learning would be in any way similar to their conventional teaching strategies widely in use today (Hussein, 2011; Shashaani, 1994). Teachers mostly tend to be comfortable with already familiar methods of teaching, using teaching

facilities that are already established including classrooms, blackboards, audio cassettes and videos, printed materials, as well as the basic computer applications. In order to continue moving faculty members toward the benefits of e-learning, the determination of their perceptions of this process of learning becomes crucial (Alharbi, 2002; Zhen, Yurui, Garthwait, Abigail & Pratt, Phillip, 2008).

A clear understanding of the perceptions of faculty members will be greatly helpful in constructing a strategy that will ensure a smooth implementation of e-learning at the KSA universities and other institutions of learning. According to O'Donnell (1991), perceptions of faculty members are typically dependent upon experience, age, gender,and position. However, other research, previously conducted, tend to show that there is a clear difference in the perceptions among those groups holding various attitudes toward e-learning (Almegren, Al-Yafei & Hashem, 2007; Becker, 1991; Magnusson & Svensson, 2000; O'Donnell, 1991). Hence, determining the perceptions of the faculty members on the basis of these categories is helpful in guiding the decision makers at the KSA institutions toward developing appropriate e-learning solutions to their particular goals as well as their unique cultural contexts (Al-balawi, 2000).

Additionally, a number of the faculty members in the KSA educational institutions are already using some methods of e-learning; therefore, there is a need to evaluate the perceptions of those with experience in e-learning, in addition to those without such experience. There have been a number of studies that have been undertaken in determining the exact perceptions of faculty members in the KSA institutions toward e-learning (Al-Kethery, 2006). However, this literature indicates that the faculty members holding "less traditional" views toward education had positive attitude toward e-learning as the most viable approach in their day-to-day

teaching activities (Becker, 1991; O'Donnell, 1991;) in fact, faculty members in almost all the KSA institutions hold positive attitudes toward e-learning (Al-Kethery, 2006); Agboola, 2005).

There are numerous reasons that warrant the adoption of e-leaning by Saudi universities. A shortage of Saudi faculty and an increasing number of students has been the predominant factor. Additionally, the maintenance of separate male and female colleges has come up against a severe shortage of women faculty, thereby necessitating the adoption of e-learning. This solution is cost efficient and allows for a culturally acceptable e-learning environment wherein male faculty are able to teach female students (Al-Sarrani, 2010). The Saudi government has continued to support e-learning in higher education institutions, leading to the formation of the National Centre for E-Learning and Distance Learning that has greatly contributed to promoting E-learning within the country **(** Al-Kethery, 2006; Chanchary, (2011).

E-learning Research in Higher Education in Saudi Arabia

Recent research on e- learning in the KSA has indicated that despite the importance and usefulness of e-learning, the most apparent inhibiting factors are lack of knowledge and skills (Al-Sarrani, 2010). However, poor Internet infrastructure, and a lack of distance learning education, as well as lack of support are major barriers still. Notwithstanding this, there is an overall positive attitude toward the adoption of e-learning among faculty members, students, and administrators. Additionally, due to the lack of adequate research regarding e-learning (Almohaisen, I., 2007; Al-Sarrani, 2010).

Studies Related to Faculty Members' Perceptions of E-Learning.

Studies Outside of the KSA

In the KSA, studies about faculty perceptions of e-learning are few. Meanwhile, around the world there are several studies extant about faculty perceptions of e-learning. Faculty perceptions are often among the main reasons that academic programs are changing. There are some studies that reveal that faculty development programs make faculty members more prone to adopt only such changes that they feel are crucial or desired (Al-blowi, 2000; Barron, 1987; Zhen, el al., 2008). Given that e-learning has been made possible because of new technology, its efficient use is dependent upon a positive attitude being adopted by faculty members. This will be a more meaningful incentive for using e-learning if faculty perceptions become positive (Al-blowi, 2000; Al-Sarrani, 2010; Hussein, 2011). There may be initial reluctance on the part of faculty members to adopt new teaching styles in view of the massive effort that must be made in adapting to them. It is within this context that there is increasing demand to alter the negative perceptions of using e-learning among faculty members. Only in this way can e-learning teaching requirements be fulfilled (Al-blowi, 2000; Al-Fadhli , 2009).

Barron (1987) has held that faculty perceptions of technology can be made better by integrating the available technology with course work provided to faculty members. A significant aspect in this regard is that faculty members can teach in the same way as they have been educated. It is very true that computer proficiency cannot be transferred to learners until faculty members adopt a positive attitude toward e-learning (Panda, 2007).

Liaw (2006) has raised questions about whether learning institutions will be able to meet the requirements of a diverse student population and of societies

undergoing transformation. Mahdizadeh, Biemans, and Mulder (2007) examined *perceived self-efficacy* of faculty perceptions of e-learning and found that the use of e-learning by instructors is explained largely in terms of their perceptions about the value they get from e-learning systems. The concept of computer self efficacy is derived from Bandura's (1986) self-efficacy construct that relates to a person's ability to use computers.

Prior research concerning efficacy has employed the technology acceptance model (TAM) to predict and explain the impact of the dependent variables cited above on faculty member's perceptions of e-learning in Saudi Arabia as well as in other parts of the world. The basic assumption of the model is the implication that positive adoption of technology depends upon the user's intention to use, as well as perceptions concerning the technology in question (Abouchedid & Eid, 2004). Additional research positively concluded that the variability in perceptions was highly dependent upon how the user perceived the technology in terms of usefulness and self-efficacy (Abouchedid & Eid, 2004).

Liaw, Huang, and Chen (2007) agreed with the recent empirical researches that technological self efficacy, perceived usefulness, and behavioral intention among users were the main determinants of concurrent perceptions. Behavior intention has been viewed as the predictor of actual behavior and (Cheon, Song & Jones, 2010) has been defined as a person's conscious plan to carry out or not to carry out a specified behavior in the future ; the degree of the formulated plans varies from one individual to another. Additionally, the concept of self efficacy was proposed by Bandura (1995), and in the e-learning arena the term has been defined as a person's belief in his capability to effectively use technology to improve learning or teaching (Alsadoon, 2009). Depending on the level of self efficacy, the perceptions of e-

learning varied from one individual to another (Abouchedid & Eid, 2004). The pattern of their results indicated that ability to use the computer equated to average computer self efficacy which resulted in positive perceptions among faculty members and vice versa (Liaw, Huang and Chen, 2007).

Perceived enjoyment is defined as "the extent to which the activity of using a specific system is perceived to be enjoyable in its own right, aside from any performance consequences resulting from such use" (Venkatesh, 2000, p. 343). Perceived enjoyment is the inherent motivation that strongly influences acceptance of technology, bringing with it fun and pleasure through the use of the new technology. Perceived enjoyment has been found to be positively associated with perceptions of e-learning as well as behavioral intentions toward using e-learning (Koohang, 2004). Perceived usefulness is an important determinant of the way users determine their intentions (Davis et al., 1989). As a consequence, e-learning reveals the perceived usefulness and positive influence it has on users' intentions to continue with it. In many universities e-learning affords a virtual learning environment that provides synchronous as well as asynchronous knowledge and assessment (Oliver & Trigwell, 2005). According to Jones (2005), several universities have started making increasing use of virtual learning environments and the number of enrolled students and staff are increasing constantly. Research conducted by Riel (2000) revealed that e-learning is now increasingly supplementing classroom learning with staff providing web resources and lecture notes online.

Abouchedid & Eid (2004) defined the term " perceived usefulness of e-learning" as the type of perceptions (attitudes) on the essentiality of a particular technology in the performance of a particular job, which in turn determines that person's attitudes. In their study, Abouchedid and Eid (2004) concluded that e-

learning attitudes among faculty members varied significantly depending upon the level of perceived usefulness of e-learning technology in promoting job performance; similar conclusions were highlighted in a study by Liaw, Huang and Chen (2007). The above notion implies that lectureres who perceived e-learning as useful were likely to change their intentions and subsequent attitudes to adopt the system positively (Abouchedid & Eid, 2004). Almuqayteeb (2009) reported that there were differences between female faculty members' perceptions of computer usefulness based upon their computer skill level.

Closely related is the impact of perceived enjoyment on learners and faculty members' attitude toward e-leaning. Shirley (2002) explained that perceived enjoyment is the intrinsic motivation that is dependent upon the user's perception of the pleasure derived from using the computer in e-learning. Shirley tested the above variable based upon the assumption that it had an impact on faculty members' perceptions of e-learning adoption. Abouchedid and Eid (2004) as well as the later study by Liaw, Huang and Chen (2007) concluded that the instructors' perceptions varied significantly depending upon the level of perceived enjoyment.

People's perceptions are known to have an impact on their behavioral intention in using e-learning. According to Wilson (2001), the popularity among students for taking up e-learning is increasing, but there are some obstacles that do not allow e-learning to strongly influence learning systems and outcomes. The barriers in this regard pertain to inadequate funding, infrastructure, and skepticism on the part of faculty in regard to the academic advantages of e-learning. It is believed that educational institutions are not making full use of technological advancements. They often question whether technological advancements will be able to cater to the changing needs of varied student populations (Wilson, 2001).

Liaw, S. (2008) suggested that interaction, instructional structure, and instructor and learner characteristics were most important to consider while designing e-learning environments. Characteristics such as confidence, belief systems, motivation, and perceptions of learners and instructors must be identified, because e-learning implies an autonomous learning environment. This is because learners and instructors have greater opportunities in terms of self directed learning in such environments.

Additionally, Cheon, Song, and Jones (2010) extended their variables to include perceived system satisfaction to test its impact on teachers' perceptions of e-learning. The purpose of the study was to test the effect of the general perception regarding the capability of e-learning and how this affected faculty members' attitudes toward the adoption of e-learning. This prior study showed that users gaged the ability of a system to satisfy the required need based upon its flexibility, integration, reliability, accessibility, stability, ease of use, and so on. Similarly, Liaw, Huang, and Chen (2007) used similar parameters to measure perceived satisfaction of e-learning systems and extended their study by measuring how the perceptions influenced teachers' perceptions. Further analysis of their results showed significant disparities among teachers perceptions depending on the perceived system satisfaction in meeting e-learners' needs (Liaw, Huang, & Chen, 2007).

Multimedia instruction patterns have been recognized by researchers who have revealed that university students are interested in making use of virtual learning environments and are open to use the system on a regular basis (Daugherty & Funke, 1999). It has been found that the most frequently identified obstacles were inadequate equipment and technical support. Moreover, they also held that faculty members mostly need enhanced time for preparation. The most significant negative aspect of

e-learning as identified by researchers is the deficiency of interest and positive attitude on the part of faculty members. Jones et al. (2005) found that e-learning is perceived positively by students but staff members were found to express negative viewpoints.

Faculty members were concerned that e-learning courses being made available to students were not providing high teaching standards because the same curriculum was not delivered as in the case of traditional classroom teaching. Teachers believed that if lecture notes were placed online, the number of students attending lectures would decline drastically (Almohaisen, 2007). According to Newton (2003), who reviewed the literature relative to teachers' perceptions of e-learning, inadequate rewards and incentives for teachers engaged in e-learning, and inefficient strategic planning and lack of proper vision were the main reasons for the slow progress of e-learning in educational institutions.

It is true that e-learning activities relate to learner freedom and an interactive learning environment. Additionally, learning instructions are founded upon badly structured formats and multiple media formats. E-learning is actually a kind of cooperative learning involving teachers and learners. There has to be a sense of perceived enjoyment and perceived usefulness that can be brought about only by the active involvement of faculty members. They have to ensure that e-learning provides more problem solving options. Instructors should facilitate the use of technology tools so that students enhance their thinking abilities and improve their own learning experience (Al-Mothana, 2009).

Despite the fact that perceptions of e-learning are considered to be a strong contributing element in using and accepting e-learning technologies, as yet there is no widely accepted explanation of constructs about computer and e-learning perceptions

(Liaw, 2004). Research by Triandis (1971) revealed attitudes that implied behavioral, cognitive, and affective intentions and elements. More and more institutions of higher learning are embracing e-learning to enhance performance levels. Some are adopting the practice just because they do not wish to remain behind (Govindasamy, 2002). Researchers feel that if instructors demonstrate higher levels of positive perceptions of e-learning, they tend to have a positive *behavioral intention* of using e-learning programs. Irrespective of the extent to which technology may be advanced, e-learning can be effectively implemented only if there is a positive attitude among users. As it has been already demonstrated, there is a strong need for instructors to have a positive attitude toward e-learning, which will make them have a higher level of behavioral intention toward using it constructively (Govindasamy, 2002).

E-learning is gaining popularity as a learning tool in most institutions; it is one of the embraced learning methods in this age of information technology (IT). There are challenges posed by diverse backgrounds of learners and instructors in the use of e-learning, causing them to perceive e-learning differently. For instance, different backgrounds determine the use of e-learning by both learners and instructors.
In a research study conducted by Liaw, Huang and Chen (2007) on the faculty members' perceptions of e-learning, it was found that instructors had positive perceptions of e-learning when they had adequate computer experience. A positive attitude toward e-learning included perceived self-efficacy because faculty members enjoyed using modern technology due to its usefulness. Liaw el al. (2007) findings showed that most instructors had remarkable skills in computing and e-learning for teaching. Moreover, instructors displayed favorable perceptions of an e-learning environment as a methodological tool that assists in teaching.

E-learning Research Studies in the KSA

In a different but related study conducted from the KSA by Hussein (2011) on the attitude of faculty members toward e-learning, it was found that faculty members in Saudi universities have positive perceptions of e-learning. This has encouraged other members to embrace the use of contemporary technology in teaching. Shirley (2002) studied the various perceptions that faculty members have of e-learning. Research showed that most faculty members have positive perceptions; this allowed them to communicate better with their students by using modern e-learning tools. In a similar study carried out by Abu Qudais, Al-Adhaileh and Al-Omari (2010), the attitude of senior members of most faculties toward e-learning was found to be positive. Most of them thought that working with computers was not only enjoyable, but also stimulating. In the same research, perceptions of the use of modern technology were not influenced by gender, teaching experience, or nature of college where the respondent had studied.

Al-Sarrani (2010) conducted a study that included 393 participants. The results showed that there was no statistically significant difference between the age of the faculty members and their perceptions of the adoption of the e-learning. However, younger faculty members were perceived to be able to embrace this technology faster than their older counterparts. This would indicate that the younger faculty members were more comfortable embracing e-learning practices in comparison to the older faculty members.

Apparently, gender seemed not to play a great role to the extent to which the faculty members' perceptions were positive or negative toward e-learning. According to the results of a study conducted by Almuqayteeb (2009) involving 165 faculty participants, it was very clear that the female faculty members and their male

counterparts both had positive perceptions of using e-learning education processes. However, the findings did indicate that a combination of demographic variables had an impact upon female faculty members' perceptions and overall use of computer technologies and the Internet. These variables included age, teaching experience, computer technologies experience, and computer skill levels. Other factors cited as affecting the female faculty members' perceptions included lack of time, reduced course quality, lack of self confidence, and lack of collegial support (Shashaani, 1994).

Educational levels and nationality seemed only to slightly influence the faculty members' perceptions (Zhen, el al., 2008). However, this was to a negligible extent, according to the Al-Sarrani (2010) study. Hence, all the faculty members, from those with only one degree or more, presented slightly different perceptions of e-learning in comparison to the nationalities of the faculty members that also showed a similar trend (Al-Mothana , 2009).

Additionally, faculty members' perceptions of e-learning were also affected by their years of teaching experience as well as their skill levels in computer technologies. The more experienced faculty members indicated higher positive perceptions of e-learning in comparison with those who had less experience. Additionally, those who possessed higher level computer skills tended to show the highest positive perceptions of e-learning, compared to those with less knowledge and computer skills (Al-Sadoon, 2009). This was attributed to their confidence and comfort with the new technologies (Zhen, el al., 2008).

In yet another empirical study by Al-Mothana (2009), faculty members had positive perceptions of Internet-based distance education in Jordan University. There was a strong positive relationship between the faculty members' perceptions of

Internet-based e-learning and its perceived value. A similar study conducted by Al-balawi (2000) also revealed that most faculty members had a positive attitude toward adopting web-based instruction by institutions of higher learning.

A study by Abu Qudais el al. (2010) identified factors affecting faculty members' perceptions of concerning the use of information technology. Faculty members' perceptions of e-learning were positive, and most of them were willing to be trained in e-learning. This has also been supported by the study by Newton (2003) that revealed that faculty members had positive perceptions of e-learning. This was also supported by Allan and Will (2001).

Another study from the KSA was conducted by Agboola (2005) on assessing the awareness and perceptions of academic staff in using e-learning as a tool for instructional delivery in post secondary institutions. The results showed that more than half of the faculty members were willing to embrace it in their teaching methods. A study conducted by Ruth et al. (2009) on the motivators and inhibitors for university faculty revealed that incentives in the education sector, such as e-learning, contributed to their positive perceptions of the adoption of technology. Motivational factors led them to develop positive perceptions toward electronic and distance education courses.

Factors Affecting Faculty Members' Perceptions of E-learning

Gender Differences

Gender is sometimes viewed as an independent variable that can impact an instructor's attitude toward e-learning. In their study, Wong and Hanafi (2007) noted that gender does not influence a person's beliefs about digital learning when both males and females have "equivalent level of IT experience" (p 165). However, their findings do suggest that female teachers exhibited higher levels of confidence in their

abilities to use computers after the training. Yet, it should be pointed out that this argument is not supported by other researchers. The research from the KSA carried out by Shashaani (1994) indicated that female teachers have a lower level of confidence in their skills after training (Chanchary, Farah Habib & Samiul Islam (2011). Considering faculty perceptions of e-learning, a study to reveal gender differences in perceptions of usage of information and related applications in teaching by Wong & Hanafi (2007) showed an equal level of positive perceptions displayed by both genders.

Finally, the study by Cavas (2009) showed that there is a statistically significant relationship between the gender of an educator and his/her views about the use of instructional technology for teaching and learning. We can also refer to the study from the KSA, carried out by Almuqayteeb (2009). The findings of her study indicated that female teachers have "positive perceptions" of the use of computers in the classroom (p. 2). Nonetheless, this positive attitude extended only to certain applications, such as e-mail, word processors, and the Internet (Almuqayteeb).

Moreover, Al-Sarrini (2010) pointed out that gender differences do not fully explain faculty members' perceptions of e-learning. In part, this discrepancy can be explained by the fact that these studies were conducted in different settings as well as in different cultures. Thus, we can argue that the exact impact of gender on perceptions has yet to be accurately measured.

Age and Perceptions of E-learning

It is believed that variables such as age tend to shape educators' perceptions of e-learning. In particular, in the KSA, the study conducted by Al-Fadhli (2009) showed that instructors whose ages were 45 and above were less willing to rely on e-learning models; similar findings were found in the Al-Sarrini study (2010). In

contrast, young instructors were more enthusiastic about the use of e-learning technology. In part, these findings confirm the popular belief that older people are less inclined to adjust themselves to technological changes.

However, one should bear in mind that other scholars do not agree with this point of view. For example, a study done by Mital and Luthra (2006) demonstrated that there is no significant relation between age and attitude toward e-learning. These scholars believed that technical competence plays the most important role and that the issue of age requires further research (Mital & Luthra). This variable is relevant to their discussion, since there are a great number of educators who graduated more than 20 years ago, a time in which computers were not regarded as an educational tool. At this point we can refer to the study by Cavas et al. (2009) who noted that Turkish science teachers who were exposed to e-learning during their education viewed it as a more favorable phenomenon. The findings of these studies can hardly be disputed, but one can argue that interpretation of statistical data could have been different. Al-Fadhli (2009) and Cavas et al. (2009) believed that age is an important independent variable because younger teachers are more willing to use technologies in the classroom. However, this behavior can be related not necessarily to age, but to technical competence and exposure to e-learning.

It is believed that younger faculty members are able to embrace this technology more easily than their older counterparts (Al-Sarani, 2010). However, research carried out by Mital & Luthra (2006) concerning the adoption of e-learning in corporations indicated a different trend where both the young and old employees collaboratively adopted the e-learning concept.

The Impact of Educational Level

A possible contributing factor that shapes a person's perceptions of e-learning is his/her educational level and background. Researchers have found no significant relationship between a faculty member's academic degree and his or her perception of e-learning. For instance, Agboola (2005) showed that people with a master's or a doctoral degree had the same perception of e-learning. A similar view of another Arab country is expressed by Abu Qudais et al. (2010) who did not attribute differences in perception to an academic degree. Thus, we can assume that more attention should be paid to the type of training a person receives rather than the level of his/her academic degree (Abu Qudais et al.). Level of education seemed to slightly influence faculty members' perceptions of e-learning, but to a negligible extent, according to the Al-Sarrani (2010) study. Moreover, it is quite probable that their respondents' educational backgrounds, as well as their level of technical competence, were different (Al-Mothana, 2009).

Studies with "Nationality" as a Demographic Variable

Various studies have indicated that nationality variables can affect perception of the use of technology. In research conducted from the KSA by Al-Sarrani (2010), it was revealed that nationality factored no significant difference between science faculty's perceptions of the usefulness of Information Technology in teaching. Similar studies conducted in the KSA by Albalawi (2000) at three universities indicated a positive attitude toward the use of e-leaning in teaching.

Technology Experience as a Factor Shaping Perceptions of E-learning

In a study by Cardwell-Hampton (2008), it was found that a lack of experience and skills in the use of technology caused faculty members to be reluctant embrace e-learning technology. There were several studies partly confirming this hypothesis.

For example, studies have demonstrated that those faculty members who were trained to use information technologies during their education felt more positive and confident regarding e-learning (Altun, 2007; Cavas et al., 2009; Wilson, 2001). These faculty members regarded computers as an integral part of the learning and teaching process. One should take into consideration that e-learning is a distinct part of instructional design, and a faculty member must possess the necessary skills in order to apply computers or Web-based technologies in the classroom (Almuqayteeb, 2009; Altun, 2007; Cavas et al., 2009).

The perceptions of faculty members regarding computer-aided e-learning education are closely related to their own technology experience (Zhen et al., 2008). Technology experience denotes the number of years during which a faculty member utilizes a computer in the classroom or instructs online courses (Alexander, Perreault, Zhao, & Waldman, 2009). In order to validate this point, we may refer to the study carried out by a group of scholars under the guidance of Alexander et al. (2009), who stated, “In the six year span studied, both students and faculty satisfaction levels with their online learning experiences have risen for three of the satisfaction items measured” (p. 16). This argument was supported by other scholars; in particular Cook et al. (2009) whose survey indicated that those faculty members lacking experience in e-learning and proper training were more likely to make negative comments about this educational model. The opinions of these researchers are quite convincing, but they do not fully explain why a person can display a negative attitude toward e-learning from the very outset. One should take into account that a faculty member’s experience in e-learning depends upon the type of educational institution, its technological resources, and overall policies pursued by the administration at a college, school or university (Cook et al., 2009).

Additionally, Saudi faculty members' perceptions of e-learning were found by the Almuqayteeb (2009) study to differ on the basis of the years of teaching experience as well as their level of skill in computer technologies. The more experienced faculty members who possessed higher skills in computer technology tended to show the highest positive perceptions of e-learning. This was attributed to their confidence and comfort in using the new technologies (Zhen, et al., 2008).

Apart from that, it is necessary to address such variables as prior experience in the use of the Internet and knowledge of e-learning and blended learning. Researchers argued that a faculty member's ability to use technology was closely related to his/her viewpoints and familiarization with different types of e-learning (Wilson, 2001). In their study, Liaw, Hang, and Chen (2007) hypothesized that those instructors' perceptions of e-learning were strongly dependent upon the "perceived usefulness" of technologies within the e-learning environment (p. 1070). In other words, this means that many faculty members may not be fully aware of the benefits of e-learning, and they tend to underestimate its significance. The findings of other researchers partially confirm this finding (Vankatesh & Davis, 1999). Furthermore, the faculty member's perceptions about e-learning can be influenced by factors such as self-esteem (Liaw et al., 2007). It has been learned that those with lower levels of self-esteem are less inclined to use instructional technologies. Hence, we can conclude that a person's intention to apply e-learning technologies in education depends on how he or she perceives its effectiveness.

Teaching experiences

There are a few studies from the KSA employing demographic variables such as teaching experience to examine faculty perceptions of e-learning technologies. Al-Sarrani (2010) noted in his study that there were no significant data related to the

number of years of teaching experience upon faculty members' perceptions of blended learning. Other studies such as Albalawi (2000) and Almuqayteeb (2009) indicated similar results; specifically, that no statistically significant differences existed between participants with regard to teaching experience variables.

Challenges or Factors Hindering E-learning

Various scholars have documented that there has been an increase in the adoption of e-learning together with other technologies that augment it. However, through the various studies, there are some serious challenges that seem to hinder innovation (Awalt, 2003). These include the following: high cost associated with system installation and maintenance; low levels of computer literacy which frustrate participants; participants' attitudes and perceptions toward e-learning; unwilling behavior with regard to online communications, system failures and power problems; serious issues relating to privacy and security; and increased workload and unwillingness of some institutions to adopt changes. All of these have contributed to mixed reactions among the faculties as to whether or not to adopt the technological innovation that comes with e-learning (Lozano-Nieto, 1998; (Zhen, et al., 2008).

Challenges of E-learning in Saudi Arabia

Despite the numerous advantages of e-learning, there are challenges associated with its adoption. E-learning will require a lot of infrastructure involving the investing of significant sums of money. In addition, there are other challenges that are specific to students, faculty, and administrators (Alsadoon, 2009). For example, a number of students lack the knowledge and skills required in e-learning, as well as the motivation for learning them. The faculty will be faced with additional time commitments, as well as the need for professional support in developing the course contents and evaluation challenges. Additionally, administrators are facing the

challenge of resistance to organizational change posed by the use of e-learning methods (Zhen et al., 2008).

In a research study conducted by Al-Sarrani (2010), differences in the demographic characteristics are cited as a main cause of resistance in Saudi Arabia. Younger faculty members perceived fewer barriers toward e-learning as compared to older faculty members. Other demographic studies registered differences in the perceived objections toward e-learning.

A similar study from the KSA by Al-Sadoon (2009) on the potential of implementing e-learning professional training development found factors that could affect implementation of online training. According to her findings, respondents were skilled in computer use and had basic knowledge in using the Internet. Faculty members' perceptions of e-learning were positive, and they were ready to seek assistance from the administration for support.

The most important barrier toward the implementation of online professional training development was lack of time due to individual workloads (Al-Sadoon, 2009; Al-balawi, 2000). Research conducted by Al- Mothana (2009) on faculty attitudes toward internet-based distance education revealed that the underlying challenges were availability of Internet and computer access. Available time was also reported as a major challenge toward adopting Internet-based distance learning. Although there were some barriers and challenges, the faculty had a positive attitude toward the approach (Alajmi, 2010; Al-balawi, 2000).

The challenges associated with this new style of teaching and technology does not mean that the risks associated with this system should be ignored. The advantages of e-learning have to be reaped by meeting the associated dangers and by taking full advantage of available technology. The dangers and risks should be met with

conscious action so that they are minimized, and people can take advantage of the new e-learning technology. Faculty perceptions have become crucial for e-learning, and if faculty members wish to make a positive impact they must demonstrate concern regarding several issues. According to Cardwell-Hampton (2008), it has become very important to adopt e-learning as a meaningful option for teaching because of changes in philosophical concepts through which educators are now viewed. They no longer are considered distributors of educational content, but as facilitators of learning (Alajmi, 2010).

Summary of Literature Review

The review of the literature with regard to e-learning in higher education revealed that there is a close relationship with this research and will be a supporting framework of this study. Most of the literature elaborates on what e-learning or distance learning is, what constitutes traditional learning, and what constitutes a mixture of distance learning and traditional learning, which is termed blended learning. The materials also have provided information on how advantageous these new e-learning techniques can be. Additionally, the major drawbacks associated with the implementation of e-learning were also discussed. Finally, the issue of demographic variables such as age, gender, level of education, and computer skills, among other factors, have been elaborated on as to their effect on faculty members' perceptions of e-learning.

In considering the various results obtained from a variety of studies, it can be concluded that most faculty members have commonly held perceptions relative to embracing e-learning within the KSA universities (Alajmi, 2010; Abdulkarim, 2007; Almohaisen, 2007). Thus, it is evident that the studies indicated that faculty members perceive e-learning positively, irrespective of their age, gender, experience and level

of education. This is mainly because of the belief that e-learning promises greater benefits to both students and faculty members (Jamlan, 2004). These findings repeated the results of earlier studies by Almuqayteeb (2009), Minton (2000), and Al-balawi (2000). Nonetheless, despite these positive findings, there also exists some reservations toward e-learning that have been identified through several studies which reveal concerns that e-learning systems will require an increase in the numbers of both faculty and students in order to make e-learning economically feasible.

CHAPTER THREE

METHODOLOGY

This chapter describes the methodology employed in this study. The major purpose of the study was to investigate faculty members' perceptions of e-learning in the Kingdom of Saudi Arabia (KSA). The study employed quantitative research to answer the research questions. Gay, Mills, Geoffrey, and Airasian (2006) referred to descriptive studies as: "practical for investigating a variety of educational problems, and concerned with measuring perceptions, opinions, demographics and procedures" (p. 277). The researcher used descriptive and one-way multivariate analyses of variance (MANOVA) statistics to describe Saudi faculty members' perceptions of e-learning.

Population

The target population for this study was the faculty members employed at two universities in the KSA. The universities selected were Northern Borders University (NBU), and Al Jouf University (AJU) in the KSA. There were 500 faculty members at NBU and 600 faculty members at AJU. Two reasons for choosing faculty members from NBU and AJU were (a) no studies of faculty members' perceptions of e-learning had been conducted at these universities, and (b) the researcher had a contact person in each university, so this helped to increase the participants' response rates (Gasaymeh, 2009).

Sampling

Random sampling was the best way to obtain a representative sample of the population (Gay et al., 2008). This allowed the researcher to make inferences about faculty members from all AJU and NBU colleges. The faculty's email addresses were found on the NBU and AJU's web site. The population consisted of both males and

females of NBU and of AJU. A simple random sampling technique was employed so that all members of the AJU and NBU faculty had an equal and independent chance of being selected (Gay et al., 2006). A simple random sample "is the most rigorous form of a probability sample" (Creswell 2008, p. 153).

A list consisting of all members of the faculty was prepared and each faculty member was assigned a number from 0000 to 1099. A table of random numbers was used to select the sample. Mason and Lind (1996) indicated that in order to use the table of random numbers to select a sample, there must be a starting point. Therefore, the researcher chose an arbitrary number, with eyes closed, from the table. If the last four digits of the number that was chosen corresponded to a number assigned to a faculty member, then that faculty member was included in the sample. Numbers outside of the range 0000 to 1099 were ignored, and therefore, did not form part of the sample. This procedure was followed in succeeding columns until the desired number of faculty members was selected.

Five hundred and fifty faculty members (50% of the population) were randomly selected from this population (NBU and ALU) for voluntary participation in this study. In the study, 442 (80%) faculty members responded to the survey, and the researcher discarded 32 questionnaires that were incomplete because they had major parts of the survey missing. Consequently, 410 (75%) faculty members responded to the survey in this study.

Instruments

A survey questionnaire was used in this study to collect the data (see Appendix A). The questionnaire included four main sections: (a) demographic information (questions 1-8 of Appendix A), (b) experience with computers and e-learning software (questions 9-16 of Appendix A), (c) faculty members' perceptions

of e-learning scale (questions 17-33 of Appendix A), and (d) perceptions of faculty of e-learning challenges facing Saudi universities scale (questions 34-44 of Appendix A).

Demographic information

This section consisted of personal information, such as age, gender, education level, nationality, and faculty teaching experience (questions 1-8 of Appendix A).

Experience with Computer and E-learning Software

This section of the questionnaire consisted of questions 9-16 and was developed by Liaw, Huang, and Chen (2007). It was designed to identify the major experience with computer and e-learning software of faculty members (Table 3.1). This scale contained eight items designed to measure faculty members' technology and computer experience (Liaw et al., 2007). The items covered teaching with computers, Internet use, e-mail use, and e-learning experience. It used a five-point response scale for each answer. The following are the numbers used : 1 = no experience, 5= high-level experience (Liaw et al., 2007; Yidana, 2007).

Table 3. 1. Scale 2: Experience with Computer and E-learning Software

Q	Survey Items 9-16
9	using operating systems (e.g., Windows XP, Windows 7, Mac OSX, Linux)
10	using the Internet (World Wide Web, WWW)
11	using word processing packages (e.g. Microsoft Word, WordPerfect)
12	using presentation software (e.g. PowerPoint)
13	using e-learning course management system for e-learning (e.g., WebCT, BlackBoard or Moodle)
14	using video conferencing tools (e.g., Skype, Adobe Connect)
15	using online chat programs (e.g. Yahoo chat, AOL chat, Facebook chat)
16	I have the necessary experience to teach via e-learning

Note: Q = Question number

Faculty Members' Perceptions of E-learning

This section of the questionnaire was developed by Liaw et al. (2007), and Liaw, S. S. (2008). It was designed to measure instructors' perceptions of e-learning (see Table 3.2). This part was modified by updating some statements (see final modified questions 17-33 of Table 3. 2, and Liaw et al.,2007, Survey, Appendix F). This scale included 19 items. It consisted of six subscales: (1) perceived self-efficacy (items 17-19); (2) perceived enjoyment (items 20-22); (3) perceived usefulness (items 23-25); (4) behavioral intention to use

e-learning (items 26-28); (5) perceived system satisfaction (items 29-31); (6) multimedia instruction (items 32-34). The instrument used a five-point Likert response scale for each response. The following are the numbers used: Strongly agree = 5, Agree = 4, Uncertain = 3, Disagree = 2, Strongly Disagree = 1.

Table 3. 2. Scale 3: Faculty Members' Perceptions of E-Learning Including Subscale Items

No.	Subscale Items from 17 to 33)
	Perceived self-efficacy
17	I feel confident that I can develop an effective e-learning course.
18	I feel confident that I can teach a successful e-learning course.
19	I feel confident using e-learning course-management tools (e.g., BlackBoard, WebCT)
	Perceived enjoyment
20	I enjoy using computers in my teaching.
21	I enjoy teaching e-learning courses
22	I enjoy developing e-learning courses
	Perceived usefulness
23	E-learning is an effective medium for learning
24	I can teach effectively through e-learning.
25	I can communicate efficiently through e-learning

Table 3.2.Continued

	Behavioral intention to use e-learning
26	I intend to teach e-learning courses when I am given the opportunity.
27	I intend to use the Internet in my future teaching assignments
28	I intend to use e-learning tools in my future teaching assignments
	Perceived e-learning technology tools satisfaction
29	I am satisfied with using e-learning tools (e.g., BlackBoard, WebCT) in my teaching
30	I am satisfied with developing my own e-learning courses.
31	I am satisfied with using computers in my teaching.
	Multimedia instruction
32	I like to use voice media instruction
33	I like to use image media instruction
34	I like to use animation media instruction

Note: No= Question number

Faculty Perceptions of E-learning Challenges Facing Saudi Universities

This section was adapted from Alajmi (2010), and it was designed to identify e-learning challenges facing faculty members in KSA universities. This part was slightly modified by adding and updating some statements (see Alajmi (2010)'s questionnaire and final modified in Appendix A). The title was changed from *Barriers to Faculty with Teaching E-learning* to *Faculty Perceptions of E-learning Challenges Facing Saudi Universities.* The section consisted of a list of obstructions and challenges facing faculty in the universities in the KSA when using e-learning. This section consisted of 11 items, and used a Likert–type, five- point scale: Strongly Agree = 5, Agree = 4, Uncertain = 3, Disagree = 2, Strongly Disagree = 1 (See Table 3.3).

Table 3.3. Scale 4: Faculty Perceptions of E-learning Challenges Facing Saudi Universities.

Q	Statements
35	Faculty members have time for e-learning training.
36	Administrative support for e-learning is strong at my college/department.
37	My college/department has adequate financial resources to develop technology-based initiatives.
38	Faculty members must spend extra time to create e-learning courses.
39	Faculty members have access to hardware essential for teaching e-learning courses.
40	Faculty members must spend extra time responding to students' inquiries in an e-learning course.
41	Faculty members have access to software essential for teaching e-learning courses.
42	Faculty members in my department/college think that e-learning is effective.
43	Faculty members in my department/college have time to adopt e-learning.
44	Faculty members in my department/college believe it is easy to manage an e-learning course.

Note. Q = Questions Number of the questionnaire

Validity and Reliability

In their definition, Gay et al. (2008) stated that, "validity is the degree to which a test measures what it is supposed to measure" (p. 46). The second section of the questionnaire was designed to measure instructors' perceptions of the e-learning scale that was developed by Liaw et al. (2007). To understand how this scale works, the researcher looked at the reliability of the questionnaire in light of the Cronbach's Alpha scale. The reliability of the e-learning scale was 0.95 (on a scale from zero to one). This high number indicated a high reliability, which in turn gave support for the

reliability of the questionnaire content (Liaw et al., 2007, p. 1072). In addition, the correlation coefficient showed a significant relation between the independent and the dependent variables (Liaw et al, 2007), and therefore was acceptable for this study.

The third section of this survey was adapted to Alajmi (2010). He reported that Cronbach's alpha for this part was 0.89, which was acceptable for this study (Alajmi, 2010). The title of the instrument was changed from *Barriers to Faculty with Teaching E-learning* to *Perceptions of Faculty toward E-learning Challenges Facing Saudi Universities.* The section consisted of the obstructions and challenges facing faculty in the universities in the KSA. To provide evidence that the instrument produced the data for which it was designed, a reliability test was conducted (Awalt, 2003; Al-balawi, 2000).

In this study, a correlation matrix for six subscales of perception was used. Ranges for the highest and lowest correlations in each subscale are the following: *self-efficacy,* (.671 to .923), *enjoyment* (.702 to .896), *perceived usefulness* (.617 to .991), behavioral *intention* (.597 to .977), *system satisfaction* **(**.651 to .815), and *multimedia instruction* (.558 to .786). From these data, significant statically a positive relationship between subscales items /questions is observed.

The validity of the questionnaire was assessed by an expert panel including the chair of the dissertation committee and committee members (See Appendix D). The survey was submitted to the dissertation committee chair for face validity evaluation. Based on the chair's suggestions, several items were revised and the survey was then sent to the other committee members, and they reviewed it several times. Both face and content validity were evaluated and some English language changes were made, in which some statements were rewritten. The expert panel approved the survey instrument. The suggested changes were made, and the new draft was again assessed

by all parties with the dissertation committee members as well as by the expert panel. Both content and face validity of the survey were accepted as being adequate.

Translation of the Survey from English to Arabic

The survey instrument was translated from English to Arabic because the participants of the study were native speakers of the Arabic language. In order to confirm the accuracy of the translation, the Arabic version of the questionnaire was reviewed by a professor who is both a native Arabic speaker and a faculty member in a U.S. university (Alajmi, 2010; Alsadoon, 2009; Al-Sarrani, 2010). It should be noted that part three of the questionnaire for this study, *Faculty Members' Perceptions of E-learning Challenges Facing Saudi Universities* had been already translated for two studies, (Alajmi, 2010 and Abu Qudais et al. 2010).

Independent Variables

The independent variables for the study are (a) gender, (b) age, (c) education level, (e) nationality, and (d) teaching experience.

Dependent Variables

Faculty members' perceptions toward e-learning in the KSA consisted of six subscales: (a) perceived self-efficacy, (b) perceived enjoyment, (c) perceived usefulness, (d) behavioral intention to use e-learning, (e) perceived system satisfaction, and (f) multimedia instruction. In addition, perceptions of faculty members toward e-learning challenges facing Saudi universities were measured.

Data Collection Procedures

As mentioned, the researcher used a survey questionnaire to collect the data for this study. The respondents completed the questionnaire on their own to ensure that their privacy was not breached and that confidentiality was maintained (Creswell, 2008).

To further enhance confidentiality and privacy, the respondents were not required to include their names in the completed questionnaire. The survey questionnaire was distributed during the fall semester of the 2011 academic year in the KSA.

As stated, participants were selected by random sampling from two universities in the KSA: Northern Borders University (NBU) and Al Jouf University (AJU). Northern Borders University consists of 12 colleges and two separate campuses, one for women and another for men. Seven of the colleges are located in Arar, three in Rafha and two in Turayf (NBU, 2011). A list of colleges is provided in Appendix A. NBU had 500 faculty members in academic year 2009. Al Jouf University was established in 2005. The university enrollment was approximately16, 000 students with 600 faculty members and instructors. The university consists of 10 colleges (Appendix D). As noted, the Kingdom of Saudi Arabia education systems have separate schools based on gender.

After receiving permission from the IRB of Texas Tech University (TTU), NBU, and AJU to conduct the study at their universities (see Appendix A), a list of faculty members was created from public records from the universities' websites. This information was publicly available for anyone to be able to access from both NBU and AJU. From these lists, 550 faculty members were randomly selected for participation in the study from the NBU and AJU. E-mail invitations (see Appendix A) were then sent to all 550 potential participants. The email invitation included a link for an online survey for the participants, and they were instructed to follow the link to the online survey. In addition, the researcher personally contacted each department secretary to deliver hard copies of the survey in a secure envelope. They were instructed to place a hard copy in the mailbox of any faculty member who

preferred to respond that way. According to policies established for all universities in the KSA, only department secretaries are able to contact faculty members. Therefore, the researcher had to convey all participant information through the department secretary. For those who prefered to answer the survey by hard copy, the introductory letter provided instructions to return the survey to their department secretary's office in a secure envelope with no personal information on it. The survey could be completed in approximately 10-15 minutes.

In order to increase the response rate of participants, in the second week an e-mail reminder was sent (see Appendix B) along with a hyperlink of the online survey to all participants (Creswell, 2008). In the third week, a final e-mail reminder (see Appendix C) along with a hyperlink to the online survey was sent to the participants. It was expected that most of the participants would answer the online survey.

There were no foreseeable risks associated with participation in this study. The participants could skip any questions and they could quit anytime by closing the browser of the online survey software. No identifying information was collected from the participants. There was no compensation for participation in this study. Participants were informed that they could opt out of the study at any time without adverse consequences.

Data Analysis

Descriptive statistics of the responses from faculty members consisted of frequencies, means, medians and comparison of means and medians for describing the demographic variables, technology and computer experience, as well as faculty members' perceptions toward challenges and obstructions facing faculty members in

the implemention of e-learning at KSA universities (Creswell, 2008; Gay et al., 2006). Also, descriptive statistics were used to answer questions 1 and 3.

One-way multivariate analyses of variance (MANOVA) statistic was used for question 2 and also tested whether a significant difference existed based upon the demographic characteristics (gender, age, education level, and teaching experience), and corresponding univariate ANOVA results for each of the demographic variables (Al-Sarrani, 2010; Gay et al., 2006; Hongbo, 2006). In addition, Post hoc comparisons using Tukey HSD test was used when more than two levels of an independent variable were analyzed (Warner, 2008).

CHAPTER FOUR

THE RESULTS OF THE STUDY

The purpose of this study was to investigate faculty members' perceptions of e-learning in higher education in the KSA and the factors influencing their perceptions. Also, this study identified faculty members' technology and computer experience. In addition, it examined differences in perceptions among faculty members based upon age, gender, education level and teaching experience. Finally, this research explored the major challenges and obstructions facing the implementation of e-learning by faculty members in the KSA.

The findings of this study are presented in four sections. The first section offers demographic information about the participants, including aggregate data about their computer and e-learning experiences. The second section addresses research question one by presenting KSA faculty members' perceptions of e-learning in higher education. The third section addresses research question two by presenting the differences in faculty members' perceptions of e-learning based upon specific demographic characteristics (i.e., gender, age, education level, nationality and teaching experience). The last section addresses third research question by reporting the challenges and obstructions face by KSA faculty members in the implementation of e-learning in higher education.

Demographic Information and Computer e-Learning Software Experience

Table 4.1 presents a summary of the demographic profile of the respondents for this study (n = 410). The majority of the respondents were male, n = 239 (58.3%). The ages and years of teaching experience of the respondents clustered towards the middle, at 33 to 38 years (n = 139, 33.9%), and 6 to 10 years (n = 170, 41.5%), respectively. The majority of the respondents held a Doctoral degree, (n = 234,

57.1%), were of non-Saudi nationality, (n = 274, 66.8%). The majority of the respondents mainly used classroom based teaching, n = 410, 100%).

Table 4.1. Frequencies and Percentages for Demographic Variables of Respondents(n=410**)**

Variables	N	%
Gender		
Male	239	58.3
Female	171	41.7
Age		
< 26	24	5.9
27 – 32	103	25.1
33 – 38	139	33.9
39 – 44	109	26.6
45 or more	35	8.5
Educational level		
Doctoral	234	57.1
Masters	108	26.3
Bachelors	68	16.6
Nationality		
Non Saudi	274	66.8
Saudi	136	33.2
Teaching experience		
1 – 5 years	44	10.7
6 – 10 years	170	41.5
11 – 15 years	159	38.8
16 + years	37	9.0
Class(es) Currently Teaching [a]		
E-learning	24	5.9
Classroom - Based Learning	410	100.0
Blended learning	35	8.5

[a] Refers to the instructional format (s) of the respondents' current teaching assignments. The frequencies exceed the number of respondents (n = 410) because some respondents were currently teaching more than one class through different instructional formats.

Table 4.2 shows the means and standard deviations for faculty experience with computer and e-learning software. As shown in the table, the means ranged from 4.01

to 2.95, with an overall mean of 3.41. This indicates that the faculty members' perceived their overall experience with computer and e-learning software as slightly above average. The faculty members reported more experience with PowerPoint (M = 4.01), the Internet (M = 3.99), and word processing software (M = 3.92), than with course management (M = 2.95), conferencing (M = 2.96), and chat (M = 2.96) software. This indicates that faculty perceived themselves as more adapt with general-purpose software than with software more typically associated with e-learning.

Table 4.2. Means and Standard Deviations for Faculty Experience with Computer and E-Learning Software (n = 410)

N	Statements Questions 9- 16	Mean	SD
9	Experience using operating systems (e.g., Windows XP, Windows, 7, Mac OSX, Linux)	3.49	0.52
10	Experience using the Internet (World Wide Web, WWW)	3.99	0.16
11	Experience using word processing packages (e.g. Microsoft Word, WordPerfect)	3.92	0.35
12	Experience using presentation software (e.g. PowerPoint)	4.01	0.09
13	Experience using e-learning course management system for EL (e.g., WebCT, BlackBoard or Moodle)	2.95	0.46
14	Experience using video conferencing tools (e.g., Skype, Adobe Connect)	2.96	0.42
15	Experience using online chat programs (e.g. Yahoo chat, AOL chat, Facebook chat)	2.96	0.52
16	I have the necessary experience to teach via e-learning	3.08	0.51
	Overall Computer and E-learning Experience	3.41	0.20

Note. The scale was: 1= no experience to 5 = highly experienced.

Research Question #1: What are faculty members' perceptions of e-learning in KSA higher education?

Table 4.3 shows the means and standard deviations for the five e-learning perceptual constructs used in this study. The table indicates that the overall perception scores of the research respondents were positive of e-learning, (M = 4.17, SD = .52).

Table 4.3. Means and Standard Deviations for Faculty Members' Perception of E-Learning

	Questions Statements	Mean	SD
	Perceived self-efficacy	**4.06**	**0.80**
17	I feel confident that I can develop an effective e-learning course.	4.17	0.69
18	I feel confident that I can teach a successful e-learning course.	4.09	0.86
19	I feel confident using e-learning course-management tools (e.g., BlackBoard, WebCT)	3.92	1.19
	Perceived enjoyment	**4.22**	**0.71**
20	I enjoy using computers in my teaching.	4.42	0.64
21	I enjoy teaching e-learning courses.	4.25	0.92
22	I enjoy developing e-learning courses.	4.00	0.91
	Perceived usefulness	**4.40**	**0.65**
23	E-learning is an effective medium for learning.	4.42	0.76
24	I can teach effectively through e-learning.	4.33	0.75
25	I can communicate efficiently through e-learning	4.43	0.80
	Behavioral intention to use e-learning	**4.37**	**0.66**
26	I intend to teach e-learning courses when I am given the opportunity.	4.45	0.70
27	I intend to use the Internet in my future teaching assignments.	4.42	0.79
28	I intend to use e-learning tools in my future teaching assignments.	4.22	0.80
	Perceived system satisfaction	**3.94**	**0.80**
29	I am satisfied with using e-learning tools (e.g., BlackBoard, WebCT) in my teaching.	3.83	0.90
30	I am satisfied with developing my own e-learning courses.	3.92	0.96
31	I am satisfied with using computers in my teaching.	4.08	0.86
	Multimedia instructions	**4.02**	**0.92**
32	I like to use voice media instruction	3.91	0.96
33	I like to use image media instruction	4.33	0.86
34	I like to use animation media instruction	3.83	1.22
	Overall perception towards e-learning	**4.17**	**0.52**

Note. The scale was: Strongly Disagree = 1, Disagree = 2, Uncertain = 3, Agree = 4, Strongly Agree=5

As shown in Table 4.3, the means ranged from 4.45 to 3.91. An examination of each of the six subscales, perceived self-efficacy (M = 4.06, SD = 0.80), perceived

enjoyment (M = 4.22, SD = 0.71), perceived usefulness (M = 4.40, SD = 0.65), behavioral intention to use e-learning (M = 4.37, SD = 0.66), perceived system satisfaction (M = 3.94, SD = 0.80), and multimedia instruction (M = 4.02, SD = 0.92). This indicates that faculty members overall perceptions ranged from agreement to approaching strong agreement of e-learning in KSA higher education.

Items showing highest agreement were "I can communicate efficiently through e-learning"(M = 4.43, SD = 0.80), "I enjoy using computers in my teaching"(M = 4.42, SD = 0.64), "e-learning is an effective medium for learning"(M = 4.42, SD = 0.76) and "I intend to teach e-learning courses when I am given the opportunity"(M = 4.45, SD = 0.70).This indicates that faculty members enjoy the instructional use of computers and feel that e-learning technologies are effective teaching tools that they want to continue to use in their teaching. However, the item with the lowest mean was "I like to use voice media instruction" (M = 3.91, SD = 0.96).This indicates that faculty members may be more comfortable with text-based instructional media.

Research Question 2: Are there statistically significant differences in faculty members' perceptions of e-learning based on demographic characteristics?

Five separate one-way multivariate analyses of variances (MANOVAs) were conducted to test for significant differences between each of the demographic variables (i.e. gender, age, educational level, nationality, and teaching experience) and the six perceptions of e-learning variables (self-efficacy, enjoyment, usefulness, behavioral intention, system satisfaction, and use of multimedia). All five MANOVAs were statistically significant with alpha at .05. The following sections report the results of the MANOVAs, and corresponding univariate ANOVA results, for each of the demographic variables. In addition, Post hoc comparisons using

Tukey HSD test was used when more than two levels of an independent variable were analyzed (Warner, 2008).

Gender

Mean scores and standard deviations for gender are displayed in Table 4.4. Higher mean scores indicate stronger agreement with the survey statements

Table 4.4. Means and Standard Deviations for Survey Subscales by Gender

Survey Subscale	Gender	Mean	SD
Perceived self-efficacy	Females	4.46	0.63
	Males	3.77	0.41
Perceived enjoyment	Females	4.60	0.65
	Males	3.95	0.42
Perceived usefulness	Females	4.37	0.52
	Males	4.25	0.51
Behavioral to use EL	Females	4.44	0.62
	Males	4.36	0.67
System satisfaction	Females	4.69	0.34
	Males	4.13	0.73
Multi-media instruction	Females	4.26	0.49
	Males	3.71	0.90

Note. (n = 410, M = 239, F = 171).

One-way MANOVA revealed a significant multivariate effect for gender, Wilks' Lambda = .43, $F(6,403) = 90.83$, $p < .05$, $\eta_p^2 = .830$. These results show that the participants' perceptions of e-learning were influenced by their gender.

Univariate ANOVA tests for gender on the six perceptions of e-learning variables are reported in Table 4.5. To account for the possibility of inflated statistical error, an alpha of .01 was used for the univariate analysis using the Bonferroni inequality (Stevens, 1992).

Table 4.5. Univariate Results for Gender on the Perceptions of E-Learning Survey Subscale (n= 410)

Source	Survey Subscale	Type III Sum of Squares	Df	MS	F	Sig.
Gender	Perceived self-efficacy	65.43	1	9.34	109.78	< .01
	Perceived enjoyment	64.62	1	10.77	123.08	< .01
	Perceived usefulness	51.95	1	51.95	73.10	< .01
	Behavioral to use EL	35.19	1	35.19	24.17	< .01
	System satisfaction	30.36	1	30.36	52.98	< .01
	Multimedia instructions	28.09	1	28.09	35.71	< .01

ANOVA showed that females (M = 4.46) indicated significantly more agreement than males with survey statements pertaining to *self-efficacy*, (females M = 4.46 vs. males 3.77), $F(1,409) = 109.78$, $p < .01$, $\eta_p^2 = .656$, *enjoyment* (females, M = 4.60 vs. males, M = 3.95), $F(1,409) = 123.08$, $p < .01$, $\eta_p^2 = .550$, *perceived usefulness* (females, M = 4.37 vs. males, M = 4.25), $F(1,409) = 73.10$, $p < .01$, $\eta_p^2 = .514$, *behavioral intention* (females, M = 4.44 vs. males, M = 4.36), $F(1.409) = 24.17$, $p < .01$, $\eta_p^2 = .312$, *system satisfaction* (females, M = 4.69, vs. males, M = 4.13), $F(1.409) = 52.98$, $p < .01$, $\eta_p^2 = .347$, and *multimedia instruction* (females, M = 4.26 vs. males, M = 3.71), $F(1.409) = 35.71$, $p < .01$, $\eta_p^2 = .265$.

These findings indicate that female faculty in the current study perceived themselves as more confident, more apt to use, and more satisfied with e-learning than did male faculty in this study. Females also expressed more enjoyment with e-learning as well as more favorable attitudes toward multimedia instruction. However, males and females did not differ in their perceptions of usefulness of e-learning.

Age

Mean scores and standard deviations for age are displayed in Table 4.6.

Table 4.6. Means and Standard Deviations for Subscale Perceptions by Age

Subscale	**Age**	**N**	**Mean**	**SD**
Perceived self-efficacy				
	< 26	34	4.33*	0.29
	27-32	103	4.32	0.55
	33-38	136	4.16	0.87
	39-44	118	4.05	0 .89
	> 45	19	3.21*	0.40
Perceived enjoyment				
	< 26	34	4.67*	0.62
	27- 32	103	4.44	0.78
	33-38	136	4.25	0.76
	39-44	118	4.13	0.52
	>45	19	3.77*	0.67
Perceived usefulness				
	< 26	34	4.30	0.17
	27-32	103	4.31*	0.71
	33-38	136	4.23	0.82
	39-44	118	4.65*	0.34
	>45	19	4.61	0.33
Behavioural to use EL				
	< 26	34	4.57*	0.32
	27-32	103	4.67	0.37
	33-38	136	4.27	0.65
	39-44	118	4.20	0.79
	>45	19	4.10	0.87

Table 4.6. Continued

System Satisfaction				
	< 26	34	4.00	0.33
	27-32	103	4.22	0.57
	33-38	136	4.33*	0.53
	39-44	118	4.21	0.90
	>45	19	3.45*	1.02
Multi-media instruction				
	< 26	34	3.97*	0.43
	27-32	103	4.44	0.41
	33-38	136	4.66*	0.42
	39-44	118	4.17	0.99
	> 45	19	3.68*	0.47

Note. (n= 410).
* $p < .01$.

One–way MANOVA revealed a significant multivariate effect for age, Wilk's = .609, F (8, 808) = 28.395, $p < .05$, $\eta_p^2 = .219$. These results show that the participants' perceptions of e-learning were influenced by their age.

Univariate tests for age on the six perceptions of e-learning variables are reported in Table 4.7. To account for the possibility of inflated statistical error, an alpha of .01 was used for the univariate analysis using the Bonferroni inequality (Stevens, 1992). Table 4.7 shows that the participants' perceptions of e-learning were influenced by their age for each of the six subscales.

Table 4.7. Univariate Results for Age on the Perceptions of E-Learning Survey

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.
Age	Self-efficacy	36.366	4	9.091	16.159	<.01
	Enjoyment	25.363	4	6.341	14.124	<.01
	Usefulness	13.437	4	3.359	8.482	<.01
	Behavioral to use EL	16.095	4	4.024	9.988	<.01
	System satisfaction	80.229	4	20.057	44.166	<.01
	Multimedia instruction	187.794	4	46.948	117.931	< .01

Note. (n = 410).

ANOVA results and Post hoc analysis for each of the perceptions of e-learning subscales are reported below.

Perceived self-efficacy. ANOVA showed that perceived self-efficacy was significantly influenced by the age of the respondent, $F(4, 405) = 16.159$, $p < .01$, $\eta_p^2 = .138$. Post hoc comparisons using Tukey HSD tests indicated that faculty members less than 39 years of age reported significantly higher self-efficacy of e-learning (< 26, M = 4.33, 27-32, M = 4.32, 33-38, M = 4.16) than older faculty members (39-44, M = 4.05, and > 45, M = 3.21). Comparison using Tukey HSD tests further underscores the statistical relationship that exist among the age groups in relation to their perceived self efficacy. This also shows that younger faculty members under 45 have higher means scores than older faculty members who over 45 on self-efficacy.

Perceived enjoyment. ANOVA showed that age had significant influence on perceived enjoyment scores $F(4, 405) = 14.124$, $p < .01$, $\eta_p^2 = .122$. Post hoc comparisons using Tukey HSD tests indicated that faculty members less than 26 and 27-32 years of age reported significantly higher enjoyment of e-learning (< 26, M = 4.67; 27- 32, M = 4.44) than older faculty members (33-38, M = 4.25; 39-44, M =

4.13, > 45, M = 3.77). This shows that perceived enjoyment scores decreased as age faculty members' age increased.

Perceived usefulness. ANOVA showed that age had significant effect on perceived usefulness $F(4, 405) = 8.482$, $p < .01$, $\eta_p^2 = .077$. Comparing results in Tukey HSD tests, faculty members aged less than 38 years had statistically significantly lower scores for perceived usefulness (< 26, M = 4.30) compared to the group aged 39-44 (M = 4.65) but compared with other age groups, no statistical relationship exists. This shows that younger faculty members have higher mean scores on perceived usefulness than older faculty members.

Behavioral intention to use e-learning. ANOVA showed that age had significant effect on behavioral intention to use e-learning, $F(4, 405) = 9.988$, $p < .01$, $\eta_p^2 = .090$). Post hoc comparisons using Tukey HSD tests indicated that scores were statistically significantly higher for faculty members aged < 26, M = 4.57 compared to those aged 39-44, M = 4.20. There was also a significant difference in mean scores for those aged 27-32 (M = 4.67) and those aged (33-38, M = 4.27, 39-44, M = 4.20), however, no statistical relationship was found to exist when age 27-32 was compared to < 26 and 45 and more.

Perceived system satisfaction. ANOVA showed that age had a significant influence on perceived system satisfaction $F(3, 406) = 44.166$, $p < .01$, $\eta_p^2 = .102$. Tukey HSD tests indicated that faculty members below 45 years (< 26, M = 4.00, 27-32, M = 4.22, 33-38, M = 4.33, and 39-44, M = 4.21) had significantly higher scores compared to those people aged over 45 years (> 45 years, M = 3.45). This shows that younger faculty members under 45 years recorded higher scores on perceived system satisfaction.

Multimedia instruction. ANOVA showed that age had a significant effect on the mean difference on multimedia instruction scores $F(4, 405) = 117.931$, $p < .01$, $\eta_p^2 = .538$. Tukey HSD tests indicated that faculty aged between 27-32 and 39-44 years had statistically significantly different scores among themselves ($p < .01$), while those aged more or over 45 years had significantly different scores with all the age groups except those aged below 26 years ($p < .01$), (< 26, M = 3.67, 27-32, M = 4.44, 33-38, M = 4.66, 39-44, M = 4.17). This shows that faculty members within the age group of 27 and 44 have higher scores on multimedia instruction than faculty members < 26 years and 45 > and greater.

Educational Level (qualification)

Descriptive statistics giving the mean and standard deviation for the subscales with educational level are presented in Table 4.8.

Table 4.8. Means and Standard Deviations for Subscale Perceptions by Educational Level

Survey Subscale	Edu. Level	N	Mean	SD
Perceived self-efficacy	Doctoral	234	3.78*	0.85
	Master	108	4.28	0.60
	Bachelor	68	4.67*	0.34
Perceived enjoyment	Doctoral	234	3.95*	0.63
	Master	108	4.43	0.78
	Bachelor	68	4.83*	0.16
Perceived usefulness	Doctoral	234	4.38	0.66
	Master	108	4.28*	0.73
	Bachelor	68	4.64*	0.36
Behavioral to use EL	Doctoral	234	4.14*	0.73
	Master	108	4.62	0.43
	Bachelor	68	4.73*	0.34
System satisfaction	Doctoral	234	3.66*	0.84
	Master	108	4.19	0.59
	Bachelor	68	4.50*	0.50
Multi-media instruction	Doctoral	234	3.75*	1.05
	Master	108	4.42*	0.43
	Bachelor	68	4.33	0.67

Note. (n= 410). * $p <. 01$.

One – way MANOVA revealed a significant multivariate effect for educational level, Wilks' Lambda = 0.42, $F(12, 802) = 36.902$, $p < .01$, $\eta_p^2 = .355$. These results show that the participants' perceptions of e-learning were influenced by their educational level.

Univariate tests for educational level on the six perceptions of e-learning variables are reported to Table 4.9. To account for the possibility of inflated statistical error, an alpha of .01 was used for the univariate analysis using the Bonferroni inequality (Stevens, 1992). Table 4.9 shows that their educational level influenced the participants' perceptions of e-learning.

Table 4.9. Univariate Test for Educational Level on the Perceptions of E-Learning Survey

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Edu. Level	Perceived self-efficacy	49.118	2	24.559	46.467	<.01
	Perceived enjoyment	47.474	2	23.737	60.495	<.01
	Perceived usefulness	45.632	2	22.816	6.814	<.01
	Behavioral to use EL	27.470	2	13.735	36.829	<.01
	System satisfaction	46.349	2	23.175	43.306	<.01
	Multimedia instruction	40.816	2	20.408	26.950	<.01

ANOVA results and Post hoc Tukey HSD analysis for each of the perceptions of EL subscales are reported below.

Perceived self-efficacy. ANOVA showed that perceived self-efficacy was significantly influenced by the educational level of the respondent, $F(2, 407) = 46.467$, $p < .01$, $\eta_p^2 = .186$. Post hoc comparisons using Tukey HSD tests indicated

that faculty members with doctoral qualification had statistically significant low scores for perceived self-efficacy (M = 3.78) when compared to those with masters qualifications (M = 4.28) and those with bachelor's degree (M = 4.67). In addition, those with masters had statistically significant low scores for self-efficacy when compared with those with a bachelor's degree. This shows that scores for perceived self-efficacy reduced with increase in qualification.

Perceived enjoyment. ANOVA showed that perceived enjoyment was significantly influenced by the educational level of the respondent, $F(2, 407) = 60.495$, $p < .01$, $\eta_p^2 = .229$. Post hoc comparisons using Tukey HSD tests indicated that faculty with a doctoral qualification had statistically significant low scores (M = 3.95) when compared to those with masters qualifications (M = 4.43) and those with a bachelor's degree (M = 4.83). In addition, those with masters had statistically significant low scores for perceived enjoyment when compared with those with a bachelor's degree. Therefore, scores for perceived enjoyment reduced with increases in qualification.

Perceived usefulness. ANOVA showed that perceived usefulness was significantly influenced by the educational level of the respondent, $F(2, 407) = 6.814$, $p < .01$, $\eta_p^2 = .032$. Post hoc comparisons using Tukey HSD tests showed that faculty members with doctoral qualifications did not differ significantly (M = 4.38) with people with masters qualifications (M = 4.28), but had statistically significant low scores when compared with those with a bachelor's degree (M = 4.64). In addition, faculty members with a masters had statistically significant lower scores compared to those with a bachelor's degree. Perceived usefulness scores were therefore higher for only those with a bachelor's degree.

Behavioral intention to use e-learning. ANOVA showed that perceived behavioral intention to use e-learning was significantly influenced by the educational level of the respondent, $F(2, 407) = 36.829$, $p < .01$, $\eta_p^2 = .153$. Post hoc comparisons using Tukey HSD tests indicated that faculty members with doctoral qualifications had statistically significant low scores (M = 4.14) compared with faculty members with masters qualifications (M = 4.62), and statistically significant low scores when compared with those with a bachelor's qualifications (M = 4.73). Faculty members with masters' qualification however did not differ significantly from those with a bachelor's degree. This means that the scores were the same for master's degree and bachelor's degree members, but lower for doctoral faculty.

System satisfaction. ANOVA showed that perceived system satisfaction was significantly influenced by the educational level of the respondent, $F(2, 407) = 43.306$, $p < .01$, $\eta_p^2 = .175$. Post hoc comparisons using Tukey HSD tests indicated that faculty members with doctoral qualification had statistically significant lower scores (M = 3.66) when compared to those with masters qualifications (M = 4.19) and those with bachelor qualification (M = 4.50). In addition, those with masters had statistically significant lower scores for perceived system satisfaction when compared with those with a bachelor's degree. This means that perceived system satisfaction scores reduced with each increase in educational achievement.

Multimedia instruction. ANOVA showed that perceived multimedia instruction was significantly influenced by the educational level of the respondent, $F(2, 407) = 26.950$, $p < .01$, $\eta_p^2 = .117$. Post hoc comparisons using Tukey HSD tests indicated that faculty members with doctoral qualifications had statistically significant lower scores (M= 3.75) when compared with people with masters

qualifications (M = 4.42), and statistically significant lower scores when compared with those with a bachelor's degree (M = 4.33). Faculty members with masters however did not differ significantly with those with a bachelor's degree. Scores on multimedia instruction therefore were the same for a bachelor's degree and master's degree holders but lower for doctorates.

Nationality

Mean scores and standard deviations for nationality are displayed in Table 4.10.

Table 4.10. Means and Standard Deviations for Subscale by Nationality

Survey Subscale and Nationality	Mean	SD
Perceived self-efficacy		
Non Saudi	4.29	0.63
Saudi	3.58	0.90
Perceived enjoyment		
Non Saudi	4.33	0.47
Saudi	4.17	0.78
Perceived usefulness		
Non Saudi	4.15	0.58
Saudi	4.52	0.72
Behavioral intention to use e-learning		
Non Saudi	4.61	0.49
Saudi	3.88	0.70
Perceived system satisfaction		
Non Saudi	3.94	0.80
Saudi	3.97	0.85
Multimedia instructions		
Non Saudi	4.02	0.92
Saudi	4.05	0.95

Note. (n= 410), non Saudi = 274, and Saudi = 136

One – way MANOVA revealed a significant multivariate effect for nationality, Wilks' Lambda = .43 $F(6,403) = 90.83$, $p < .01$, $\eta_p^2 = .814$. These results

show that the participants' perceptions of e-learning were influenced by their nationality.

Univariate tests for nationality on the six perceptions of e-learning variables are reported in Table 4.11. To account for the possibility of inflated statistical error, an alpha of .01 was used for the univariate analysis using the Bonferroni inequality (Stevens, 1992). Table 4.11 shows that the participants' perceptions of e-learning were influenced by their nationality.

Table 4.11. Univariate Test for Nationality on the Perceptions of E-Learning Survey Subscales

Source	Survey Subscale	Type III Sum of Squares	df	MS	F	Sig.
Nationality	Perceived self-efficacy	65.32	1	9.33	85.19	< .01*
	Perceived enjoyment	57.67	1	57.67	2.97	.322
	Perceived usefulness	11.87	1	11.87	29.90	< .01*
	Behavioral intention to use e-learning	48.38	1	48.38	150.83	< .01*
	System satisfaction	10.53	1	5.25	4.93	.029
	Multimedia	6.80	1	2.75	2.21	.435

Note. (n= 410). * $p < .01$.

Univariate ANOVA showed that non- Saudi faculty indicated significantly more agreement than Saudi faculty with survey statements pertaining to *perceived self-efficacy*, (Non-Saudi M = 4.29 vs. Saudi M = 3.58), $F(1,409) = 85.19$, $p < .01$, $\eta_p^2 = .719$, *perceived usefulness* (non Saudi M = 4.15, vs. Saudi M = 4.52), $F(1,409) = 29.90$, $p < .01$, $\eta_p^2 = .643$, and *behavioral to use EL*, (Non-Saudi, M = 4.61, vs. Saudi , M = 3.88), $F(1,409) = 150.83$, $p < .01$, $\eta_p^2 = .432$. No significant differences found for *perceived enjoyment, system satisfaction and multimedia Instruction.*

These findings indicate that non-Saudi faculty members in the present study perceived themselves as more confident, practice of e-learning, and more satisfied with e-learning than did Saudi. However, Saudi expressed more enjoyment with e-learning as well as more favorable attitudes toward perceived *enjoyment*. Non- Saudi and Saudi did not differ in their perceptions of system satisfaction and multimedia Instruction of e-learning.

Teaching Experience

Mean scores and standard deviations for teaching experience are displayed in Table 4.12.

Table 4.12. Means and Standard Deviations for Subscale by Teaching Experience

Survey Subscale	Mean	SD
Perceived self-efficacy		
1-5 years	4.02	0.76
6-10 years	4.47*	0.71
11-15 years	4.06	0.84
16 > years	3.97*	0.94
Perceived enjoyment		
1-5 years	4.59*	0.71
6-10 years	4.27	0.65
11-15 years	4.13	0.68
16 > years	3.93*	0.64
Perceived usefulness		
1-5 years	4.23	0.73
6-10 years	4.43	0.77
11-15 years	4.51*	0.42
16 > years	4.17*	0.64
Behavioral intention to use e-learning		
1-5 years	4.43	0.66
6-10 years	4.62*	0.65
11-15 years	4.43	0.64
16 > years	4.11*	0.61
Perceived system satisfaction		
1-5 years	4.17	0.73
6-10 years	4.41*	0.77
11-15 years	4.16	0.74
16 > years	3.60*	0.77

Table 4.12. Continued.

Multimedia instructions		
1-5 years	4.16	0.92
6-10 years	4.55*	0.90
11-15 years	3.85	0.95
16 > years	3.45*	0.94

Note. (n= 410). * $p < .01$.

One – way MANOVA revealed a significant multivariate effect for teaching experience, Wilks' Lambda = .785, $F(4, 405) = 17.361$, $p < .05$, $\eta_p^2 = .114$. These results show that the participants' perceptions of e-learning were influenced by their teaching experience.

Univariate ANOVA tests for teaching experiences on the six perceptions of e-learning variables are reported in Table 4.13. To account for the possibility of inflated statistical error, an alpha of .01 was used for the univariate analysis using the Bonferroni inequality (Stevens, 1992). Table 4.13 shows that the participants' perceptions of e-learning were influenced by their teaching experiences.

Table 4.13. Univariate Test for Teaching Experience on the Perceptions of E-Learning Survey Subscales

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Teaching	Perceived self-efficacy	27.387	3	9.129	20.62	< .01*
Exp.	Perceived enjoyment	21.354	3	7.118	11.90	< .01*
	Perceived usefulness	17.748	3	5.916	15.39	< .01*
	Behavioral to use EL	16.295	3	5.432	13.53	< .01*
	System satisfaction	48.424	3	16.141	30.38	< .01*
	Multimedia	54.523	3	18.174	25.06	< .01*

Note. (n=410). *$p < .01$.

ANOVA results and Post hoc analysis for each of the perceptions of e-learning subscales are reported below.

Perceived self-efficacy. ANOVA showed that perceived self-efficacy was significantly influenced by teaching experience of the respondent, $F(3, 406) = 20.62$, $p < .01$, $\eta_p^2 = .081$. Post hoc comparisons using Tukey HSD tests indicated that faculty members with 16 > years teaching experience (16>, M = 3.97) significantly had lower scores when compared to those with less experience (6-10, M = 4.47) ($p < .01$). Those with 6-10 years (M = 4.47) of teaching experience on the other had significantly higher scores than other categories of years of experience groups. Post hoc comparisons using Tukey HSD tests showed that in comparing 1-5 with other years, only 6-10 years was significant [6-10; $p < .01$, 11-15; $p = 0.346$, 16 and more; $p = 0.97$]. Comparing 6-10 with other years of experience, all were statistically significant [1-5, 11-15, 16 and more; $p < .01$]. Comparing 11-15 years (M = 4.06) of experience with other years, only 6-10 years was significant [1-5; $p = 0.346$, 6-10; $p < .01$, 16 and more; $p = 0.346$]. Comparing 16 and more with other years of experience(16 and more, M = 3.97), only 6-10 years was significant [1-5 $p = 0.068$, 6-10; $p < .01$, 11-15; $p = 0.770$].

Perceived enjoyment. ANOVA showed that perceived enjoyment was significantly influenced by teaching experience of the respondent, $F(3, 406) = 11.90$, $p < .01$, $\eta_p^2 = .132$. Post hoc comparisons using Tukey HSD tests indicated that experience in teaching had a statistically significant effect on the mean difference of faculty members with less than 5 years teaching experience (1-5, M = 4.59) had significantly higher scores than people with more than 5 years of experience in teaching (6-10, M = 4.27, 11-15, M = 4.13, 16 and more, M = 3.93). In addition, faculty members with less than 5-year teaching experience had higher scores compared to those with 11-15 years, 16 and more of teaching experience.

Perceived usefulness. ANOVA showed that perceived *usefulness* was significantly influenced by teaching experience of the respondent, $F(3, 406) = 15.39$, $p < .01$, $\eta_p^2 = .102$. Post hoc comparisons using Tukey HSD tests showed that those with 11-15 years (1-5, M = 4.23, 6-10, M = 4.43, 11-15, M = 4.51) of teaching experience had significantly higher scores for perceived usefulness compared to 16 and more years (M = 4.17) of teaching experience.

Behavioral intention to use e-learning. ANOVA showed that *behavioral intention to use e-learning* was significantly influenced by teaching experience of the respondent, $F(3, 406) = 13.53$, $p < .01$, $\eta_p^2 = .091$. Post hoc comparisons using Tukey HSD tests showed that faculty members with 6-10 (M = 4.62) years of experience had significantly higher scores compared to those with 16> (M = 4.11) years.

Perceived system satisfaction. ANOVA showed that perceived system satisfaction was significantly influenced by teaching experience of the respondent, $F(3, 406) = 30.38$, $p < .01$, $\eta_p^2 = .183$. Post hoc comparisons using Tukey HSD tests showed that faculty members with less than 10 years (6-10, M = 4.41) years of teaching experience had significantly higher scores for perceived system satisfaction compared to those 16 > year (16 >, M = 3.60) of teaching experience.

Multimedia instruction. ANOVA showed that *multimedia instruction* was significantly influenced by teaching experience of the respondent, $F(3, 406) = 25.06$, $p < .01$, $\eta_p^2 = .156$. Post hoc comparisons using Tukey HSD tests showed that faculty members with 1-5 (M = 4.16) and 6-10 (M = 4.55) years of experience had significantly higher scores compared to those with 11-15 (M = 3.85) years, however, those with more than 16 > years (M = 3.45) of experience had significantly lower scores than those with 6-10 and 11-15 years.

Research Question #3: What challenges and obstructions face faculty members in the implementation of e-learning at KSA universities?

Table 4.14 contains the survey items designed to elicit KSA faculty perceptions concerning potential challenges in the implementation of e-learning at KSA universities. Overall faculty members agreed with positively worded statements representing areas that often challenge the implementation of e-learning in higher education (M = 3.19, SD = 1.18). This indicates a generally positive perception toward implementing e-learning in KSA universities.

Faculty members expressed moderate agreement with statements pertaining to the accessibility of e-learning software and hardware, indicating an area of potential concern (M = 3.08, SD = 1.32) and (M = 3.09, SD = 1.12), respectively. Another area of moderate agreement was the perceived difficulty in managing an e-learning course (M = 3.16, SD = .80). Areas of higher agreement, and, therefore of less concern, are the perception of administrative support (M = 3.66, SD = 1.44), time to create e-learning courses (M = 2.18, SD = 1.15, and it was a negative question) and the effectiveness of e-learning as an instructional tool (M = 3.83, SD = 0.90).

Table 4.14. Challenges and Obstructions Faced by Faculty Members

	Challenges in implementing e-learning	Mean	SD
35	Faculty members have time for e-learning training.	3.41	1.45
36	Administrative support for e-learning is strong at my college/department	3.66	1.44
37	My college/department has adequate financial resources to develop technology-based initiatives.	3.58	1.32
38	Faculty members must spend extra time to create e-learning courses.	2.18	1.15
39	Faculty members have access to hardware essential for teaching e-learning courses.	3.08	1.32
40	Faculty members must spend extra time responding to students' inquiries in an E-learning course.	2.67	1.18
41	Faculty members have access to software essential for teaching e-learning courses.	3.09	1.12
42	Faculty members in my department/ college think that e-learning is effective.	3.83	0.90
43	Faculty members in my department/college have time to adopt e-learning.	3.24	1.16
44	Faculty members in my department/college believe it is easy to manage an e-learning course.	3.16	0.80
	Overall Perception towards e-learning challenges	**3.19**	**1.18**

Note. (n= 410).

A number of respondents offered insights on the challenges and obstructions faced by faculty members in the implementation of e-learning at KSA universities. Moreover, faculty members exhibited highly favorable perceptions of e-learning challenges.

Analysis of the first closed questions revealed the need for an open question that would allow faculty members to report any additional challenges that they faced within the colleges. Through this open question forum, it was revealed that a few faculty members were not comfortable with the e-learning system and preferred to use

the traditional teaching methods. Moreover, because of these results, we realize that most faculty members are not trained to design and implement e-learning programs efficiently and effectively.

In response to the optional open question, faculty members also expressed the need for hardware and software as well as other related equipment in order to better use new technologies for e-learning. They need a number of things, including the ability to access the Internet through wireless in the colleges or campus connectivity for faculty and students for the application of e-learning and student assessment courses such as International Computer Driving License (ICDL), and to activate emails with self-correction. It showed that faculty members had limited access to new teachnology resources and as well as access to the Internet in their colleges.

A few faculty members indicated that the most important barrier to the implementation of e-learning was lack of time due to their individual workloads. Some respondents suggested that meetings should be held periodically, at least among the deans, agents, and members of the faculty in order to identify steps to implement e-learning and to identify challenges and obstacles in order to be able to resolve them. Some faculty members are worried that e-learning is a curriculum based solely upon rote-memory learning and does not draw out the creativity of the faculty members and students. Because of this, it is possible that few students will be motivated, and this will negatively affect the faculty members in the long run. Some faculty members' preferred blended learning to the use of only e-learning.

Summary of Results

The results showed that there was a difference between the levels of e-learning based on different components of a faculty member's identity. The gender perceptions were the first indication of differences where the perceptions by females were more

positive than those of males. This was followed by age differences in which the faculty members under 44 years had more positive perception of e-learning than those over the ages of 45. The educational level was also noted as affecting the perceptions of e-learning because the positive perception was stronger among those who had a Bachelor's degree; however, the perception was different according to the various types of educational levels of how e-learning could be used. The overall differences of the subscales together showed that those who had fewer than 15 years teaching experience had a stronger perception of e-learning than those who had been teaching for more than 16 years (1-5 years 4.30 v. 6-10 years M = 4.24 v. 11-15 years M = 4.19 v. 16 > years M = 4.26). Nationality was also an influence in terms of the positive impression of non-Saudis. It is also noted that there is an overall positive outlook regarding e-learning by faculty members who hold the belief that it is a tool which enhances learning. When responding to the challenges and obstacles of e-learning, there was a perception that a lack of basic tools and knowledge created impediments to teaching e-learning courses. The study showed that faculty members had did not have access to new technology resources and access to the Internet in their colleges. The results showed that the acceptance of e-learning is that varies according to demographics. It was also evident that there is a perception regarding e-learning based upon the availability of technology resources required for teaching.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents the discussions of results, conclusions, limitations and research recommendations of the study. The three research questions developed for the study included what the faculty members' perceptions of e-learning were within the KSA, whether there were any statistically different perceptions of e-learning by demographics, and what challenges were faced by faculty members in the use of e-learning.

The study indicated that there were differences with the technological relationships to e-learning as perceived by faculty members. The findings revealed that the overall perceptions were positive toward e-learning. The study also revealed perceived differences with self-efficacy, enjoyment, behavioral intention to use e-learning, system satisfaction, and multimedia instructions. The results revealed that the difference in demographics and problems with e-learning were consistent. There was a significant effect from the demographic variables and the way in which this created the interactions with e-learning technology. The findings showed that there were gaps in the perceptions of e-learning, and how this relates to the attitude faculty members hold regarding teaching with the use of e-learning tools.

Demographic Information and Computer e-Learning Software Experience

The results concerning demographics, as earlier indicated in table 4.1, varied with the demographic function under study. In terms of gender, from the sample of 410, most of them were men, totaling to 239, with 171 women. In terms of their ages, most of the participants were in the age group of 33-38. On a general standing, most of the people who study via the e-learning process are between ages 27 to 44. The reason for this could be the fact that at this age, most people are employed. Thus,

e-learning is the best option they have to further their studies. In addition to this, recent research indicated that there has been an explosion in the number of adults seeking higher education (Chaturvedi & Dhar, 2009). The optimism and independence, coupled with their self-direction in establishment of learning objectives, make it easier for them to embrace and adapt to the e-learning process (Abu Qudais el al., 2010).

The education levels of the sample size ranged from bachelors to doctoral. Results indicated an increase in the e-learning use with a corresponding increase in the level of education. Bachelors' faculty members embraced e-learning least, while e-learning was more used by masters' faculty members and most by those holding doctoral degrees.

Years of teaching experience also represented varied use and perception of the e-learning process. Those with an experience of 6 to 15 years recorded the highest frequency. A reason for this is the fact that those with these years of experience have an understanding of e-learning's usefulness and benefits. Those with less than 6 years of teaching experience recorded a low frequency because of their lack of experience. On the other hand, those with more than 16 years of teaching experience recorded low frequencies because of the generational differences. The participants comprised more Non-Saudi citizens than Saudi citizens. This indicated that a reason that could cause unwillingness by Saudi citizens to participate in e-learning is their reluctance to expose their personal information on the Internet (Al-Khalifa, 2008; Al-Kethery, 2006).

Research Question 1: Faculty Members' Perceptions of E-Learning

The first research question sought to find out perceptions of KSA faculty members on e-learning in higher education. This is whether faculty members had an overall perception of e-learning that was positive or negative. It was found that there was a significantly positive reaction toward the overall perception of e-learning, with the means ranging from 4.45 to 3.91 as shown in Table 4.3. The results of other studies also agreed with findings in the study (Alajmi, 2010; Almuqayteeb, 2009; Al-Sadoon, 2009; Al-Sirrani, 2010).

The findings for each of the six subscales of self-efficacy, enjoyment, usefulness, behavioral intention, system satisfaction, and multimedia instructions resulted in favorable and positive results. A large majority of faculty members believed that e-learning was favorable, with the ability to learn and grow, within the overall e-learning at KSA universities.

Of the three questions that were directed to the participants (faculty members) on their perceived self-efficacy, the majority had a positive response to the question about their confidence, which indicated an agreement. They felt confident that they could develop effective e-learning courses. This was followed by the response that indicated confidence in teaching a successful e-learning course. The response with the lowest mean, though close to the other two, was the confidence in using the e-learning course management tools.

The faculty members' perceived enjoyment of the e-learning was relatively high too, with an increasing level of enjoyment deprived from developing the e-learning courses, teaching them, and using computers to teach the e-learning courses respectively. Perceived usefulness of the e-learning process among the faculty members also had a relatively high mean from the results presented. The

highest was the response that faculty members could teach effectively through e-learning; followed by the response that e-learning is an effective learning medium. Likewise, the behavioral intention to use e-learning, the perceived system satisfaction and multimedia instructions scored highly, indicating an agreement and support of e-learning. In summary, perceived usefulness of e-learning had the greatest support from faculty members, with a mean of 4.40 out of 5. Perceived system satisfaction, on the contrary, had the lowest agreement score of 3.92. However, this score still indicated an agreement with the process (Hongbo, 2006).

The positive response received to the first question relates to literature reviewed which stated similar objectives, along with the ability to offer e-learning. The positive aspects are similar to findings in studies where individuals have access to learning that carries through with a specific process, despite location(Al-Khalifa, 2008). The e-learning platform is one that offers easy access to education, more tools for development, and the ability to offer more capacity due to the available resources (Almegren et al, 2007). This positive perception results from the upgrade of e-learning tools and various other applications, whereby benefits are also derived from providing the more practical aspects of e-learning training for faculty members (Al-balawi, 2000; Al-Khalifa, 2008). Variables concerning cost, time, and extra experience are also developed outside the classroom environment. For faculty members, this also provides a way of overcoming difficulties encountered within the traditional classroom setting. Logistical needs such as training, skills, and further education are no longer hindered through the use of e-learning and other available tools (Al-Khalifa, 2008; Al-Kethery, 2006).

The logistical attributes observed from the ease of access to e-learning were in line with the reported positive perceptions of e-learning (Al-Khalifa, 2008). The

enjoyment, usefulness, self-efficacy, behavioral intention to use EL, and satisfaction with the system were reflected in past studies and literature as well as in the current study. This shows that the trend of e-learning is one that is moving in a positive direction among faculty members. The ability to expand tools and to begin to offer exploration in the field of e-learning is the most significant aspect that researchers must focus on when continuing to offer alternatives to those who are interested in e-learning (Al-Khalifa, 2008; Almegren et al, 2007).

The positive direction associated with the study is one that is connected to overall perceptions or attitudes. This interest is motivating many to look into using e-learning in higher education at the KSA. This includes creating more opportunities for learning along with the ability to further education with this new technology (Abu Qudais el al., 2010). This new technology can be utilized to create more opportunities for faculty member to develop better learning methods and enhance higher education (Al-Khalifa, 2008). These motivational factors are influenced by the various circumstances of faculty members, which can be altered and changed according to their specific needs, and which provide a new focus for those interested in the e-learning programs (Al-Khalifa, 2008; Hongbo, 2006).

In this study, the willingness of faculty members to develop new materials and to expand the tools for e-learning is one which is strongly noted due to the need to offer more educational support and knowledge for those involved in the study (Al-balawi, 2000; Panda, 2007). When looking at this study, along with indications from past studies, it is noted that there is some optimism which has been developed among faculty members working with e-learning, and finding new technology as e-learning to assist with the instruction and development of curriculum within the higher education environments (Hartley, 2000; Panda, 2007). The fact that some software,

namely course management, conferencing, and chat are less preferred than PowerPoint, Internet, and word processing software should prompt improvement of their user interfaces (Allan, 2001; Panda, 2007). This will improve the utilization and adaptation of the e-learning process (Al-balawi, 2000; Almegren et al, 2007).

Research Question 2: Are there statistically significant differences in faculty members' perceptions of e-learning based on demographic characteristics?

Despite the initial positive response noted in both the literature reviewed and the study findings, a gap exists which occurs within the demographic variables. The first difference was based upon gender differences, specifically because females had a more positive perception of e-learning with self-efficacy, positive perception, perceived enjoyment, behavioral intention, system satisfaction, technology tools, and positive perception. Gender differences within e-learning hold a specific relationship to each of the levels of comfort, perception, and ease of use for those working with e-learning (Al-balawi, 2000).

The reason for the demographic differences in e-learning by gender may be associated with the ability to embrace the new technological tools. This can be achieved by universities implementing training in the e-learning process earlier. The perceptions of faculty members not only are considered to have differences by gender, but may also be related to the accepted forms of pedagogy associated with e-learning (Al-harbi, 2002). The perceptions, then, not only have to do with gender, but also how beliefs about learning and gender differ according to the types of pedagogy that should be used (Hartley, 2000). The ability to embrace e-learning as a pedagogy, considering gender differences as noted, indicates the need for more understanding of the newer pedagogies as a different classroom structure altogether (Almuqayteeb, 2009). This pedagogy shift is able to show that there is a difference in the gender

perceptions with the ability to embrace and show interest in e-learning as a new form of pedagogy and to move outside of familiar methods of teaching for this specific process (Shashaani, 1994). The relationship between the embracing of new pedagogies, gender roles and relationships, and teaching indicates a direct relation to e-learning (Al-Kethery, 2006). Closing this gap depends upon understanding the new pedagogies, and relating them to the newer e-learning technology, which directly links to gender perceptions and to other pedagogical methods (Almuqayteeb, 2009).

The reason for this gap in genders and pedagogy is one that may be linked to gender roles and perceptions in teaching and e-learning among various faculty members (Al-Kethery, 2006). The perception of gender roles in the KSA, their relationship to pedagogies, and the image which many have of teaching, is directly associated with how one teaches in relationship to e-learning (Almuqayteeb, 2009). The demographic implications are indicated in the basic differences in gender but are also based upon the perceptions of teaching and gender roles that were incorporated into this study (O'Donnell, 1991). Self-perceived abilities within the new e-learning technology, and ways in which this relates to gender roles, become significant, mainly because of the images which one holds regarding teaching, pedagogies, and the need for using better tools for more effective teaching. Gender roles are inclusive of the sociological influences of how one should teach and how this is incorporated into the teaching abilities one possesses (Almuqayteeb, 2009; Jones, 2005). The result is one which is reflected in this study, mainly in how gender roles, teaching perceptions, pedagogical approaches, and the image which one holds regarding teaching of a specific gender, is reflective of how one approaches the role of e-learning (Almuqayteeb, 2009; Al-Sarrani, 2010).

The second significant difference, which was directly related to question two, was the difference in age group. It was shown that there was a significant difference within age groups by participant perceptions. The influence by age group showed for all the six subscales of e-learning, there were varied responses by different age groups. In the perceived self-efficacy subscale, the most of affirmative response was by faculty members under the age of 26, closely followed by those in the 27-32 age brackets. The least mean was recorded by those over the age of 45, who had a significantly lower reaction to the positive perception of e-learning. From the results, it was indicated that perceived enjoyment with respect to age groups, though relatively high by the average mean, reduced with advancement in the ages. As shown in Table 4.7, the highest perceived enjoyment was by those below the age of 26. The lowest perceived enjoyment was by the participants over the age of 45. Perceived usefulness recorded the highest mean among participants of the 39-44 age brackets, and the least among the participants aged below 26 years. In the subscale of behavioral intention to use e-learning, the highest recorded mean of affirmation was among participants of the 27-32 age brackets, while least was among the participants over 45. This shows that the perceptions regarding e-learning are directly related to the age differences within these groups. This perception changes with older age groups, showing a significant difference in the perceptions of these groups and how this relates to their acceptance of e-learning. These differences in age groups occur between generations, and can affect both the perception and acceptance of the use of e-learning among those groups (Al-Mothana, 2009; Al-Sarrani, 2010).

According to another recent study (Ong & Lai, 2006), this gap in age differences was also strongly supported based upon level of education and understanding of e-learning techniques. The study was also indicative of the

perception of roles one believes one should have as a faculty member, with most of the older generation adhering to an interest in the traditional roles of teaching (Al-Sarrani, 2010). Their understanding, perceptions and attitudes then directly related to their understanding of teaching, as well as their familiarity with the tools available through the new technology of e-learning (Ong, Lai, 2006). The same trend is seen in this study where there seems to be a lesser acceptance of e-learning among faculty members above the age of 45. The 33-38 age bracket recorded the highest perceived system satisfaction, while the least was recorded among the participants aged 39-44. The final subscale, which is Multimedia instruction, recorded the highest affirmation mean among participants aged 33-38 and the least among those between the ages of 39 to 44. From the above summary, it implies that there is a difference in the perception and understanding of e-learning, as well as accepted pedagogies associated with it (Al-Mothana, 2009; Al-Sarrani, 2010; Hartley, 2000).

Another gap in age groups noted is one that relates to the mindset and belief systems of older groups of faculty members. According to Al-Fadhli (2009), groups of faculty members above the age of 45 did not want to rely on the e-learning systems because of the alternative pedagogies which were required. The adjustment to the technologies, technical competence, and the viewpoint that technology was not an educational tool all relate to the inability of this group of faculty members to accept e-learning (Amuradha, & Singh, 2003). The perception of and exposure to e-learning also relates to the inability of older groups of faculty members to use the new tools (Mital & Luthra, 2006). Younger faculty members are believed to adapt more easily, mainly because of their familiarity and comfort with technology, their exposure to different teaching systems, and also their ability to adapt collaboratively through various social trends to the tools of the new e-learning technology (Al-Khalifa, 2008;

Al-Sarrani, 2010, Mital & Luthra, 2006). These researchers results agreed with the finding of this study, with the gap beginning at age 33 to 38, who can adapt to the new technology, and are ready to use the different formats, while older groups are not as ready for implementations of e-learning.

The next set of results indicates a similar gap of education level that directly influences their perception of the e-learning process. As indicated in Table 4.10, those who had a bachelor's degree have a more favorable perception of e-learning, as opposed to those who had a master's degree and doctoral degree. The pattern is consistent in most of the perception subscales, with the bachelor's degree holders scoring the highest mean, and doctoral degree holders recording the lowest mean. The positive perceptions came mostly from the use of multimedia tools. This indicates that the educational level is affected by the experiences which one brings to the use of e-learning in higher education, as well as the ability to become familiar with the use of specific tools for e-learning (Al-Mothana, 2009). The positive perceptions of those with a bachelor's degree also indicate that there is a need to have responses with the logistics that are required for those seeking a higher education (Amuradha, & Singh, 2003).

The next perceptions that held a significant difference were based upon the teaching experiences of those who have completed a bachelor's degree having a positive value based on teaching experience. This ranged from those who had a doctoral degree stating that there is a higher perception of usefulness of e-learning, while those same individuals stated that the behavioral intention subscale of using e-learning was lower. This significance continued with those who had a doctoral degree having a lower perception toward multimedia instruction as opposed to those having a bachelor's degree.

As with the educational level, there is an indication of how e-learning affects performance when outside of the traditional classroom. The question is based upon the structure used, the tools that are available, and the personal interaction available to faculty members. The different levels of education become associated with this, most notably with the interpretations of how to use e-learning, and how this affects the pedagogical process. The question becomes based on how e-learning can be used and whether it takes away from the performance, experience and ability to gain interactive insight within the classroom. At the same time, other studies are showing that e-learning is able to enhance behaviors and perceptions because of the technological tools available (Allen, 2005; Welsh, Wanberg & Brown, 2003).

Teaching experience also held a significant difference. It was noted that as the teaching experience increased, there was a lower perception of e-learning. The break occurred at the point at which those who had taught more than 10 years having a perception that e-learning was not as effective. The differences were based upon usefulness, self-efficacy and behavioral intention. There is importance in this particular difference, as it relates back to the belief in having a specific pedagogical structure and teaching environment (Hartley, 2000). There is also the belief by many faculty members having varied levels of experience, to begin altering the environment and beliefs according to the behaviors and interpretations of other faculty members (Almuqayteeb, 2009). Faculty members who had more teaching experience indicated that the traditional class format does not allow for an alternative, yet that factor also causes many faculty members to not be able to express a more positive behavioral intention toward accepting the new e-learning curriculum (Rosenbilt, 2005). This indicates that there is a changing structure of teaching methods deriving mainly from more openness toward e-learning. The experiential level of faculty

members becomes an influential factor in the importance of e-learning and the ability to alter the pedagogies to accommodate the new teaching formats (Zhen el al., 2008).

In this study, question #2 also addressed the significantly different values based on nationality. The main focus was on self-efficacy, with those who were non-Saudis having a more positive perception than Saudi faculty members. The perceptions changed when enjoyment, usefulness, and behavioral intention were considered. Faculty members' perceptions were indicative of non-Saudi faculty having a more positive perception of e-learning. These perceptions are significant because of the influences of nationality identity and how this relates to belief and pedagogical methods as well as differing perceptions of e-learning. It also indicates that there is a significant difference in the perceptions based on the use of technology in emerging areas, and how this relates to the personal perceptions of e-learning from differing regional perspectives (Albalwi, 2000; Zhen el al., 2008).

The concept of nationality and its relationship to e-learning and technology is one that is known to have cultural influences, mostly because of the perceptions that come from technology and one's relationship to its influences (Fry, 2001; Zhen el al., 2008). Information seeking, knowledge perception, and amounts of sharing are some of the areas that are known to differ by cultural influences. This is based upon definitions that come from cultural influences (Amuradha, & Singh, 2003). When one is seeking information in a particular culture, it is usually based upon finding the right individual, while working toward understanding and utilizing proper applications of available e-learning tools. Instead of the platform of all knowledge being available, there is a perception of sharing ideas with others based upon the pace needed, as well as coordinated community efforts that aid in forming the perceptions that result in a successful implementation of the new e-learning technology (Zhen el

al., 2008). These cultural influences differ from other studies that indicate that there are no variances due to nationality differences, indicating mostly positive perceptions regarding e-learning (Albalwi, 2000; Ardichvili, Maurer, & Li, 2006). It can be assumed that the study was indicative of those differences being based upon exposure, education, and use of technology resulting from differing cultural backgrounds and nationalities (Albalwi, 2000; Al-Mothana, 2009).

Age difference, teaching experience, nationality, and perceptions from demographics all combine with the same observations and adoption of e-learning and the inhibiting factors to which it may relate. The negative perceptions and the relation to demographics show that the roles of each subscale directly reflect teaching abilities (Albalwi, 2000; Almohaisen, 2007). More important, it shows that perceptions related to demographics are based upon the pedagogical styles being employed and openness to incorporating new tools and ideas toward daily activities associated with one's teaching experience. The problem areas that had been commonly associated with perception issues toward e-learning include self-efficacy, usefulness, and behavioral intention. These issues are important, as they create a potentially negative attitude toward faculty members when using the e-learning systems (Zhen, el al., 2008). The negative perception associated with different demographics directly relates to the initiatives taken by faculty members to use the available e-learning tools and to establish a stronger connection with those tools on the part of faculty members (Barron, 1987; Zhen el al., 2008).

Another important aspect is the educational levels and how these directly affect their perceived usefulness. It was noted that those with a higher educational degree did not indicate a high amount of perceived usefulness or relationship to the available e-learning tools (Abouchedid et al, 2004) . This leads to a direct response

from faculty members that creates both synchronous and asynchronous knowledge attributable to their work (Almohaisen, 2007). The ability to use e-learning technology in higher education offers faculty members more creative resources for teaching and for further developing the specific needs of those faculty members and becomes an important means of creating the necessary intention for those interested in acquiring the various skills associated with e-learning (Almohaisen, 2007). The influence of educational level, and other perceptions created by faculty members, then becomes an essential part of whether or not the technology is used and how much it becomes a part of the system of e-learning (Shirley, 2002).

The challenges of overcoming the perceptions created by faculty members then become problematic in nature by faculty not being able to create courses and provide the necessary amount of time and resources, mainly due to the perceptions held by faculty members caused by their perceptions toward e-learning tools (Alajmi, 2010; Abouchedid et al, 2004; Al-Sadoon, 2009; Hartley, 2000).

The gap that occurs with e-learning is not only based on the faculty members' perceptions of how it will affect them, but moreover, with the multimedia instruction necessary with e-learning (Abouchedid et al, 2004). The perception of faculty members by demographics revealed lower responses toward multimedia instruction based on age, teacher experience, and level of education. This perception is one that not only may affect the ability to use multimedia, but also may limit the e-learning tools found online to assist those faculty members teaching the courses (Hartley, 2000). The ability to improve critical thinking and to achieve more effective learning through the use of these e-learning tools becomes limited by those demographics holding this perception. If the e-learning tools are not looked upon as effective, they may not be utilized properly (Abdulkarim, 2007).

The perception of the faculty members then becomes one that is based on a demographic gap in which the faculty members are unable to benefit from the e-learning tools available to them (Abouchedid et al, 2004). Creating higher levels of performance and understanding of the benefits and concepts from multimedia instruction then becomes an important part of assisting with e-learning while closing the demographic gap through use of available e-learning tools. According to the Govindasamy (2002) study, there are demographic gaps created by this perception, leading to obstacles in applying the available e-learning tools, while faculty members are hindered in maintaining a positive attitude toward e-learning by specific groups of faculty members.

Research Question 3: Challenges and Obstructions Faced by Faculty Members in the Implementation of E-Learning at KSA Universities

The challenges and obstacles facing faculty members reveal a strong understanding of the lack of software, hardware, and Internet technology support to help in managing the e-learning courses. This proved to be one of the most challenging areas that faced faculty members (Agboola, 2005). The lack of administrative support and the inability to be creative with the courses were also a part of the problem, specifically with barriers being created in finding the right instructional tools (Hartley, 2000). This led to an indication that most faculty were not comfortable with the e-learning system and methods and were not being encouraged to create and implement the required programs (Abouchedid et al, 2004). Lack of resources, equipment, technologies and other resources were among some of the issues raised, with the ability to discuss more options with the e-learning program and to overcome perceived obstacles being among the many responses (Hartley, 2000). It was felt to be the key to proper implementation of the e-learning program,

without which many of the faculty members feeling that this would worsen the perceived lack of resources and exacerbate any problems with the e-learning curriculum (Govindasamy, 2002).

This perception on the part of faculty members is based on a lack of understanding, education, knowledge, and comfort level with the e-learning system. In other research studies (Davies, 2005), age gaps, educational gaps, gender gaps, and differences in nationality were noted. When comparing this to the last question, it can be assumed that the demographic gaps are likely linked to the lack of support and available resources. If a faculty member has become more familiar with the tools of technology and understands how they are used, then it becomes easier to become familiar with and use the different e-learning tools (Abouchedid et al, 2004; Almegren et al, 2007). These gaps are directly linked to the influences from administrative support as well as the lack of e-learning tools currently available. While most faculty members indicated there was a positive indication toward using e-learning, there was also perceived a lack in the ability to bring effective support, making it difficult for some faculty members to meet the new challenges in today's e-learning environment (Almohaisen, 2007). While there are also noted some barriers, most of the faculty members who were using e-learning in a specific format were eager to continue with it in their educational programs and to develop specific applications within the scope of e-learning (Abdulkarim, 2007; Alajmi, 2010).

The recognition by faculty members that more support was needed and that there were gaps in the understanding of the system is significant in that these demographic differences have also been noted in past studies (Abdulkarim, 2007). The success of the e-learning system is recognized as being dependent on proper installation and maintenance of the system, perceptions toward using media in

education, levels of computer literacy, and behaviors that are linked to the use of technology (Abdulkarim, 2007). The perceptions toward technology also are indicative of problems, such as personal privacy issues, security, power outages, increased workload, and possible software failures (Panda, 2007). Each of these contributes to the inability to adapt the necessary procedures for the required e-learning systems, while leading to difficulties in obtaining other innovations (Lozano-Nieto, 1998). The challenges toward e-learning then create other challenges in adopting and maintaining positive attitudes regarding e-learning, limited to the extent of availability of e-learning tools within the college or university setting (Abdulkarim, 2007; Almegren et al, 2007).

Limitations in Research

The ability to understand the basics of the e-learning system allowed for a different understanding toward the use of technology. The limitations in this particular study came from the ability to understand where the demographic gaps were and why they were associated with the different understanding of e-learning. When looking at the different responses, there was an indication that gaps were associated with e-learning, specifically with certain perceptions being dominant with differences of what was needed. However, there was not the ability to evaluate this in terms of the technology, definitions that faculty members held, reactions which may have led to this, or deeper issues related to the e-learning system currently in use (Almegren et al, 2007). The question may not have been directly related to the demographic differences, but instead may have been linked to the deeper interpretations, background ,and the personality differences between faculty members. The way in which this was shown most was in the last question, in which there was a

strong response toward the lack of support and understanding with the e-learning system that was expected to be used (Wilson, 2005).

Suggestions for Future Research

The importance of this study comes from the noted differences in demographics and the gaps that are associated with e-learning and different pedagogies. The gaps are based specifically on the understanding of demographics and the relationships to why the gaps are created. There is an understanding that the gaps are linked to demographics. However, further studies can look at why these gaps are occurring and what the experiences are of those who are working with the demographics (Almohaisen, 2007). Further studies can look at the specific differences, such as age or education level. These can then be evaluated according to personal definitions of e-learning and how this is beginning to affect the concept of technologies (Wilson, 2005). The definition of e-learning can be followed by belief systems toward pedagogies and implementation of specific programs and how this affects the teaching style. It can be noted that these issues have a direct relationship to e-learning and ways in which it is developed (Almohaisen, 2007).

Future research must not only look at the gaps in demographics and how they are created, but also to question of how this relates to the e-learning structure within different educational formats. In the current study, there was an assumption that the same e-learning concept was used and accessible to different faculty members. However, the last question indicated that these challenges were the main problem with e-learning, and caused many not to use the pedagogy because of the gaps that were created (Chanchary, 2011). Determining the gaps within the e-learning systems and defining how these relate to the different demographics indicates a different perception toward e-learning and the way in which it is associated with higher

learning (Almohaisen, 2007). This provides a different level of insight to the importance of developing the proper tools and training for e-learning (Almohaisen, 2007). It also shows that this is developed according to the individuals who are learning and the experiences and definitions which they bring to the pedagogies (Alajmi, 2010). Determining these differences and finding e-learning tools and software to help with the alternative levels of development can then provide different forms of insight to those who are interested in the e-learning process.

Suggestions for Administration, Faculty Members, and Major Policy Areas of E-learning in KSA

This section presents suggestions for the administration of new major policy areas in using e-learning in KSA and for faculty member in KSA based on the results of this study.

The results provide the KSA universities adminstrators with a general scope of the processes and methods of e-learning and a comprehensive understanding of existing problems of e-learning. Influences of gender, age, educational level, nationality, and teaching experience on faculty members' perceptions of e-learning at KSA universities are observable. It was notable that modern-day lecturers were not resistant to using technological applications but were not sure as to how to implement such lectures in a more formal teaching method (Shabha, 2000). This study revealed that significant differences exist among faculty members when considering the demographics variables and their perceptions of e-learning. The present day lecturers who had access to today's *Information Communication Technologies (ICT) epoch (Distribution of Partners in Europe)* were more likely to have used new technologies like the Internet than those of previous years, and were more likely to embrace new technological innovations as teaching methodologies (Wilson 2005).

Faculty members with less than 39 years of age reported significant higher levels of efficacy of e-learning than older faculty members. It is therefore necessary to train lecturers on e-learning technology as well as conceptual issues (Shapiro 2000). The training sessions would target mainly younger lecturers below 26 years and older above 45 years. Additionally, in order to effectively implement e-learning programs, structural changes in KSA educational sector would be duly necessary. It would take the form of flexible work culture, job redesign and organizational re-engineering (Amuradha, & Singh, 2003).

Another area of concern is student learning and satisfaction of courses delivered through an e-learning system. Students encountered difficulty with course materials and were unable to prepare for online examinations. Besides, in other studies, e-learning challenges were common. For instance lecturers were reluctant to assist the students for work overloads and lack of time (Hartley, 2000). In the study difficulty in the managing of e-learning course was raised.

For the administration of higher learning, the type of leadership within the institution will determine the direction of the institution towards e-learning programs that are adopted. Since the technological advances were too recent, it is expected that senior staff, mainly administrators, finance officers, learning directors and faculty could be barriers to e-learning.

KSA university management's understanding of e-pedagogy programs will determine forthcoming interventions and initiatives. The success of e-learning would depend on access to technology where computers become inevitable elements of effective learning (Mapuva, 2009). Appropriate increased funding for IT support and e-learning (software and hardware) are likely to improve quality, efficiency and effectiveness of a new e-learning program. Furthermore, skills advancement was

likely to improve on teaching methods such as interactive conferences (ITV room or broadcast) which should be installed in each college. The success of e-learning would come from full cooperation of faculty staff and students (Volery, 2000).

Conclusion

The concepts in e-learning are known to be embraced by faculty members for the ability to develop more tools that are associated with e-learning. In the current study, it was noted that a positive perception of e-learning is made, specifically, because of the new tools and developments which are available to faculty members. This is also based on the logistics that are able to change and the associations which this has with e-learning. The positive movement of e-learning as a tool for faculty members is one that is burgeoning with new potential and alternatives to assist individuals with specific needs and abilities with e-learning. Identifying these and continuing to create more options for e-learning is a challenge that must be met with potentials and alternatives with which many can satisfy their specific needs.

While e-learning is able to provide more tools for those who are teaching, there are significant gaps within the demographics that can affect perceptions of e-learning. This perception is identified by self-efficacy, usefulness, behavioral intention, systematic use and multimedia instruction. These gaps are associated with a range of faculty member experiences and its association with each of these perceptions. It was found that there were significant gaps with gender, age, nationality, education level, and faculty member experience. The gaps with gender were divided, with females having a more positive association to e-learning than males. Age had a direct division after the age of 45, with not as many positive responses to the faculty member experiences and pedagogies. This was followed by gaps associated with educational level and faculty member experience. Direct gaps were noted between the bachelor's,

master's and doctoral level, specifically with the behavioral intention, usefulness, and systematic use. Nationality also showed differences, with non–Saudi ethnicities having a more positive response to e-learning.

Each of these particular tools and skills alter the perceptions and attitudes by understanding the gaps which are associated with the e-learning. The research study was able to find that the frustrations came from misunderstanding and lack of resources which could be used for teaching (Alajmi, 2010). The relationship to demographics from the last survey question indicates that there is a direct response in terms of the experience of faculty members, demographics, and the available resources for learning. The gaps could be lessened if there are different approaches in terms of the e-learning resources and pedagogical materials. This may be improved with understanding the pedagogical influences and preferences as well as how these connect directly to the perceptions associated with nationality (Almohaisen, 2007). Defining and understanding this creates a different association with the resources and responses, while showing that attitudes vary according to demographics (Alharbi, (2002).

To further this understanding, there is the need to understand how the demographic gaps and e-learning directly affect perceptions (attitudes), behaviors, and responses to the technology. Further investigation can be done in terms of understanding why there are gaps in demographics and how these relate to the e-learning tools which are available. From this point, there is the ability to begin changing the resources, technology, and the education and training that are currently available for e-learning (Almohaisen, 2007). By doing this, there is the ability to create and develop a deeper understanding of e-learning while lessening the gaps that are associated with demographics and learning materials (Abdulkarim, 2007).

The results of this study indicate that female faculty in the current study perceived themselves as more confident, apt to use, and satisfied with e-learning than did male faculty in this study.This study concluded that faculty members at the NBU and AJU in the KSA are willing to implementations e-learning in their universities. However, they need to be given more time and fewer schedules, with IT support, and be willing to be trained for e-learning (EL). Some of them preferred to use blended learning (BL) in their teaching.

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Appendix A

Permission and IRB Approval from TTU, NBU and AJU

المملكة العربية السعودية
وزارة التعليم العالي
جامعة الجوف
مكتب وكيل الجامعة
للدراسات العليا والبحث العلمي

بسم الله الرحمن الرحيم

جامعة الجوف
Al Jouf University

الرقم: [illegible]
التاريخ: [illegible] ١٤هـ
المرفقات: ....

تعميم

سعادة الدكتور **عميد كلية العلوم الطبية التطبيقية**	**المحترم**
سعادة الدكتور **عميد كلية الهندسة**	**المحترم**
سعادة الدكتور **عميد كلية التربية**	**المحترم**
سعادة الدكتور **منسق كلية العلوم**	**المحترم**
سعادة الدكتور **عميد كلية العلوم الإدارية والإنسانية**	**المحترم**
سعادة الدكتور **وكيل كلية المجتمع بالقريات بنين**	**المحترم**
سعادة الدكتورة **وكيلة كلية العلوم والآداب بالقريات**	**المحترم**
سعادة الدكتور **المشرف العام على الكليات الصحية**	**المحترم**
سعادة الدكتور **عميد كلية المجتمع بسكاكا بالوكالة**	**المحترم**
سعادة الدكتور **عميد برنامج السنة التحضيرية**	**المحترم**
سعادة الدكتور **عميد كلية الصيدلة**	**المحترم**
سعادة الدكتور **منسق كلية علوم الحاسب والمعلومات**	**المحترم**
سعادة الدكتور **المشرف على كلية العلوم والآداب بالقريات**	**المحترم**
سعادة الدكتور **منسق كلية المجتمع بطبرجل**	**المحترم**
سعادة المشرف العام على تقنية المعلومات	**المحترم**
سعادة الدكتورة عميدة كليات البنات العلمية- سكاكا	**المحترمة**
سعادة الدكتورة عميدة كليات البنات الادبية- سكاكا	**المحترمة**

بناء على موافقة معالي أ.د.مدير الجامعة على توصية اللجنة الدائمة للبحوث العلمية آمل تسهيل مهمة الباحث / د. احمد بن معجون العنزي لإجراء بحث ميداني وجمع معلومات تتعلق ببحثه (مرفق استبانه)

وتقبلوا سعادتكم خالص تحياتي وتقديري،،،

وكيل الجامعة
للدراسات العليا والبحث العلمي

د. ماهر بن مفضي العنزي

ص.ب ٢٠١٤ – الجوف – سكاكا – هاتف ٦٢٥٢٢٧١ ٠٤ – فاكس ٠٤٦٢٤٧١٨٣
E-MAIL: JOUF-UNIVERSITY@JU.EDU.SA: البريد الالكتروني P.O.BOX 2014.AL-JOUF.SKAKA. TEL:04 6242271 . FAX:046247183

KINGDOM OF SAUDI ARABIA
Ministry of Higher Education
NORTHERN BORDERS UNIVERSITY
Vice - President Office
For Post – Graduate Studies and Scientific Research

المملكة العربية السعودية
وزارة التعليم العالي
جامعة الحدود الشمالية
وكالة الجامعة
للدراسات العليا والبحث العلمي

جامعة الحدود الشمالية 2007 – ١٤٢٨
NORTHERN BORDER UNIVERSITY

سعادة عميد / **حفظه الله**

سعادة عميدة / **حفظها الله**

السلام عليكم ورحمه الله وبركاته

تهديكم وكالة الجامعة للدراسات العليا والبحث العلمي أطيب تحياتها وتقديرها ، وأفيد سعادتكم بأن عضو هيئة التدريس بكلية التربية والآداب الأستاذ / أحمد بن معجون العنزي المبتعث حالياً بالولايات المتحدة الأمريكية للحصول على درجة الدكتوراه في مجال تكنولوجيا التعليم من جامعة تكساس بصدد جمع بيانات لانجاز بحثه لنيل درجة الدكتوراه لموضوع توجهات أعضاء هيئة التدريس في الجامعة نحو التعليم الإلكتروني (التعليم عن بعد) في التعليم العالي بالمملكة العربية السعودية .

أمل تكرم سعادتكم بتعميد من يلزم بتوزيعها على السادة أعضاء هيئة التدريس بالكلية لتعبئتها وإعادتها شاكرين لسعادتكم سلفاً حسن تعاونكم .

وتقبلوا خالص التحية ووافر التقدير ،،،

وكيل الجامعة

للدراسات العليا والبحث العلمي

د.محمد بن سعد الوصالي

الرقم ١٤٨٤٠/٢٢/٢/د Ref. | التاريخ : ١٤٣٢/١٠/٢هـ Date: | المشفوعات : .... Encl.:

هاتف مكتب / ٠٤٦٦٢٠٠٥٧ | فاكس / ٠٤٦٦٢١٣٢٢ | ص.ب ١٣٢١ عرعر

TEXAS TECH UNIVERSITY
Vice President *for* Research

September 13, 2011

Dr. Steven Crooks
Ed Psychology & Leadership
Mail Stop: 1071

Regarding: 503065 Faculty Members' Perceptions of E-Learning in Higher Education in the Kingdom of Saudi Arabia (KSA)

Dr. Steven Crooks:

The Texas Tech University Protection of Human Subjects Committee approved your claim for an exemption for the proposal referenced above on September 12, 2011.

Exempt research is not subject to continuing review. However, any modifications that (a) change the research in a substantial way, (b) might change the basis for exemption, or (c) might introduce any additional risk to subjects must be reported to the IRB before they are implemented.

To report such changes, you must send a new claim for exemption or a proposal for expedited or full board review to the IRB. Extension of exempt status for exempt projects that have not changed is automatic.

The IRB will send annual reminders that ask you to update the status of your research project. Once you have completed your research, you must inform the Coordinator of the Committee either by responding to the annual reminder or by notifying the Coordinator by memo or e-mail (donna.peters@ttu.edu) so that the file for your project can be closed.

Sincerely,

Rosemary Cogan

Rosemary Cogan, Ph.D., ABPP
Protection of Human Subjects Committee

Box 41075 | Lubbock, Texas 79409-1075 | T 806.742.3905 | F 806.742.3947 | www.vpr.ttu.ed u
An EEO/Affirmative Action Institution

Appendix B:

A Survey Instrument (English Version)

Dear Faculty Member:

You have been selected to participate in this research. The aim of this research is to investigate faculty members' perceptions toward e-learning (distance learning) in higher education in the Kingdom of Saudi Arabia (KSA). Please answer all the questions as honestly as possible. Your responses will be used for the purposes of this study only, and will not be disclosed to third parties without your direct consent. Your personal identity will remain anonymous, and you should not put your name on the survey. The survey will take approximately 10- 15 minutes to complete. If you prefer, a paper version of the survey can be obtained from your department office. The study involves no potential risks.

If you have any questions regarding this study, please contact the one of the researchers:

Ahmed Alenezi (principle researcher)

Email: ahmed.alenezi@ttu.edu

Phone: In the KSA, 00966-555382007

Steven Crooks Ph.D. (dissertation adviser)

Email: steven.crooks@ttu.edu

Phone: 806-742-1997 ext. 297

Thank you in advance for your participation.

Definition of the Key Term: *E-Learning (EL) [Distance Learning (DL) or Online Learning (OL)]***:** refers to the process of using technology to deliver learning where the instructor and the student are not physically in the same place.

Section 1: Background Information

Please put an (x) in the box appropriate for each statement.

1. What is your university? ☐ NBU ☐ Al Jouf U.
2. What is your current age? _____
3. Gender: ☐ Male ☐ Female
4. What is your nationality? ☐ Saudi ☐ Non-Saudi
5. What is the highest academic education degree you hold?

   ☐ Doctoral ☐ Master ☐ B.A ☐ Other _____

6. What is your current academic department? _____

   And what is your current college? _____

7. How many years of teaching experience do you have?

   ☐ 0-5 years ☐ 6-10years ☐ 11- 15years ☐ 16 or more

8. What type of class(es) are you currently teaching(select all that apply)

   a) ☐ E-learning (online learning)

   b) ☐ Classroom-based Learning (traditional, face-to-face)

   c) ☐ Blended learning (combination of distance and classroom-based learning).

Section 2: Technology and Computer Experience

This section concerns your technology and computer experience. Please rate your current level of experience using the following tools from 1= no experience to 5= highly experienced.

	Statements	1	2	3	4	5
9	Operating systems (e.g., Windows XP, Windows, 7, Mac OSX, Linux)					
10	Internet (World Wide Web, WWW)					
11	Word processing packages (e.g. Microsoft Word, WordPerfect)					
12	Presentation software (e.g. PowerPoint)					
13	Course management system for e-learning (e.g., WebCT, BlackBoard or Moodle)					
14	Video conferencing tools (e.g., Skype, Adobe Connect)					
15	Online chat programs (e.g. Yahoo chat, AOL chat, Facebook chat)					
16	I have the necessary experience to teach via e-learning					

1= no experience to 5= highly experienced.

Section 3: Faculty Members' Perception of E-learning

This section concerns your perceptions toward e-learning in Saudi Arabia. Please think about each statement in relation to higher education in the KSA and record your responses by selecting the level that corresponds to agreement with the statement. Please use the following scale to record your level of agreement for each item: Strongly Disagree = 1, Disagree = 2, Uncertain = 3, Agree = 4, Strongly Agree = 5.

	Survey Statements	1	2	3	4	5
17	I feel confident that I can develop an effective e-learning course.					
18	I feel confident that I can teach a successful e-learning course.					
19	I feel confident using e-learning course-management tools (e.g., BlackBoard, WebCT)					
20	I enjoy using computers in my teaching.					
21	I enjoy teaching e-learning courses.					
22	I enjoy developing e-learning courses.					
23	E-learning is an effective medium for learning.					
24	I can teach effectively through e-learning.					
25	I can comunicate efficiently through e-learning					
26	I intend to teach e-learning courses when I am given the opportunity					
27	I intend to use the Internet to support my teaching.					
28	I intend to use e-learning tools in my future teaching assignments.					
29	I am satisfied with using e-learning tools (e.g., BlackBoard, WebCT) in my teaching					
30	I am satisfied with developing my own e-learning courses.					
31	I am satisfied with using computers in my teaching.					
32	I like to use voice media instruction					
33	I like to use image media instruction					
34	I like to use animation media instruction					

Strongly Disagree = 1, Disagree = 2, Uncertain = 3, Agree = 4, Strongly Agree = 5

Section 4: Perception of E-learning Challenges Facing Saudi Universities

This section contains statements that represent potential challenges concerning the implementation of e-learning in Saudi universities. Please mark your level of agreement or disagreement for each statement according to the following scale: Strongly Disagree = 1, Disagree = 2, Uncertain = 3, Agree = 4, Strongly Agree = 5.

	Survey Statements	1	2	3	4	5
35	Faculty members have time for e-learning training.					
36	Administrative support for e-learning is strong at my college/department					
37	My college/department has adequate financial resources to develop technology-based initiatives.					
38	Faculty members must spend extra time to create e-learning courses.					
39	Faculty members have access to hardware essential for teaching e-learning courses.					
40	Faculty members must spend extra time responding to students' inquiries in an E-learning course.					
41	Faculty members have access to software essential for teaching e-learning courses.					
42	Faculty members in my department/ college think that e-learning is effective.					
43	Faculty members in my department/college have time to adopt e-learning.					
44	Faculty members in my department/college believe it is easy to manage an e-learning course.					

Strongly disagree = 1, Disagree = 2, Uncertain = 3, Agree = 4, Strongly Agree = 5

Please provide any new ideas, not covered above, about challenges, or problems you perceive that may hinder the application of e-learning in your department/college.

_____

_____

_____

_____

Thank you very much for your participation.

Appendix C: Arabic Version of the Survey

بسم الله الرحمن الرحيم

إستبيان

مقدمة

لقد تم اختياركم للمشاركة في هذا البحث، ويهدف هذا البحث إلى التحقق من توجهات أعضاء هيئة التدريس في الكلية/ الجامعة نحو التعليم الإلكتروني (التعليم عن بُعد) في التعليم العالي بالمملكة العربية السعودية. يُرجى الإجابة عن جميع الأسئلة بأكبر قدر من الصدق والدقة. سوف تستخدم إجاباتك لأغراض هذه الدراسة فقط، ولن يتم الإفصاح عنها لطرف ثالث دون موافقة مباشرة منك. ستظل هويتكم الشخصية مجهولة فلا يجب عليكم وضع الإسم الخاص بكم على الاستبيان الذي سيستغرق لإكماله حوالي 10-15 دقيقة . يمكن إرسال نسخة من الاستبيان عند الطلب إلى صندوق بريد القسم الخاص بكم حال رغبتم في ذلك . لا تنطوي الدراسة على أية مخاطر محتملة . إذا كان لديكم أية أسئلة بخصوص هذه الدراسة فيرجى الاتصال في الباحث:

احمد بن معجون العنزي

البريد الإلكتروني :alenezi8@yahoo.com

رقم الهاتف : 00966-0567032255

مبتعث من جامعة الحدود الشمالية لتحضير درجة الدكتوراة

في جامعة تكساس التكنولوجية – الولايات المتحدة الامريكية

شكراً لكم مُقدماً على مشاركتكم.

تعريف المصطلح الرئيسي في هذه الدراسة :

التعليم الإلكتروني (EL) } التعلم عن بعد (DL) أو التعلم عبر الإنترنت (OL) { : يُطلق المصطلح على عملية استخدام التكنولوجيا لنقل التعلم حيث لا يتواجد كلاً من المعلم و المتعلم في نفس المكان بدنياً ويتم التواصل بين المعلم والمتعلم عبر استخدام الشبكة العنكبوتية (الأنترنت) (2005, Sloan) .

مع خالص شكري وتقديري لاهتمامكم وحرصكم على المشاركة مقدماً

Appendix C: Arabic Version of the Survey

القسم الأول : معلومات عامة

1- إلى أي جامعة تنتمي؟

جامعة الحدود الشمالية ☐ جامعة الجوف ☐

2- كم تبلغ من العمر؟

3- ما هو النوع أو الجنس؟ ذكر ☐ أنثى ☐

4- ما هي أعلى درجة تعليمية أكاديمية حصلت عليها ؟

دكتوراة ☐ ماجستير ☐ بكالريوس ☐ درجة أخرى ☐

5- ما هو تخصصك الأكاديمي الحالي؟_____

6- وما هي كليتك الحالية؟ _____

7- كم عدد سنوات خبرتك في التدريس؟

0-5 سنوات لقل ☐ 6-10 سنوات ☐ 11-15 سنوات ☐ 16 سنوات **أو أكثر** ☐

8- ما هو نوع الفصل الذي تقوم بالتدريس له حاليًا(قم باختيار كل ماينطبق عليك)

☐ التعليم الإلكتروني (التعلم والتعليم عبر الإنترنت)

☐ التعليم في الفصول الدراسية (فصل دراسي تقليدي أو التعليم وجهًا لوجه**)**

☐ التعليم المدمج (مزيج بين التعلم عن بعد والتعلم في الفصول الدراسية)

(من فضلك تابع الصفحة التالية)

Appendix C: Arabic Version of the Survey

القسم الثاني: الخبرات التكنولوجية واستخدام الحاسب الآلي

يتكون هذا القسم من نقاط تعبر عن خبراتك التكنولوجية واستخدامك للحاسب الآلي، يرجى تقييم مستوى خبرتكم الحالية باستخدام علامات التقييم التالية إبتداءاً **من 1 = بدون خبرة إلى 5 = خبرة ممتازه.**

الرقم	العبارات	1	2	3	4	5
9	الخبرة في إستخدام أنظمة التشغيل (مثل ويندوز XP و ويندوز و ويندوز 7 وMac OSX, Linux)					
10	الخبرة في إستخدام شبكة الإنترنت (شبكة حول العالم www)					
11	الخبرة في إستخدام سلسلة برامج معالجة النصوص (مثل مايكروسوفت وبرنامج الكتابة "word" وبيرفكت)					
12	الخبرة في إستخدام برامج العرض(presentation) سوفت وير (مثل باور بوينت)					
13	الخبرة في إستخدام أنظمة إدارة كورس التعليم الإلكتروني (مثل WebCTو BlackBoard و Moodle)					
14	الخبرة في إستخدام أدوات الفيديو للمؤتمرات Video Confrences (مثل Skype وAdobe connect)					
15	الخبرة في إستخدام برامج الدردشة على شبكة الانترنت (مثل دردشة الياهو(Yahoo chat) أو الفيسبوك (Facebook)					
16	لدي الخبرة اللازمة للتدريس مستخدما التعليم الإلكتروني					

(من فضلك تابع الصفحة التالية)

Appendix C: Arabic Version of the Survey

القسم الثالث: توجهات أعضاء هيئة التدريس في الكلية أو الجامعة نحو التعليم الإلكتروني

يركز هذا القسم على توجهاتك تجاه التعليم الإلكتروني في المملكة العربية السعودية، يُرجى التفكير في كل عبارة تتصل بالتعليم العالي في المملكة وسجل إجابتك عن طريق اختيار المستوى الذي يتوافق مع ما تشعر به تجاه العبارة، وفيما يلي جدول تقييم تعبر عنه الأرقام المستخدمة: أعترض بشدة =1، أعترض=2، غير متأكد=3، أوافق=4، أوافق بشدة= 5.

(من فضلك اكتب الرقم المناسب امام كل عبارة

رقم	العبارات (البنود)	1	2	3	4	5
17	أثق في قدرتي حول إمكانية تحضير و تطوير محاضرات تعليمية على الإنترنت					
18	أثق في قدرتي نحو إمكانية تدريس محاضرات تعليمية إلكترونية ناجحة					
19	أثق في قدرتي على استخدام أدوات و أنظمة إدارة محاضرات تعليمية إلكترونية (مثل البلاك بورد Blackboard أو الوب ستي WebCT)					
20	أشعر بالمتعة عند إستخدام الحاسب في عملية التدريس .					
21	أشعر بالمتعة عند تدريس حلقات تعليمية إلكترونية .					
22	أشعر بالمتعة عند إعداد و تطوير حلقات تعليمية إلكترونية .					
23	التعليم الإلكتروني هو وسيلة فعالة للتعليم والتعلم .					
24	أستطيع التدريس بفاعلية وتـأثير من خلال التعليم الإلكتروني					
25	أستطيع التدريب بكفاءة من خلال التعليم الإلكتروني .					
26	أنوي تدريس حلقات تعليم إلكترونية عندما تتاح لي الفرصة لذلك					
27	أنوي إستخدام شبكة الإنترنت مستقبلياً في مهام التدريس .					
28	أنوي إستخدام أدوات التعليم الإلكتروني مستقبلياً في مهام التدريس					
29	أشعر بالارتياح عند استخدام أدوات التعليم الإلكترونيBlackboard ,WebCT					
30	أشعر بالرضا والارتياح عند تحضير و إعداد محاضراتي الخاصة بالتعليم الإلكتروني					
31	أشعر بالرضا والارتياح عند استخدام الكمبيوتر في عملية التعليم					
32	أحب استخدام الوسائط الصوتية في المحاضرات					
33	أحب استخدام الوسائط المرئية والصور في المحاضرات					
34	تارضاحملا يف ةكرحتملا روصلا مادختسا بحأ					

أعترض بشدة=1 ،أعترض=2،غيرمتأكد=3،أوافق=4،أوافق بشدة=5

Appendix C: Arabic Version of the Survey

القسم الرابع : التحديات والعقبات التي تواجه الجامعات السعودية وطاقم العاملين بها في تنفيذ التعليم الإلكتروني :يتكون هذا القسم من عوامل العقبات والمشكلات، وفيما يلي مدرج قائمة بالمشكلات (العقبات) أو التحديات المحتمل أن تحول دون تطبيق وتنفيذ التعليم الإلكتروني في كليتك/ جامعتك. يُرجى اختيار العبارات التي تراها مناسبة، وفيما يلي الأرقام المستخدمة: أعترض بشدة =1، أعترض=2، غير متأكد=3، أوافق=4، أوافق بشدة= 5.

الرقم	العبارات (البنود)	1	2	3	4	5
35	لدى أعضاء هيئة التدريس في الكلية/ الجامعة الوقت الكافي للتدريب					
36	يوجد الدعم الإداري لتبني تقنية التعليم الإلكتروني في التدريس					
37	يوجد الدعم المادي الكافي لتطوير الأنشطة القائمة على التكنولوجيا					
38	يستطيع أعضاء هيئة التدريس في الكلية/ الجامعة ةيناكمإ قضاء وقت إضافي لعمل التعليم الإلكتروني					
39	يملك أعضاء هيئة التدريس في الكلية/ الجامعة إمكانية الدخول على و الوصول للأجهزة الأساسية (هارد وير)					
40	يجب أن يمضي أعضاء هيئة التدريس في الكلية/ الجامعة وقت إضافي للرد على استفسارات الطلاب					
41	يملك أعضاء هيئة التدريس في الكلية/ الجامعة إمكانية الوصول للبرامج الأساسية(سوفت وير)					
42	يظن أعضاء هيئة التدريس في الكلية/ الجامعة أن التعليم الإلكتروني وسيلة فعاله للتعلم					
43	لدى أعضاء هيئة التدريس في الكلية/ الجامعة الوقت لتبني التعليم الإلكتروني					
44	يعتقد أعضاء هيئة التدريس في الكلية/ الجامعة أنه من السهل إدارة دورة تعليم إلكترونية.					

أعترض بشدة =1، أعترض=2، غير متأكد=3، أوافق=4، أوافق بشدة= 5

هذا الجزء تم تصميمه للتعبير عن التحديات والعقبات التي يواجهها أعضاء هيئة التدريس في الكلية/ الجامعة. يمكنك في الجزء التالي تقديم أو إضافة أفكار جديدة لم يتم التطرق إليها أعلاه عن التحديات أو المشكلات التي قد تواجهها عند تطبيقك للتعليم الإلكتروني. من فضلك تابع استخدام الصفحة التالية إضافة أفكار جديدة

_____

_____

وفي النهاية، لكم جزيل الشكر والتقدير على مشاركتك القيمة. والحمد لله رب العالمين

Appendix D

Panel of Experts

Dr. Steven Crooks, Associate Professor of Instructional Technology, Department of Educational Psychology &Leadership, College of Education, Teach Texas University.

Dr. Nancy Maushak, Associate Professor of Instructional Technology, Department of Educational Psychology &Leadership, College of Education, Teach Texas University.

Dr. Fethi Inan, Associate Professor of Instructional Technology, Department of Educational Psychology &Leadership, College of Education, Teach Texas University.

Dr. Simpson, Doug, Professor, Helen DeVitt Jones, Chair, Department of Educational Curriculum and Instruction, College of Education, Texas Tech University.

Dr.White, David, Instructional Technology, Department of Educational Psychology and Leadership, College of Education, Texas Tech University.

Benaissa Chidmi, Assistant Professor, Department of Agricultural and Applied Economics, Texas Tech University

Dr.Hifeth Salamah, Professor, Department of Instructional Technology, King Saud University (KSA)

Abdurman ALdail, Associate Professor, Department of Instructional Technology, King Saud University (KSA)

Dr.Dina Ismaeel, Associate Professor, Department of Instructional Technology, Helwan University (Egypt)

Dr.Moustafa Drgawdat, Associate Professor, Department of Instructional Technology, Helwan University (Egypt)

Appendix E

Initial Email Invitation to Participants and Reminder emails

Appendix E

Initial Email Invitation to Participants and Reminder emails

Dear Faculty Member:

I invite you to participate in a research study. The purpose of this research study is to investigate faculty members' perceptions of e-learning (distance learning) in higher education in the Kingdom of Saudi Arabia (KSA). You may participate in this study by selecting the survey link at the bottom of this message. The survey is stored in an online survey system to ensure that your personal identity remains anonymous. Please answer the questions as honestly as possible. Your responses will be used for the purposes of this study only and will not be disclosed to third parties. The survey should take approximately 10-15 minutes to complete.

Participation in this research study is voluntary. You are free to skip items you do not wish to respond to or to quit the survey at any time by closing your browser window.

http://tltc.qualtrics.com/SE/?SID=SV_01d37EsUZmDI6tS

If you prefer, a paper version of this survey can be obtained by contacting your department secretary. Your department secretary will then place a copy of the survey in your mailbox. Once you complete the survey you may return it to your department secretary. The study involves no potential risks. Thank you very much.

If you have any questions regarding this study, please contact:

Ahmed Alenezi (principle researcher)

Email: ahmed.alenezi@ttu.edu

Phone: In the KSA, 00966-555382007

Steven Crooks Ph.D. (dissertation adviser)

Email: steven.crooks@ttu.edu

Phone: 806-742-1997 ext. 297

Appendix E: Initial Email Invitation to Participants and Reminder emails

First Reminder Email

Dear Faculty Member:

Last week ago, I invited you to participate in a research study. I want to thank you if you have completed the survey already. If you have not had a chance to take the survey, I would like to invite you to participate. The purpose of this research study is to investigate faculty members' perceptions of e-learning (distance learning) in higher education in the Kingdom of Saudi Arabia (KSA). You may participate in this study by selecting the survey link at the bottom of this message. The survey is stored in an online survey system to ensure that your personal identity remains anonymous. Please answer the questions as honestly as possible. Your responses will be used for the purposes of this study only and will not be disclosed to third parties. The survey should take approximately 10-15 minutes to complete. Participation in this research study is voluntary. You are free to skip items you do not wish to respond to or to quit the survey at any time by closing your browser window.

http://tltc.qualtrics.com/SE/?SID=SV_01d37EsUZmDI6tS

If you prefer, a paper version of this survey can be obtained by contacting your department secretary. Your department secretary will then place a copy of the survey in your mailbox. Once you complete the survey you may return it to your department secretary. The study involves no potential risks. Thank you very much.

If you have any questions regarding this study, please contact:

Ahmed Alenezi (principle researcher)

Email: ahmed.alenezi@ttu.edu

Phone: In the KSA, 00966-555382007

Steven Crooks Ph.D. (dissertation adviser)

Email: steven.crooks@ttu.edu

Phone: 806-742-1997 ext. 297

Appendix E: Initial Email Invitation to Participants and Reminder emails

Second Reminder Email

Dear Faculty Member:

Two week ago, I invited you to participate in a research study. I want to thank you if you have completed the survey already. If you have not had a chance to take the survey, I would like to invite you to participate. The purpose of this research study is to investigate faculty members' perceptions of e-learning (distance learning) in higher education in the Kingdom of Saudi Arabia (KSA). You may participate in this study by selecting the survey link at the bottom of this message. The survey is stored in an online survey system to ensure that your personal identity remains anonymous. Please answer the questions as honestly as possible. Your responses will be used for the purposes of this study only and will not be disclosed to third parties. The survey should take approximately 10-15 minutes to complete.

Participation in this research study is voluntary. You are free to skip items you do not wish to respond to or to quit the survey at any time by closing your browser window.

If you prefer, a paper version of this survey can be obtained by contacting your department secretary. Your department secretary will then place a copy of the survey in your mailbox. Once you complete the survey you may return it to your department secretary. The study involves no potential risks. Thank you very much.

If you have any questions regarding this study, please contact:

Ahmed Alenezi (principle researcher)

Email: ahmed.alenezi@ttu.edu

Phone: In the KSA, 00966-555382007

Steven Crooks Ph.D. (dissertation adviser)

Email: steven.crooks@ttu.edu

Phone: 806-742-1997 ext. 297

Appendix F

Liaw's Permission and his Survey

Appendix F

Liaw's Survey and his Permission

From:

廖述盛 <ssliaw@mail.cmu.edu.tw>
To: Ahmed A <alenezi8@yahoo.com>
Sent: Saturday, June 18, 2011 10:50 AM
Subject: Re: about your permission to use your questionnaire

Dear Ahmed Alenezi
You have my permission to use the questionnaire.
Hope it good for you.
Shu-Sheng Liaw

--------- Original Message ---------
From: Ahmed A <alenezi8@yahoo.com>
To: "ssliaw@mail.cmu.edu.tw" <ssliaw@mail.cmu.edu.tw>
Sent: 2011/06/16 16:02
Subject: about your permission to use your questionnaire

Greetings Dear Dr. Shu-Sheng Liaw

I would like to receive your permission to use your questionnaire "Surveying instructor and learner attitudes toward e-learning (Computers & Education 49; p. 1066-1080, 2007). I have included an attachment of this questionnaire.
I am studying for my ED.D at Texas Tech University. If it possible to use your questionnaire I will greatly appreciate it. Could you please let me know as soon as possible?
Thank you
Best Regards,
Ahmed Alenezi
Alenezi8@yahoo.com

Table 6. Means, standard deviations and item-total correlations (from 1 which means ‘‘strongly disagree’’ to 7 which means‘‘strongly agree’’)

E-learning as a self-paced learning environment
I can learn actively in the e-learning environment
I have more opportunities to create my own knowledge in the e-learning environment
The hypertext online instruction can enhance my learning motivation
I can discuss actively with others in the e-learning environment
I can read the online instruction actively
I can find information actively in the e-learning environment
E-learning as an effective learning environment
The e-learning environment improves my thinking skills
The e-learning environment enhances my problem-solving skills
The e-learning environment provides various aspects to solve problems
E-learning as a multimedia instruction environment
I like colorful pictures in online instruction
I like learning videos in online instruction
I like the animated online instruction
Teachers as an instructor-led learning environment
I like the instructor’s help and suggestions in the e-learning environment
I like the instructor’s voice and image in the e-learning environment
I like the instructor’s online multimedia instruction in the e-learning environment

Table 2. The Mean, standard deviation, item-total correlations (from 1 which means ‘‘strongly disagree’’ to 7 which means ‘‘strongly agree’’). (S.-S. Liaw (2007) Computers & Education 51 (2008) 864–873 871

Perceived self-efficacy:
I feel confident using the e-leaning system (the Blackboard)

I feel confident operating e-learning functions

I feel confident using online learning contents

Perceived satisfaction:
I am satisfied with using e-learning as a learning assisted tool

I am satisfied with using e-learning functions

I am satisfied with learning contents

I am satisfied with multimedia instruction

Perceived usefulness:

I believe e-learning contents are informative

I believe e-learning is a useful learning tool

I believe e-learning contents are useful

Behavioral intention:

I intend to use e-learning to assist my learning

I intend to use e-learning content to assist my learning

I intend to use e-learning as an autonomous learning tool

e-learning system quality:

I am satisfied with e-learning functions

I am satisfied the Internet speed

I am satisfied with e-learning content

I am satisfied with e-learning interaction

Interactive learning activities:

I would like to share my e-learning experience

I believe e-learning can assist teacher-learner interaction

I believe e-learning can assist learner-learner interaction

E-learning effectiveness:
I believe e-learning can assist learning efficiency
I believe e-learning can assist learning performance
I believe e-learning can assist learning motivation
Multimedia instruction:

I like to use voice media instruction

I like to use video media instruction

I like to use multimedia instruction