THE FACTORS INFLUENCING THE EFFECTIVENESS OF E-LEARNING AT AL-QUDS OPEN UNIVERSITY IN PALESTINE

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ABSTRACT

This study examines the factors influencing the effectiveness of e-learning At Al-Quads Open University In Palestine. The study was a cross sectional study where respondents' perceptions was measured at one point in time (211).

Correlation analyses, was to find out whether there is a relationship between e-learning effectiveness as a variable independently, and the Instructor characteristics, student characteristics, technology, and impediments are the dependent variable, At Al-Quads Open University In Palestine.

Students' characteristics such as students' motivation to use e-learning technology and students' computing competency have also found to be related with e-learning effectiveness. As compared with the instructor and students' characteristics, technology and impediments quality in terms of access, navigation, interface and the reliability effectiveness of technology infrastructure have the highest relation to e-learning effectiveness.

In conclusion, the results from this study indicate that instructor characteristics, student characteristics, technology, and impediments have strong relationships with e-learning effectiveness.

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CHAPTER ONE

INTRODUCTION

1.0 Background of the study:

The enormous development in the means of modern communication technologies and the growth of technology at a rapid pace, creating an explosion cognitive and contributed to the advancement of information technology and increased knowledge, E-Learning is learning that takes place in an electronically simulated environment. E-Learning, web-based training, internet-based training and computer-based training are the next-generation instruction methods being developed today.

No one can deny of Information technology in teaching and learning has created a need to transform how university students learn by using more modern, efficient, and effective alternative such as e-learning. According to new report by global industry analysts, inc., e-learning has emerged as an imperative tool to impart knowledge in the academic as well as corporate sectors. Since e-learning has several advantages in terms of cost reduction, simplified training programs, flexibility and convenience; it is poised to become an integral component of information dissemination, and emerges as the new paradigm of modern education. Backed by several favorable trends, the world of e-learning market, It is believed that the role of e-learning and information technology in education will continue to expand in scope and complexity.

In addition, the current system unable to support any training courses to guide the new user or the new students about these. The system contains tools as text, sound and pictures, to explain and teach the student how to use the advanced data structure, like Graph, Sort and Search, also the student can show the source code and make compiler the programs.

It has become an essential channel for both formal and informal learning. This is a list of as many vendors of e-learning software as I can identify. It is not possible to have a comprehensive and completely up-to-date list. Companies go in and out of business and are purchased by other companies. Re-branding is a regular occurrence. Many corporations and universities have built their own proprietary systems and have made them available only in a limited way if at all. I have included those that are commercially and readily available. The focus is on those available in English and for which information is available on the World Wide Web. As a result, there are numerous tools in other languages not listed here. The list evolves monthly as I learn of new products and changes. Though e-learning has been growing worldwide, it is still new in Palestine. One of the driving forces of implementing e-learning in Palestine is due to the blockade on Palestine and the difficult situation that prevails in Palestine. learning in Palestine is still limitedly shared. This is due to the internet facility in Palestine. The internet speed in Palestine is very low where most of Palestine people still using dial up system to connect to the internet. Very few people have ADSL system and they are mostly in big cities. Apart from that, during the early years of e-learning.

However, it was not fully accepted by the Palestine government and ministry of higher education begins to accept this mode of learning. Though the infrastructure for elearning has been improved, many still do not know what factors are critical to ensure the success of e-learning. Thus, this research is keen to find out what factors are critical for elearning success, especially in the educational context.

1.1 Problem Statement:

This study focused the factors and difficulties of Al Quds Open University to use elearning, The field of university education in the continuous development of curricula methods and means, and strategies. The dealing of this practice at University, where elearning and the culture of open learning through the use of new educational model refresh has led to impediments limitation on students which are paved education at among students. This study aims to identify the difficulties found by the students when dealing with e-learning. The delivery of e-learning is constrained by factors that apply to the students needs to the ascertained so as to review any monitors on the part of the students or many control from other elements beyond their control.

According by Dillon and Guawardena (1995) and Leidner and Jarvenpaa (1993), three main variables that affect the effectiveness of e-learning environments includes the technology, instructor characteristics, and student characteristics. Similarly, Selim (2007) also found that learners perceived instructor characteristics as the most critical factor in e-learning success, followed by IT infrastructure and university support. Learner characteristics were perceived as the least critical factor to the success of e-learning.

In another study, Volery and Lord (2000) identified three CSFs in e-learning: technology (ease of access and navigation, interface design and level of interaction); instructor (attitudes towards students, instructor technical competence and classroom interaction); and previous use of technology. Similarly wiring and on multiple case study, Soong, Chan, Chua, and Loh (2001) found that human factors, technical competency of both instructor and student, e-learning mindset of both instructor and student, level of collaboration, and perceived information technology infrastructure are critical for e-learning effectiveness.

In addition three main variables that add impediments to e-learning is the blockade in Gaza Strip and West Bank that deprives thousands of students for education. The continuing policy of siege imposed by Israeli occupation authorities in Palestine, from 06/15/2010 to 30/11/2011. The education prospectus especially e-learning in Palestine in light of the continued and imposition of comprehensive sanction select worked to develop even the requirements of e-learning, internet also compared the crisis in the education (Rigther 2010-2011). Public infrastructure develop prints review frasier Palestine political dialogue remains fragile with progress with education model. (TV, 2011).

In the first half of 2011. The Israeli government has taken steps to ease the blockade on Palestine, which allowed unrestricted import of goods intended for civilian use, the Palestinian Authority in improving the institutional frameworks for and access to electricity and municipal service delivery through substantive analytical pieces and financing sect oral projects. (TV, 2011).

It is clear to identify the factors that will enable e- learning to take hold and activation of education delivering anther such as technology, instructors, students characteristics, and impediments influence the effectiveness of e-learning.

1.2 Research Question:

Based on the problem discussed above, the central question for this study would be (what factors are considered to be critical in determining the effectiveness of e-learning?):

- 1. Is there any instructor characteristics related to e-learning effectiveness?
- 2. Is there any student characteristics related to e-learning effectiveness?
- 3. Is there any technology related to e-learning effectiveness?
- 4. Is there any impediments related to e-learning and effectiveness?

1.3 Research Objectives:

Generally, this study aims to examine factors that influence the e-learning effectiveness at Palestinian Universities. Therefore, to answer the research questions posted above, the following research objectives were formulated:

- 1. To examine the relationship between instructors characteristics and e-learning effectiveness.
- 2. To investigate the relationship between students' characteristics and e-learning effectiveness.
- 3. To determine the relationship between the technology used and e-learning effectiveness.
- 4. To determine relationship between impediments e-learning and effectiveness.

1.4 Significant of Study:

This study select to identify the difficulties of Al Quds University, most importantly the impression of the e-learning in Palestine. this study will produce a useful finding for

empirically analyzing factors needed for e-learning effectiveness and the events to see look at the review education. Specifically, this study is the first step in evaluating the successful implementation of e-learning in the educational context, and establish what need at the overcome. This study can used by e-learning administrator and the academic staffs at of Al Quds Open University to plan necessary improvement and enhancement to the system. Additionally, it can be a guideline in e-learning development purposes, particularly in Palestinian universities. With an added attention imposition of the delivery of e-learning as a means of infrastructure and development of Palestine.

1.5 Scope of Study:

The main focus of this study is to examine factors that are critical for the effectiveness of e-learning in Palestine. The study was conducted using a survey with a cross-sectional emphasis.

1.6 Organization of Chapters:

This chapter is the first of five chapters in this project paper. Chapter 2 reviews the literature on e-learning, explaining their definition and purpose, potential benefits and limitations and the critical success factors.

Chapter 3 presents the method for the study, namely the research framework, and the research design. The chapter also reports the selection of respondents, the development of questionnaire, and data collection procedure. The chapter ends with a brief description of the strategies used to analyze data collected from the survey.

Chapter 4 discusses the interpretation of the research findings. There are reports of the descriptive statistical analysis. The results are summarized in a number of tables to facilitate interpretation.

Chapter 5 discusses the interpretation of the research findings for the study. The findings are compared to those found in the past research reviewed in Chapter 2. New findings are also discussed. The chapter ends with a discussion on limitations of the study.

CHAPTER TOW

LITERATURE REVIEW

2.0 Introduction:

This chapter begins by giving a brief history of distance learning and the changing from distance learning to e-learning after the appearance of computers and the Internet systems world–wide; after that will be an introduction and definition of distance learning and e-learning. This part of the chapter will discuss about perspectives of e-learning and several approaches. Then there will be a discussion on previous research on the advantages and disadvantages of e-learning systems, especially in the educational perspective. The third part of this chapter will introduce effectiveness factors that are based on previous research for e-learning systems. In the last part there will be a discussion of empirical studies on e-learning systems based on effectiveness Factors (Schemes).

2.1 Definition and Purpose of E-learning:

2.1.1 E-learning:

E-learning commonly refers to the intentional use of networked information and communications technology in teaching and learning. A number of other terms are also used to describe this mode of teaching and learning. They include online learning, virtual learning, distributed learning, network and web-based learning. Fundamentally, they all refer to educational processes that utilize information and communications technology to mediate asynchronous as well as synchronous learning and teaching activities. On closer scrutiny, however, it will be clear that these labels refer to slightly different educational processes, and as such they cannot be used synonymously with the term e-learning (Naidu,2006).

E-learning is one of the new learning trends that challenge the traditional "bucket theory" or the 'banking concept' of education (Freire, 1994). "E-learning or electronic learning can be defined as instructional content or learning techniques delivered or facilitated by electronic technology" (Guha&Maji 2008, p297). E-learning also can be viewed as the delivery of course content via electronic media, such as the Internet, intranets, extranets, satellite broadcast, audio/video tape, interactive TV, and CD-ROM (Urdan&Weggen, 2000).

In the background of e-learning it is important to note that there is no single evolutionary tree, and no single agreed-upon definition of E-Learning. Since the 1960s, E-learning has evolved in different ways in Business, Education, the Training sector, and the Military, and currently means quite different things in different sectors. In the school sector, 'E-Leaning' refers to the use of both software-based and online learning, whereas in Business, Higher-Education, and the Military and Training sectors, it refers solely to a range of on-line practices (Nicholson, 2007).

The first talks about e-learning go back to 1994-1995, described as online webbased school/learning systems with administrative follow-up, with real-time classroom instruction and materials provided. Remember also the first digital TV and desktop video systems. From 1997 on were born the LMS-learning management systems. They came from all over the world; hundreds of systems were offered and used. From 2000 to 2004 many new concepts were created and disseminated, more and more came the need to integrate several separate systems like student record systems, library systems, LCMS (learning content management systems), VLE(virtual learning environment) (EF-ODL, 2008).

E-learning has been viewed as synonymous with web-based learning (WBL), Internet-based training (IBT), advanced distributed learning (ADL), web-based instruction (WBI), online learning (OL) and open/flexible learning (OFL) (Khan, 2001). It has the potential to revolutionize the basic tenets of learning by making learning individual-based rather than institution-based. E-learning is training that capitalizes upon the wide variety of new training technologies such as web-based training and CD-ROM. Although any form of e-learning may be useful for geographically-dispersed training audiences, e-learning can also take place on-site, in a self-paced fashion. Online learning is an educational concept that implies using local, extended networks, or the Internet to spread information, to communicate, and to support any other kind of educational interaction between students and teachers. Many other terms, such as e-learning, virtual learning, distance learning, Tele-learning are also used when discussing education (teaching and learning) with the aid of a computer (CAL, standing for Computer Assisted Learning). Although not strictly synonymous, all these terms address the issues of Web-based learning or the use of NICTs (New Information and Communication Technologies), and share the aim of improving flexibility in location and time management for learners. Meanwhile, the blended learning concept also became attractive: the mix of e-learning and classic learning styles (EF-ODL, 2008). The concept of blended learning implies a mixture of traditional teaching and online education (Hadengue, 2004).

Elementary and secondary schools, as well as universities, have capitalized upon new technologies in order to provide courses and sometimes entire degrees to students that are geographically dispersed. To distinguish these college and university efforts from those being undertaken in industry, we refer to this type of coursework as distance education because e-learning requires investment of time and effort in developing new skills, new approaches, and new resources perhaps time and effort that would otherwise be spent on research (KENET, 2004).

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The blockade Is still on Palestine in the Gaza Strip and West Bank deprives thousands of students in education the study addresses the impact of the continuing policy of siege imposed by Israeli occupation authorities of the Palestine, Monitors study, which covers the period from 06/15/2010 to 30/11/2011.

The education and e-learning in Palestine in light of the continued imposition of comprehensive sanctions, Electricity cut off the entry and Prevent the entry electronic equipment necessary to development of e-learning through contact with the world through the Internet and highlights the crisis in the education sector key, and of the inability to build new schools to keep pace with the natural evolution to increase the students, or because of delays in the restoration of schools that were damaged during the attack, by preventing the entry building materials, and the impact on the environment appropriate to the learning process in light of the high rate of students in the ranks of some of the schools, and increase the number of schools operating on double shifts, and the impact on the absorptive capacity of the students. The report monitors the effect of depriving thousands of students and students from the Gaza Strip, an education at the universities of the West Bank, in the disciplines of their choice, which are vital and necessary to the population, because of the continued siege and closure. (Rights, 2010-2011).

No doubt that globalization and rapid changes occurring in the world have thrown its impact on education and human endeavors. Both training and education are considered as a lifelong experience for workforce cross the world. Palestine, in fact, is part of the sweeping globalization and transformation, regardless of its difficult political context and might be because of it. Palestine opened itself up to many international interventions and programs. Hence e-learning is needed and the documentation on e-learning is also needed. There is a very big need for this chapter about the Palestinian environment and lack infrastructure impediments as it is achieving two goals. The first goal is to provide Information data that sheds light on what is going on in Palestine regarding e-learning. This goal will clarify how information technology, e-learning programs, electronic libraries, twining programs, international courses, worldwide research initiatives, electronic homepages, and other tools of communications, are developed in Palestinian schools and universities. The second goal is to explore challenges and obstacles faced and institutions' strategies of coping with these challenges as well as the national policy to develop learning at this particular context. (Mohammad A. MLKKL, 2010).

Public Infrastructure Palestinian political dialogue remains fragile with progress made during the first half of 2011. The Israeli government has taken steps to ease the blockade on Palestine, allowing unrestricted import of goods intended for civilian use, the Palestinian Authority in improving the institutional frameworks for - and access to - electricity and municipal service delivery through substantive analytical pieces and financing sect oral projects. (TV, 2011).

The Society for Gender Studies Palestinian development "pdwsa" conduct a survey statistics under the title "The impact of the siege on the Palestinian family from the standpoint of women", in the period between the months of July, and August / August 2008 on a random sample of 600 women divided the Gaza Strip . (P, 2008)

As for the "The impact of the blockade on education and e-learning," expressed the proportion (56.8%) of women respondents for they believe that the rate of failure among students has increased while the proportion expressed (64.2%) of them for they believe that the siege caused the students to get low rates of study in the siege.

2.1.2 E-learning perspectives:

No one can deny, E-learning has a truly vast perspective. It is a collaborative learning process where people learn from one another. The learner is connected to professionals and experts both in and outside the organization. He can select activities

from a personal learning menu. In e-learning the instructional material and content may be delivered by any or all electronic media including the Internet, intranet, extranet, LAN, Satellite broadcasts, audio/video tapes, CD-ROM and interactive TV. It includes computer-based training (CBT), electronic performance support systems (EPSS) and web-based training (WBT), in addition to distance learning (Guha&Maji, 2008). Moreover, up-front planning is one of the most important elements of e-learning. The user interface has to be intuitive and easy to navigate. Fancy or obscure techniques are better to be avoided, as these tend to discourage the learner. Figure 1.1 explains the various components of e-learning. In short, there will be teaching ends and learning ends technologically and synchronously.



Figure 1.1: E-learning Component, 2008

2.1.3 E-Learning: Growth, Prospects and Trends:

There are several inter-related factors and trends favor the growth of elearning in higher education, both for on-campus instruction and distance learning, as well as in corporate, government and other training programs. More than half of the college and university classes on US campuses use e-mail, Worldwide Web (www) materials, or other Internet applications. The University of Delhi in India is using satellite technology to beam and transmit classroom lessons from one campus to another (Guha&Maji, 2008).

Moreover, part-time degree students with jobs or other responsibilities, along with recognized needs for adult/continuing education, go for off-campus distance learning at times and places conveniently suited to the individual, compared to other distance learning media. Distance learning is training that takes place largely synchronously; that is, the material is delivered to all participants at the same time even though participants are separated by geographical distance. The US Distance Learning Association defines distance learning as "the delivery of education or training through electronically mediated instruction including satellite, video, audio, audio graphics, computers, multimedia technology and learning at a distance" (Leonard, 1996). In the practitioner literature, few authors separate distance learning from the broader concept of e-learning.

Internet-based e-learning shifts the power from suppliers to customers, and thus is likely to promote more vigorous competition. This does not necessarily mean that higher education and training will become marketable commodities but rather the students with different backgrounds and varied needs and preferences will be able to select from a broader range of instructional alternatives than at present (Guha&Maji, 2008).

E-learning also encourages "opening out" and ensuring greater efficiency of different instructional elements: content development course delivery, evaluation and testing, as well as such administrative functions like registration, payment and student record-keeping. The University of Fern at Hagen in Germany is one such virtual classrooms simulate the "real" classroom with good example where mechanisms and facilities for libraries and student queries. Comparisons between traditional classrooms and e-learning indicate the following differences (Primelearning, Inc, 2001):

- Location: (i.e., e-learning can be done anytime and anywhere, whereas traditional classes are dependent on certain times and locations).
- Content: (e-learning can use audio, animation, video, simulation, online resources and communities whereas traditional classrooms often rely on presentation slides, textbooks, and video).
- Personalization: (e-learning allows the learning pace and path to be determined by the user whereas traditional classrooms require only one learning path for all students).

In addition, the development of the Internet and the World Wide Web have signaled the beginning of a new era for distance learning, as developers became able to easily and cost effectively extend the reach of their courses to a global audience.

On the other hand, one reason for the dynamic growth in online distance learning is that Internet -based distance teaching allowed educators to address the major drawback of using CDROMs and radio or broadcast television for instruction namely, the lack of a two-way communications channel between teacher and student (Ninth Bridge, 2006). Multimedia technologies and Internet-based training are beginning to facilitate more individualized, learner-based educational efforts, and collaborative technologies are allowing new environments for learning, such as virtual learning communities.

Today, courses using a variety of media are being delivered to provide specialized courses to students in remote geographic areas, to open educational resources to a broader population, and to enhance interactions between students and teachers. Learners can take entire self-instructional courses over the Internet or on CD-ROM or can participate in facilitated courses where they can interact with the instructor and other learners in real time.

2.2 Benefits and Limitations of E-learning:

E-learning experimental or pilot programs have helped us evaluate the advantages and disadvantages of e-learning in general. E-learning strategies seem to offer a larger amount of information than traditional courses as well as easier access to that information. In addition, both controlled information sources (that is, provided narrowly by the teacher's textbook) and open information sources are available in parallel. This may stimulate critical review and comparison on the part of the learner and enrich the pedagogic process. In fact, the main difference between classical learning and computer-assisted learning courses probably does not lie in their raw contents, but rather in information processing and the channels used to pass such information on. Learning may be further stimulated by interactive and retroactive processes, the visual approach to communication and the enhanced ability on the part of the learner to manipulate information for themselves (Tuovinen, 2000).

In addition, there are many of definitive pedagogic characteristics of New Information and Communication Technologies may also derive from their capacity to enable the performance of different tasks at the same time. For example, a single session of e-learning may well deal with some aspects of information searching, information management, information production and communication, which in traditional courses would usually be approached as quite separate topics. To a significant extent, e-learning may open the way to greater diversity in the learning process through which the student masters the information provided. Finally, elearning can be seen as a significant contributor to greater autonomy in learning in general.

However, e-learning has also been the object of a number of concerns. It is obvious that it requires more technical equipment than traditional courses, though this has become less of a problem since most students now have access to computers and to the Internet. More importantly, a minimal computer literacy rate is usually required before an e-learning course may become effective.

Also, the computer literacy, or "the ability to use applications rather than to program" (Hadengue, 2004) as well as reading and writing abilities, may be of greater importance for an isolated e-learner than for a traditional learner within a classroom. One key concern is certainly how to generate and assess student motivation. If not addressed, usually by tutoring, the motivation of the least autonomous and/or the weakest students may become a significant problem. Thus, in most cases a tutor should help the students with the start-up process and somehow be committed to follow-up. Because it is at variance with preconceived ideas, and at least in the initial steps of most practical courses, e-learning may indeed be as time-consuming as a traditional course. Here is the greatest challenge to e-learning: while providing

unmatched flexibility, with its independence of physical location, permanent access, infinite adaptability, and its endless availability for individual follow-up by the student, e-learning cannot provide a substitute for or even adjust to the failing autonomy and/or learning drive of the student. Therefore, one drawback of e-learning may be that student motivation is a prerequisite – there is no potential benefit from the immediate help of group dynamics or face-to-face interaction with a teacher.

As already alluded to, recognition of skills through the various awarding of degrees, credits or training certificates, which represent strong incentives to students, are seldom offered by universities to e-learning students in information literacy. Indeed, even when valued by students, most such e-learning training courses remain unrecognized within the university curriculum. If lack of recognition does contribute to the sidelining of e-learning, it however remains a factor that can (and should) be effectively addressed by university boards of study.

Finally, it may be noted that ideas developed for commercial marketing have probably skewed the approach of a number of universities to e-learning strategies. Commercial "client-oriented approaches" stress the importance of creating proximity and direct relationships with potential buyers. Obviously, this does not easily transpose to university libraries. Nonetheless, it has sometimes been taken as a weak point of e-learning that it neither relies on nor stimulates direct person-to-person interaction. Again, this can be seen as another reason for stressing the importance of some degree of ancillary tutoring in support of e-teaching.

2.3 E-learning Critical Success Factors:

The purpose of e-learning, like any other learning approach, is to achieve the learning objectives. The objective attainment measures can be environmental, technological, student-related, and instructor-related.

On another hand, e-learning some of the crucial CSFs are technological, such as bandwidth, hardware reliability and network security and accessibility. Another elearning CSF is student engagement in learning models. E-learning models are synchronous (real-time), asynchronous (anytime and anywhere), or a mix of the two. There are numerous tools that instructors can use to adopt an e-learning model; minilectures, electronic/conventional discussion, active/cooperative learning and many others. The third e-learning CSF is student-related. Students must be motivated and committed. In e-learning based courses, students take the responsibility for their learning pace.

In an exploratory investigation of learner perceptions according to Selim (2007), e-learning can be integrated into many university programs. There are several

factors that need to be considered to identify and measure e-learning applications' critical success factors (CSFs) from learner perceptions.

Four CSFs were identified and measured, namely, instructor characteristics, learner characteristics, technology infrastructure and university support. They tested learner's attitude towards using e-learning. A sample of 37 class sections with 538 responses was used to validate the proposed e-learning CSFs. The results revealed that learners perceived instructor characteristics as the most critical factor in e-learning success, followed by IT infrastructure and university support. Learner characteristics were perceived as the least critical factor to the success of e-learning (Selim, 2007) (Figure 2.2).

Students Characteristic Critica Factor		Ι	nstructor Charac	teristic
		l S s (uccess CSFs)	
Technology Infrastructure			Univ Suj	versity oport

Figure 2.2: E-learning CSFs: an exploratory investigation of learner perceptions. Source: Selim (2007)

2.3.1 Instructor Characteristic:

E-learning point toward a revolution in education, allowing learning to be individualized, enhancing students' interactions with others, and transforming the role of the teacher. While the success of e-learning depends heavily on the satisfaction of students and available technologies, satisfaction on the part of the instructor, as a facilitator of learning rather than just a distributor of content, is also important and serves as one of the critical measures for the assessment of effectiveness of programs. In this vein, the purpose of this study is to identify the moderator factors that affect the satisfaction of online faculty in hospitality programs.

In addition, faculty's effectiveness, along with students' effectiveness, is a critical building block of quality (Sloan Consortium, 2002) in online education. Faculty's satisfaction is quite important, given that it affects faculty's motivation, which, in turn, contributes to enhancing students' learning experience. (Webster &Hackley, 1997). Stated that the positive attitude by e-learning instructors toward technology, interactive teaching style, and control over technology contributed to some of the success of effective learning. Selim (2007) also found that instructor's attitude toward interactive learning was the most critical success factor in e-learning. In this vein, this study aims at identifying key determinants of faculty's satisfaction with e-learning courses in hospitality programs.

Moreover, as a facilitator of learning, the role of an instructor in e-learning and their satisfaction with their instruction cannot be underestimated in the process of assuring the learning quality. Faculty satisfaction and student satisfaction are likely to be a function of each other. Several motivating factors of the participation of faculty in elearning have been explored.

By previous studies. The National Education Association (National Education Association, 2000) found that approximately 75% of faculty surveyed had a positive feeling about distance education. (Ulmer, Watson & Derby, 2007). Also found faculty with an experience of teaching distance learning viewed distance education as effective in terms of student performance and instructor-to-student interaction. Faculty members like to teach online, expecting to access more diverse student population (Sloan Consortium, 2006). And perceiving an opportunity for students to engage in highly interactive communication with the instructor and their peers (Sloan Consortium, 2006). Similarly, students' outcome may function as a motivation factor for faculty. According to a study, the level of faculty's satisfaction is higher in courses where student performance is better (Hartman, Dziuban, &Moskal, 2000).

As for all educational endeavors, the instructor plays a central role in the effectiveness and success of e-learning based courses. Collis (1995) and Willis
(1994) believed that it is not the information technology but the instructional implementation of the IT that determines the effectiveness of e-learning. (Webster &Hackley, 1997) proposed three instructor characteristics that affect e-learning success:

- IT competency;
- Teaching style; and
- Attitude and mindset.

Moreover, (Volery and Lord, 2000) suggested that instructors provide various forms of office hours and contact methods with students. Instructors should adopt interactive teaching styles, and encourage student–student interaction. It is so important that instructors have good control over IT and are capable of performing basic troubleshooting tasks.

University students are becoming more diverse and demand for e-learning based courses is increasing (Papp, 2000; Volery& Lord, 2000). Students need to have time management, discipline, and computer skills in order to be successful in the e-learning era. Student's prior IT experience, such as having a computer at home and attitudes towards e-learning, is critical to e-learning success. All we are knew, as stated before, research concludes that e-learning based courses compare favorably with traditional learning and e-learning students perform as well or better than traditional learning students (Beyth- Marom, Chajut, Roccas, &Sagiv, 2003). This shows that students like to use e-learning if it facilitates their learning and allows them to learn anytime, anywhere in their own way (Papp, 2000).

2.3.2 Student Characteristic:

To measure different dimensions of student characteristics, different tools were employed. may include a greater number of factors if research from education theory, behavioral psychology, and cognitive psychology studies are included. In other words, it may be necessary to include human learning research to understand the effects of an online course to student learning accurately. (Eyong B. Kim, 2009)

Student self-motivation student learning style instructor knowledge and facilitation instructor feedback interaction course structure. It includes previous studies published from the years 2000 to 2009. It may be more insightful and valid if a longer time horizon is covered as follows:

- Emotional intelligence is the primary predictor for GPA in online courses.
- Self-discipline/ motivation is significantly correlated with online course grades.

- Among the Big Five personality dimensions, four personality characteristics (conscientiousness, openness to experience, emotional stability, agreeableness)are significant predictors of course grades.
- Student satisfaction of online courses is influenced by student self-motivation, student learning style, instructor knowledge and facilitation, instructor feedback, interaction, and course structure.
- Eight CSFs were identified, such as instructor's attitude towards and control of the technology, instructor's teaching style, student motivation and technical competency, student interactive collaboration, e-learning course content and structure, ease of on-campus internet access, effectiveness of information technology infrastructure, and university support of e-learning activities.

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2.3.3 Information Technology:

Information technology (IT) explosion resulted in changes in education. Elearning integration into university courses is a component of the IT explosion; as a matter of fact IT is the engine that drives the e-learning revolution. The efficient and effective use of IT in delivering e-learning based components of a course is of critical importance to the success and student acceptance of e-learning. So ensuring that the university IT infrastructure is rich, reliable and capable of providing the courses with the necessary tools to make the delivery process as smooth as possible is critical to the success of e-learning. IT tools include network bandwidth, network security, network accessibility, audio and video plug-ins, courseware authoring applications, Internet availability, instructional multimedia services, videoconferencing, course management systems, and user interfaces.

In addition, information technology, has been integrated in many university programs. There are several factors that need to be considered while developing or implementing university curriculums that over e-learning based courses. This paper is intended to specify e-learning critical The efficient and use of IT in delivering e-learning based components of a course is of critical importance to the success and student acceptance of e-learning. So ensuring that the university IT infrastructure is rich, reliable and capable of providing the courses with the necessary tools to make the delivery process as smooth as possible is critical to the success of e-learning. IT tools include network bandwidth, network security, network accessibility, audio and video plug-ins, courseware authoring applications, Internet availability, instructional multimedia services, videoconferencing, course management systems, and user interface.

2.3.4 University Support:

E-learning projects that were not successful in achieving their goals did not have access to technical advice and support (Aldexander, McKemzie, &Geissinger, 1998; Soong etal., 2001). If the technical support is lacking, the e-learning will not succeed. University administration support to e-learning is essential for its success. This study limited the e-learning CSF categories to those that were reported in the literature while including newly used items within each CSF category.

The university support factor is the second wing of the technology factor and was measured using 5 indicators. All the items were related to university support to e-learning initiatives avail-able. The support included library services, help desk, computer labs and

facilities. Students were mostly stewed with university support. The SUP con crematory factor model is given in Fig.3.

The university support section consisted of 5 items (SUP1–SUP5) and all of them were developed to capture the effectiveness and efficiency of the university technical support, library services and computer labs reliability. (look at the concept page 99)



Figure 2.3: Support confirmatory factor model.

2.4 Impediments:

Moreover, that globalization and rapid changes occurring in the world have thrown its impact on education and human endeavors. Both training and education are considered as a lifelong experience for workforce cross the world. Palestine, in fact, is part of the sweeping globalization and transformation, regardless of its difficult political context and might be because of it. Palestine opened itself up to many international interventions and programs. Hence e-learning is needed and the documentation on e-learning is also needed. There is a very big need for this chapter about the Palestinian environment as it is achieving two goals.

The first goal is to provide information data that sheds light on what is going on in Palestine regarding e-learning. This goal will clarify how information technology, elearning programs, electronic libraries, twining programs, international courses, worldwide research initiatives, electronic homepages, and other tools of communications, are developed in Palestinian schools and universities. The second goal is to explore challenges and obstacles faced and institutions' strategies of coping with these challenges as well as the national policy to develop learning at this particular context.

In addition, most of the Palestinian universities are introducing e-learning into their courses either independently or with support of international organizations such as the British Council and JICA (Japan International Cooperation Agency). In 2004, the British Council ran a fully online professional development project between the Islamic University Gaza and Middlesex University. This was concerned with on-line learning environments, webcams and videoconferencing and won the Times Higher Education Supplement e-tutor of the year award. The British Council also organized videoconferencing forums to enable Palestinian policy makers and practitioners to share

experiences and discuss with their UK counterparts such matters as e-learning pedagogy, evaluation and assessment methodologies.

E-Learning is a key part of QOU development strategy (Hodali and Amro, 2004). QOU and ELLUMINATE uses model software to provide online lectures, blended sessions, workshops, discussion circles, and conferences and enable students to access and download course materials, submit assignments and interact with their teachers and fellow students.(look at the concept page 99)

The Impediments over Palestinian education promotes biased learning and is incongruent with typical education systems around the world, As this Impediments focus on the adverse affects of the political conflict in the region to education. Some emphasis will be put on the differences in female and male students in the Palestinian education system, this is not the case. The Israeli government controls all textbooks given to students in schools in the West Bank and Gaza. Also, Israeli soldiers have the right to procure random searches and seizures at universities in these regions. The education system is constantly affected by political turmoil as well. School-wide cancellation is typical in both the West Bank and Gaza because of political conflicts in the regions All of these factors are huge impediments to the level of education given to Palestinian students (Gerner, 1989). The other hand, the collaboration between Palestinian educational organizations is not that common but EU-supported projects have created opportunities for faculty affiliates to collaborate in ICT and e-learning development. Mention was made earlier of the Avicenna Virtual Campus, EUMED CONNECT project and RUFO project. The Avicenna Virtual Campus was designed to accelerate the adoption and use of ICTassisted learning in 11 Mediterranean non-EU Member States. The EUMED CONNECT project concerned with establishing and operating an IP-based network in the Mediterranean region, and RUFO (Inter-University Network for Open and Distance Learning), supported and financed by the General Directorate of Education and Culture of the European Commission, aimed create an inter-university network in Palestine for open and distance learning in connection with European networks.

In this study, and the project, the (2005-2008 RUFO) aimed to create an interuniversity network in Palestine to develop knowledge and skills in open and distance learning in collaboration with European networks. Again, the Palestinian partners were QOU, Al-Quds University, Al-Najah National University, Birzeit University and Palestine Polytechnic University. The European partners were the Basque University, the French Conservatoire National des Arts ET Métiers (CNAM) and University Lille1-Sciences et Technologies, and the Belgian University Libre de Bruxelles. Workshops, study visits, training and project proposals were developed but political events in Palestine made it difficult for the Palestinian Ministry for Higher Education to take charge of the contract and the completion date was revised to early 2009 rather than September 2008 (Hodali, 2007).

2.5 Empirical studies for factors effectiveness e-learning:

There is little research is available on how to measure e-learning effectiveness in this as a brief discussion on the previous research on the subject at of findings.

Volery and Lord (2000) drew upon the results of a survey conducted amongst 47 students enrolled in an e-learning based management course at an Australian university. They identified three CSFs in e-learning: technology (ease of access and navigation, interface design and level of interaction); instructor (attitudes towards students, instructor technical competence and classroom interaction); and previous use of technology from a student's perspective. Soong, Chan, Chua, and Loh (2001) using a multiple case study, verified that the e-learning CSFs are: human factors, technical competency of both instructor and student, e-learning mindset of both instructor and student, level of collaboration, and perceived information technology infrastructure.

They recommended that all these factors should be considered in a holistic fashion by e-learning adopters. According to studies conducted by (Dillon and Guawardena, 1995) and (Leidner&Jarvenpaa, 1993), three main variables affect the effectiveness of e-learning environments: technology, instructor characteristics, and student characteristics. Using a survey on the perception of e-learning among postgraduates enrolled at Curtin Business School, Helmi (2002) concluded that the three driving forces to e-learning are information technology, market demands, and education brokers such as universities.

Moreover, the findings of Volery in his research is divided in six items that are related to the effectiveness of e-learning systems. The first item is related to ease of access and navigation. There was no frustration experienced with access and navigation. The second item is about interfaces. This ergonomic dimension was particularly important since it was discovered that some students could spend up to two hours at a time on the Web site. The third item discusses interaction. The interaction dimension indicates that universities must not attempt to come to terms with the Internet in a fetish way, i.e. to require their lecturers to merely put their lecture notes on the Web. The result of that approach is unfortunately too well-known: lectures become even more rigid and boring. The fourth item of Volery's finding is about attitudes towards students. The instructor must show some empathy towards students both in a face-to-face setting and in cyberspace. This implies, among other things, handling e-mail queries rapidly and solving emerging problems efficiently in a remote fashion. A fifth item is about instructor technical competence. The lecturer is not only the repository of knowledge but he or she can play an important role alongside the Internet as a knowledge navigator. The last item of this finding is about classroom interaction. The Internet, however, allows a new level of interactivity as it eliminates the temporal and spatial rigidity of office hours or class meeting times. It will virtualized the walls of the university, creating "elsewhere' learning.

In other hand of research, which was done by Webster and Hackly in 1997, twelve hypotheses were proved by their research. The reliability of the technology used in distance learning should relate positively to learning outcomes; the quality of the technology used in distance learning should relate positively to learning outcomes.

After this results, the students will perceive the technology used in distance learning to be a less-rich medium than traditional, face-to-face instruction in original sites; they will perceive the technology used in distance learning to be richer than those at remote sites will perceive it to be. Students in courses using full-motion video will perceive the technology used in distance learning to be richer than students in courses using compressed video will perceive it to be. They will report higher learning outcomes to the extent to which they perceive the technology used in distance learning to be rich.

Moreover, the students will experience more positive learning outcomes from technology-mediated distance learning with fewer student locations and instructors who exhibit more interactive teaching styles and control over the technology; they are more comfortable when their images are displayed on a screen and would experience more positive learning outcomes from technology-mediated distance learning.

To the extent that classmates have positive attitudes toward the technology used in distance learning, students will experience more positive learning outcomes, and that instructors have more positive attitudes toward the technology used in distance learning, students will be likely to experience more positive learning outcomes.

All influences on technology-mediated distance learning outcomes are related to at least three of the seven outcome variables. Perceived medium richness is related to all seven outcome variables. Thus, to the extent that instructors can exploit the full richness of the media available to them, students should experience more positive learning outcomes. Further, since medium richness is partially perceived, instructors can exhibit attitudes and behaviors that are consistent with a rich medium.

On another hand, influences on outcomes were students' comfort with their images on the screen (relating to six outcomes), instructor control over the technology (relating to five outcomes), and the quality of the technology, instructor's attitudes, and teaching style (all relating to four of the seven outcomes). Thus, in practice, instructors should build on opportunities for students to become comfortable with the technology employed for distance learning, learn to control the technology, project positive attitudes, and use interactive teaching styles.

On other research, done by (Ozkan, Kosler and Baykal, 2009) had fourteen findings. This research had been motivated by the desire to gain a better understanding of the assessment of e-learning applications. Primary contribution of this research study is to find out how to define, assess, and promote e-learning success.

Users are positively influenced by the popularity (trend) of learning management systems and distance learning applications in the online environment and their satisfaction will positively influence perceived net benefits in the learning management system context, the quality and manipulation of e-learning systems is positively related with users' perceived enjoyment toward e-learning systems.

Learner attitudes toward computers will positively influence perceived elearner satisfaction from learning management systems providing a valid/authoritative certification/diploma, and would influence learners positively. Learner's study habits are positively related with learner's perceived effectiveness from a learning management system. Learners' perceived satisfaction toward e-learning is positively related to instructor's rapid responses to learner's needs, instructor's self-efficiency toward content and learning management systems, instructors' communication abilities and the capability of instructors to follow up learner problems and provide solutions to learner problems.

Three items will positively influence perceived e-learner satisfaction with elearning. The first item is system quality, the second item is information quality and the third item is service quality. Finally e-learning system's reliability is positively related with learners' perceived effectiveness.

Holsapple and Lee-Post's e-learning success model is adapted from DeLone and McLean's (2003). DeLone and McLean identified six dimensions of success factors: system quality, information quality, use, user satisfaction, individual impact, and organizational impact. These were incorporated into their original overall success model shown in Figure 2.3.



Figure 2.4: DeLone and McLean's information system success model

Holsapple and Lee-Post's e-learning effective Model makes the process approach explicit to measure and assess success. Their model also includes success metrics developed specifically for the e-learning context being investigated. They use the process approach to posit that the overall success of e-learning initiatives depends on the attainment of success at each of the three stages of e-learning systems development: design, delivery, and outcome analysis. Success of the design stage is evaluated along three success factor dimensions: system quality, information quality, and service quality.

Success of the delivery stage is evaluated along two success factor dimensions: use and user satisfaction. Finally, success of the outcome stage is evaluated along the net benefits dimension. The arrows shown in Figure 2.4 depict the interdependences within the three stages of success assessment. Success of system design is essential to the success of system delivery, which, in turn, affects the success of system outcome.

The success of system outcome, however, has an impact on the success of subsequent system delivery, as indicated by the double arrow linking system delivery and outcome stages (Holsapple and Lee-Post, 2006).



Figure 2.5: The e-learning success model and sample metrics. Source:Hollsopple and Lee-Post (2006)

Moreover, In system design for each major factor some sub-factor is available that is mentioned in the Holsapple and Lee-Post (2006) model. Some sample factors of information quality: well-organized, effectively presented, of the right length, clearly written, useful and up-to-date. There are some available factors for system quality such as easy-to-use, user friendly, stable, secure, fast and responsive. Finally, there are some factors for system quality that are named by Holsapple and Lee-Post (2006) according to their model: prompt, responsive, fair, knowledgeable and available. There is also available in system delivery and system outcome.

For system delivery, in terms of use, factors such as PowerPoint slides, audio, script, discussion boards, case study, practice problems, Excel tutorials, assignments and practice exams. For user satisfaction; overall satisfaction, enjoyable experience, overall success and recommend to others factors mentioned in the model. In the next and the last step there are two major factors in system outcome, the first one is net benefits and the other one is negative aspects. For net benefits some sub-factors are available such as enhanced learning, empowered, time-saving and academic success, and for negative aspects, lack of content, isolation, quality concerns and technology dependence are factors that were introduced.

2.6 Conclusion:

E-learning, or electronic learning, can be defined as instructional content or learning techniques delivered or facilitated by electronic technology. It has the potential to revolutionize the basic tenets of learning by making learning individual-based rather than institution-based (Guha&Maji 2008).

Webster and Hackley (1997) further suggested that the following dimensions can capture the concept of effectiveness: student involvement and participation, cognitive engagement, technology self-efficacy (i.e. the belief that one has the capability to interact with a given technology), perceived usefulness of the technology employed, and the relative advantage or disadvantage of online delivery.

According to studies conducted by Dillon and Gunawardena (1995) and Leidner and Jarvenpaa (1993), three main variables affect the effectiveness of online delivery:

- 1. Technology.
- 2. Instructor characteristics.
- 3. Student characteristics.

In addition, these factors add number four impediments faced by the effectiveness of elearning in society of Palestine, and the blockade Is still on Palestine in the Gaza Strip and West Bank deprives thousands of students in education the study addresses the impact of the continuing policy of siege imposed by Israeli occupation authorities of the Palestine, and e-learning in Palestine in light of the continued imposition of comprehensive sanctions, electricity cut off the entry and prevent the entry electronic equipment necessary to development of e-learning through contact with the world through the Internet and highlights the crisis in the education sector key, and of the inability to build new schools to keep pace with the natural evolution to increase the students, or because of delays in the restoration of schools that were damaged during the war on Palestine and especially in the Gaza Strip, by preventing the entry building materials, and the basic tools needed to develop the infrastructure to keep up with technology in the world in this rapid development.

Finally, on these four major parts of delivery on each e-learning system and impediments the effectiveness e-learning, the research framework and also analysis of the data gathered by the designed questionnaire will follow those four items, and the critical success factors that were introduced before.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction:

The primary in this chapter describes the method for this study. Moreover, this chapter shows, the research design, the sample design, survey materials used in this study. Therefore, this chapter reviews the methods used to study these relationships. In this chapter, an outline of the way in which the research will be conducted is presented. Details of the research design, the methodology for collecting the data, approach and data analysis are presented in this section.

3.1 Research Framework:

The theoretical scheme for this study focuses on : infrastructure of e-learning and model of E-learning Effectiveness.

The link between the dimensions of e-learning and effectiveness. The theoretical framework is show in Figure 3.1, the Instructor characteristics, student characteristics, technology, and impediments are the independent variables, while the e-learning effectiveness is the dependent variable. This study is conducted in an attempt to bridge

the gap by providing a basis for discernment and insight through e-learning effectiveness. The model suggests that increasing the extent of these four factors of e-learning effectiveness.

Independent Variables Dependent Variable



Figure 3.1.Research framework which shows the linkage between independent variables and dependent variable.

3.2 Research Design:

In this design quantitative research was used to examine the relationships between instructors' characteristics, students' characteristics, and technologyused and the elearning effectiveness and impediments among undergraduate students at Quds- Open University Palestine, The study was cross-sectional. The data in this research were collected by the survey method using a questionnaire to study the relationship between the independent variables and the non-independent.

3.3 Operational Definitions and Measurements:

Table 3.1 shows the operational definition of the variables and their measurements. All items in this study were adapted from (Volery and Lord, 2000). (Webster 1997 and Selim, 2007). and (JamilTmesa, 2012).& Mohammad A. MLKKL(2010). In this study, each of the adapted questions asked how strongly the respondents agreed or disagreed with the statement given on a five-point scale wherebySD= strongly Disagree, D= Disagree, N= Neutral, , A= Agree, SA = Strongly Agree

Variables (Dependent and Independent)	Operational Definition	Items	Authors
E-learning effectiveness	Technology effectiveness and student satisfaction	 1.Easy access to Web site. 2. Web site contained useful graphical and features. 3. I felt personally involved in the course. 4. I believe that I will be able to use this technology easily in the future. 5.This type of multimedia technology interferes with 	(Volery and Lord, 2000).& (Webster and Hackley, 1997)

 Table 3.0 : Operational definitions and measurements

		communication in the	
		classroom.	
		6. I would recommend this type of	
		distance learning course to	
		someone else.	
Instructor	Instructors' attitude	1 . The instructor is enthusiastic	Selim (2007) &
characteristics	Towards technology,	, about teaching the class Soong, C	
	teaching style, and	2 . The instructor's style of Chua d	
	control of the	presentation holds me interest	(2001)
	technology	3 . The instructor is friendly	
		towards individual students	
		4 . The instructor has a	
		genuine interest in students	
		5. Students felt welcome in	
		seeking advice/help	
		6. The instructor	
		encourages student interaction	
		7. The instructor handles	
		the e-learning units effectively	
		8. The instructor explains	
		how to use the e- learning	
		components	
		9 I feel the instructor is keen	
		that we use the e-learning based	
		units	
		10 . We were invited to ask	
		questions/receive answers.	
		11. We were encouraged to	
		participate in class.	
		12. The instructor encourages	
		and motivates me to use e-	
		learning	
		13. The instructor is active in	
		teaching me the course subjects	
		via e-learning.	

Student	Student motivation	1. The e-learning encourages me Selim (2007)	
characteristics	to use e-learning,	to search for more facts than the	
	and technical	traditional methods.	
	competency	2. The e-learning encourages me	
		to participate more actively in	
		the discussion than the	
		traditional methods.	
		3. I enjoy using personal	
		computers.	
		4. I use the personal computers	
		for work and play.	
		5. I was comfortable with using	
		the PC and software applications	
		before I took up the e-learning	
		6 My provious experience in	
		using the PC and software	
		applications helped me in the e-	
		applications helped me in the e- learning based courses	
		7. I am not intimidated by using	
		the e-learning based courses.	
		8. I learn best by absorption (sit	
		still and absorb).	
		9. I learn best by construction	
		(by participation and	
		contribution).	
		10. I learn better by construction	
		than absorption.	
		11. I only read messages in the	
		discussion group.	
		12. I do read as well as	
		participate in the discussion	
		group.	
		13. The instructor initiated most	
		of the discussion.	
		14. The students initiated most	
		of the discussion.	
		15. The instructor participated	
Technology	Technology access,	1. Easy on-campus access to the	Selim (2007)
	navigation and	Internet.	
	interface and	2. Did not experience problems	
	technology	while browsing.	

	infrastructure reliability and effectiveness.	 Browsing speed was satisfactory. Overall, the website was easy to use. Information was well structured/presented. I found the screen design pleasant. I could interact with classmates through the web 	
		8. I could easily contact	
- -	T 1'	the instructor.	
Impediments	Impediments access, navigation and interface and infrastructure reliability and effectiveness.	 The impediments the e- learning units effectively Policy crossings closures make Poor infrastructure e- learning Crossings closures make the instructor handles the e-learning units effectively I full comfortable with using the PC and software policy crossings closures Easy on-campus access to the Internet with crossings closures Did not experience problems while browsing with power outages I could easily contact the instructor with crossings closures 	(Mohammad A. MLKKL, 2010).

3.4 Hypothesis in this research:

H1: There is a significant relationship between instructor characteristics and e-learning effectiveness.

H2: There is a significant relationship between student characteristics and e-learning effectiveness.

H3: There is a significant relationship between technology and e-learning effectiveness.

H4: There is a significant relationship between impediments and e-learning effectiveness.

3.5 Data Collection:

3.5.1 Background of Organization:

The idea of the establishment of the University started in 1975 based on the needs of the Palestinians for higher education, and taking into consideration their demographical, social and economical situations under the Israeli occupation.

In 1991 when the University undertook its educational services with it headquarters in Jerusalem. It spread its educational regions and study centers in major Palestinian cities that included few hundred learners. This stage was especially hard and difficult because it coincided with the first Palestinian Intifada (Uprising) that started in 1987 and continued for six years. The University suffered a lot because of the destructive economic consequences of the First Gulf War on the Palestinian population and the Arab Nation. Despite the unavoidable bad circumstances and hardships, the University continues to function because of the faithfulness of its administration to the principles and mission of the University. The ideas of steadfastness and struggle have been taken from the historical leadership of the people of Palestine. Every Palestinian is now sure that the University always remains a source of knowledge to every Palestinian home.

3.5.2 The mission of Al-Quds Open University:

The university commitment to carrying out the philosophy, principle and methods of open education and open learning according to the latest cognitive and technological developments, Taking care to make the level of both the academic programs and graduates equal and competitive to the equivalent levels in local and Arab universities.

In addition, employing a mixture of various instructional media (printed, visual, audio, computerized and electronic) to support open learners, Seeking to implement the principle of total quality at the University and providing the necessary qualified cadres, funds and training, and encouraging research and studies in particular, as well as creative production in general, Developing the professional capabilities of the academic supervisors so they can perform their duties at a high quality level.

3.5.3 Primary data:

Preliminary data is collected on the relationship between the Instructor Characteristics, Student Characteristics, Technology, Impediments and e-learning effectiveness through the self-questionnaire. The questionnaire contains six section the first section (A) contains personal background, The second part (B, C, D, E, F) to the dimensions of Independent Variables.

3.5.4 Population and Sampling:

The sampling frame for this study includes all the undergraduate students at Al-Quds Open University, Palestine. In selecting the research sample, there were no restrictions on the types of students, but the respondents had to be involved directly with the e-learning. The total number of students who are currently using e-learning at the university 847 Out of 1713 male,1703 and female students(University, 2010) But, for reasons of difficult access to location and barriers, only students living in Al-Quds Open University were chosen for this study. Therefore, all the 211 undergraduate students living in were taken as the sample for this study.

3.5.5 Data collection Techniques:

Survey was used to gather primary information regarding the factors that are perceived to influence the e-learning effectiveness. Acknowledging the cultural differences and since teaching is carried out in Arabic, all the survey materials were prepared in Arabic. The Arabic version was translated using back translation to English. Each participant in this study received a six page questionnaire. The survey materials used in this study are shown in Appendix A.

3.5.6 Research Instrument:

The six page questionnaire consisted of six sections. Section A asked about personal background and demographic, section B instructor characteristics there were 13 items. Section C asked about students' characteristics which consist of 15 items. In Section D, there were 8 questions on e-learning technology. In section E, asked about impediments, there were 7 items. The final In section F, asked about e-learning effectiveness there were 6 items.

3.5.7 Data Collection Procedures:

The data collection was conducted from early February until early 2012. The process begins by obtaining permission from the university to conduct the study and to

get the list of e-learning students. A representative was appointed tohelp researcher in distributing and collecting the questionnaire.

3.5.8 Data Analysis Technique:

The 211 questionnaire was distributed, and are potentially available for analysis. To answer the objectives of this study, analysis will be in the event of getting an answer using descriptive statistics and the relationship of independent variables and dependent variable were tested using correlation analysis. The analyses will be conducted using (SPSS) version 16.0 program for Windows.

3.5.9 Descriptive Statistics:

Respondents' demographic variables including gender, age, highest educational, years experience, were analyzed using descriptive statistics, such as frequencies and percentages.

3.6Conclusion:

This chapter has explained the research method and strategy of the study. It described the research framework, the sample of the study, the selection of respondents, the development of questionnaire, the research materials, and the survey procedure. This chapter also briefly explains the adoption of correlation analysis and descriptive statistics. The results of the study are reported in Chapter 4.

CHAPTERFOUR

FINDING

4.0 Introduction:

This chapter four puts outlines the results of the analysis of data obtained from the data that was collected from the participants. The major purpose of this research is to examine the association between the dimensions of e-learning and effectiveness as a variable dependently, and the Instructor characteristics, student characteristics, technology, and impediments are the independent variables. The chapter begins by reporting the demographic characteristics of the respondents. It then presents relationship between the research a variables independently and dependent variable . Also this study aims to achieve the objectives of the research, as well as answers to research questions highlighted in this chapter.

4.1 Demographic Characteristics of the Participants:

4.1.1 Respondent According to Gender:

Of the 211 respondents in this research 134 or 63.5% were male and 77 or 36.5% were female. Looking into this it shows that there were 57 more men who responded than

women who can also be a concluding factor that AL-Quds Open University in Palestine has a large number of males as compared to women who are students in the university.

Gender	Frequency	Percent
Male	134	63.5
Female	77	36.5
Total	211	100.0

 Table 4.1: Frequency Distribution of Gender



4.1.2 Respondent's Age:

In terms of age, 3 respondents or (1.4%) of the total between 18-22 years, whereas 43 respondents (20.4%) were within the age of 23-26 years, 82 respondents (38.9%) were within the age of 27-30 years. Only 83 respondents More than 30 years old and represent (39.3%) from the total respondents.

Age	Frequency	Percent
18-22	3	1.4
23-26	43	20.4
27-0	82	38.9
More than 30	83	39.3
Total	211	100.0

 Table 4.2: Respondent Frequency According to Age



Age

4.1.3 Respondent according to Experience:

As regards the duration of the experience, has been the majority of respondents, 72 or (34.1%) of respondents students with AL-Quds Open University were within have experience of 1-3 years, whereas 55 respondents (26.1%) were within have experience of 4-1 years, 47 respondents (22.3%) were within have experience of less than 1 year, 22 respondents (10.4%) were within have experience of More than 6, Only 15 respondents don't have experience 15 years old and represent (7.1%) from the total respondents.

Experience	Frequency	Frequency
Don't have experience	15	7.1
less than 1 year	47	22.3
1-3	72	34.1
4-6	55	26.1
More than 6	22	10.1
Total	211	100.0

Table 4.3: Respondent Frequency According to Experience



4.2 Reliability Analysis:

Reliability is one of the most important elements of test quality. There are several statistical indexes that may be used to measure the amount of internal consistency for any study. The most popular index (and the one reported in Testing & Evaluation's item analysis) is referred to as Cronbach's alpha. (Wikipedia, 1951)

According to Cronbach's alpha the result for this study, it is desirable the a reliability coefficient of .70 or higher, as the following in this table:
Independent Variables	NO of Item	Cronbach's Alpha
IC	13	0.764
CS	15	0.716
Т	8	0.733
Ι	7	0.718

Table 4.4 : Respondent reliability analysis independent variables

4.3 Descriptive Analysis:

The Descriptive analysis of the independent variables(Instructor Characteristics, Student Characteristics, Technology, Impediments), and e-learning effectiveness are discussed in section 4.2.1 to 4.2.4.service.

4.3.1 Instructor Characteristics:

There were 13 questions on Instructor Characteristics ranged from 2.9336to 3.3791. The standard deviation ranged from .85764to .84531on the 13 questions that were answered on instructor characteristics. A detailed description of this information is shown in the table 4.5 below.

Instructor Characteristics	Ν	Mean	Std. Deviation
The instructor is enthusiastic about teaching the class	211	3.3791	.84531
The instructor's style of presentation holds me interest	211	3.2464	.97836
The instructor is friendly towards individual students	211	3.3839	.86849
The instructor has a genuine interest in students	211	3.3318	.84361
Students felt welcome in seeking advice/help	211	3.2654	.79309
The instructor encourages student interaction	211	2.9479	.72094
The instructor handles the e-learning units effectively	211	3.1232	.83950
The instructor explains how to use the e- learning components	211	3.0521	.92094
I feel the instructor is keen that we use the e-learning based units	211	2.9336	.85764
We were invited to ask questions/receive answers	211	3.3744	.83717
We were encouraged to participate in class	211	3.1232	.79863
The instructor encourages and motivates me to use e- learning	211	3.0900	.88235
The instructor is active in teaching me the course subjects via e-learning	211	3.3128	.94471

Table 4.5: Mean and standard deviation for instructor characteristics

4.3.2 Student Characteristics:

The mean and standard deviation of emphasis of rewards is tabulated in table 4.6 . From Table 5 we have 15 questions were used to determine the perceived ease of use in student characteristics and the mean range for this was between 2.9953and 3.5687. The standard deviation was .83273which was the lowest and a highest was .98433.

Table 4.6: Mean and standard deviation for Student Characteristics

Student Characteristics	Ν	Mean	Std. Deviation
The e-learning encourages me to search for more facts than the traditional methods	211	3.2986	.76150
The e-learning encourages me to participate more actively in the discussion than the traditional methods	211	2.9953	.83273
I enjoy using personal computers	211	3.1469	.80283
I use the personal computers for work and play	211	3.1422	.95178
I was comfortable with using the PC and software applications Before	211	3.2464	.81870
I took up the e-learning based courses	211	3.4502	.84638
My previous experience in using the PC and software applications helped me in the e-learning based courses	211	3.1374	.97843
I am not intimidated by using the e-learning based courses	211	3.1469	.95303
I learn best by absorption (sit still and absorb)	211	3.4171	.71529
I learn best by construction (by participation and contribution)	211	3.2370	.85251
I learn better by construction than absorption	211	3.1611	.92471
I only read messages in the discussion group	211	3.2938	.87948
I do read as well as participate in the discussion group	211	3.3460	.77940
The instructor initiated most of the discussion	211	3.1517	.84367
The students initiated most of the discussion	211	3.5687	.98433

4.3.3 Technology:

Performance oriented had a mean range of 2.9763 as the lowest and a 3.3318 mean as the highest on all the 8 questions that were asked. The standard deviation was .79195 as the highest on all the 8 questions asked and the lowest was .93234. The table below shows the analysis that was made.

Technology	Ν	Mean	Std. Deviation
Easy on-campus access to the Internet	211	2.9953	.82915
Did not experience problems while browsing	211	3.0569	.76507
Browsing speed was satisfactory	211	3.2749	.89110
Overall, the website was easy to use	211	2.9194	.88294
Information was well structured/presented	211	2.9763	.79195
I found the screen design pleasant	211	3.2085	.97022
I could interact with classmates through the web	211	3.3318	.93234
I could easily contact the instructor	211	3.2085	.87022

Table 4.7: Mean and standard deviation for Technology

4.3.4 Impediments:

Impediments was assessed to see the mean and standard deviation in all the 7 questions. Based on table 4.8 below the highest mean range on the entire question asked was 3.0427 and the highest standard deviation was .82847

Impediments	Ν	Mean	Std. Deviation
The impediments the e-learning units effectively	211	3.0427	.82847
Policy crossings closures make Poor infrastructure e- learning	211	3.3318	.79611
Crossings closures make the instructor handles the e- learning units effectively	211	3.1422	.80153
I full comfortable with using the PC and software policy crossings closures	211	3.1848	.90893
Easy on-campus access to the Internet with crossings closures	211	3.1659	.92951
Did not experience problems while browsing with power outages	211	3.2370	.86143
I could easily contact the instructor with crossings closures	211	3.2370	.83122

Table 4.8: Mean and standard deviation for impediments

4.3.5 E-learning Effectiveness:

E-learning Effectiveness variable had 6 questions and had a mean range of 2.9716 and 3.2085 which is the lowest and the highest range. The standard deviation also was .88672 and .95018 which is the lowest and highest standard deviation as shown in the table 4.9 below.

E-learning Effectiveness	Ν	Mean	Std. Deviation
Easy access to Web site	211	3.0379	.88649
Web site contained useful graphical and features	211	2.9905	.72425
I felt personally involved in the course	211	3.1374	.97497
I believe that I will be able to use this technology easily in the future	211	3.2085	.95018
This type of multimedia technology interferes with communication in the classroom	211	3.1185	.88020
I would recommend this type of distance learning course to someone else	211	2.9716	.88672

Table 4.9: Mean and standard deviation for e-learning effectiveness

4.4 Correlation Analysis:

A correlation test is conducted to determine the relationship between the independent and

dependent variables.

4.4.1 The relationship between instructor characteristics and e-learning effectiveness:

The correlation between instructor characteristics and e-learning effectiveness. are shown in table 4.10. From the table it can be noted that there is a significant correlation between instructor characteristics and e-learning effectiveness. Significant positive relationship is observed between instructor characteristics and e-learning effectiveness (.452). We therefore accept H1 that There is a significant relationship between instructor characteristics and e-learning between instructor characteristics and e-learning between instructor characteristics and e-learning effectiveness (.452). We therefore accept H1 that There is a significant relationship between instructor characteristics and e-learning effectiveness.

Correlations		IC	ELE
	Pearson Correlation	1	.452(**)
Instructor Characteristics	Sig. (2-tailed)		.000
	Ν	211	211

Table 4.10: Correlation between instructor characteristics and e-learning effectiveness

4.4.2 There is a significant relationship between student characteristics and learning effectiveness:

It can also be seen in Table 4.11 that Innovation is positively and significantly correlated with student characteristics and e-learning effectiveness. with a correlation of .431 that there is a significant relationship between student characteristics and e-learning

effectiveness. from the data that was gathered from the questionnaires answered by students inAl-Quds Open University. We therefore accept H2 that there is a significant relationship between student characteristics and e-learning effectiveness.

Table 4.11: Correlation between student characteristics and e-learning effectiveness.

Correlations		SC	ELE
	Pearson Correlation	1	.495(**)
Student Characteristics	Sig. (2-tailed)		.000
	Ν	211	211

4.4.3 There is a significant relationship between technology and e-learning effectiveness:

As displayed in Table 4.12, the results indicate that there is a significant and positive relationship between technology on rewards and e-learning effectiveness. (.563). We therefore accept H3 There is a significant relationship between technology on rewards and e-learning effectiveness. Table 4.12: Correlation between technology on rewards and e-learning effectiveness

Table 4.12: Correlation	ı between	technology a	and e-learning	effectiveness.
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Correlations		Т	ELE
	Pearson Correlation	1	.563(**)
Technology	Sig. (2-tailed)		.000
	Ν	211	211

4.4.3 There is a significant relationship between impediments and e-learning effectiveness:

As shown in Table 4.13, impediments oriented is positively and significantly correlated

withe-learning effectiveness. (.585). In summary, the findings accepted H4 that There is

a significant relationship between impediments and e-learning effectiveness.

Correlations		Ι	ELE
	Pearson Correlation	1	.585(**)
Impediments	Sig. (2-tailed)		.000
	Ν	211	211

Table 4.13: Correlation between impediments and e-learning effectiveness.

4.5 Summary of Chapter:

This chapter provides the statistical results and interpretation of the findings from the information that was collected. Characteristics of the sample were explained in terms of (Gender, Age, And experience), The mean and standard deviation of deviation of each variable were then analyzed .

Finally the results of the correlation between the dimensions of e-learning and effectiveness as a variable independently, and the Instructor characteristics, student characteristics, technology, and impediments are the dependent variable were given.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.0 Introduction:

This chapter discusses the findings of the study based on the research questions developed as well as different literature reviewed and the objectives developed in Chapter. This study provides identification of factors critical to e-learning effectiveness. The first section is the discussion followed by the second section on limitation of research. The third section is the recommendation for future study, and finally the fourth section on the conclusion of study.

5.1 Discussion:

The idea of this study to determine there was any relationship between the four dimensions of e-learning and effectiveness as a variable dependently, and the Instructor characteristics, student characteristics, technology, and impediments are the independent variable. After measuring the four dimensions, and e-learning effectiveness allowed us to understand the relationship between the four dimensions as a whole and e-learning effectiveness. The results of this study is positively related to students e-learning effectiveness. With the recognition that of the four dimensions suggest positive reactions toward greater e-learning effectiveness.

5.1.1 Instructor Characteristics and E-learning Effectiveness:

The results show that there was an association between instructor characteristics and e-learning effectiveness. Past researches conducted by Volery and Lord (2000) and Ozkan, Kosler and Baykal (2009) have demonstrated these relationships, and this study confirmed previous findings. The findings indicated significant positive relationship is observed between e-learning Effectiveness and Instructor Characteristics (.452). that the role of instructor in e-learning is important in determining its success. This is may be due to the fact that the amount of time instructor takes to upload learning materials in the system, or to answer students' questions, and the instructor's involvement in the discussion may motivate students to engage with e-learning and thus, increase students satisfaction level with the system. In other words, instructor who has a positive attitude to experience a more positive learning outcomes. And impediments faced by students in this study.

5.1.2 Students Characteristics and E-learning Effectiveness:

Students' characteristics such as students' motivation to use e-learning technology and students' computing competency have also found to be related with e-learning effectiveness. This finding is in accordance with Volery and Lord's (2000), Ozkan, Kosler and Baykal's (2009) and Webster and Hackly's (1997) studies. In this study, it is found that both students' computing competency and students' motivation to use e-learning have strong relationship with e-learning effectiveness. The findings suggest that are also positive correlation between students characteristics and e-learning effectiveness (.495). Moreover, students who have the necessary computer skills or having computers at home tend to be more satisfied with the e-learning. Therefore, to attract students who did not have computer background, it is suggested that the university provides free training or prepare a comprehensive manual book on how to operate the e-learning.

In another hand, to improve and sustain students' motivation in using e-learning, it is suggested that both administrators and instructors to give more attention on the creation of tasks, material and feedback mechanism and also on course structures, processes and requirements. E-learning that offers interesting tasks and materials, provides additional student support services like creating a learning community for student-student and student-instructor interactions, and provides good assessment methods and feedback may motivate students to use e-learning.

5.1.3 Technology and E-learning Effectiveness:

The study shows that technology quality in terms of access, navigation, interface and the reliability and effectiveness of technology infrastructure have the highest relation to e-learning effectiveness as compared to other two factors. This findings is similar to Webster and Hackly (1997), Ozkan, Kosler and Baykal (2009) and Holsapple and Lee-Post's (2003) studies.

The results suggest there are relationships between the Technology and e-learning effectiveness is positive (.563). Moreover, technological aspect is one of the key successes of e-learning. Thus, the administrator of the university need to ensure that the technology use for e-learning provide convenient access to students, required minimal time for document exchange, have good user interface such as ease of use, navigation, cognitive load, mapping, screen design, and information presentation.

5.1.4 Impediments and E-learning Effectiveness:

Palestine needed e-learning. There is a very big need for this chapter about the Palestinian environment imposition Infrastructure comprehensive sanctions, and prevent the entry electronic equipment necessary to development of e-learning through contact with the world through the Internet and highlights the crisis in the education sector key, The second goal is to explore challenges and obstacles faced and institutions' strategies of coping with these challenges as well as the national policy to develop learning at this particular context. (Mohammad A. MLKKL, 2010) and of the inability to build new schools to keep pace with the natural evolution to increase the students, or because of delays in the restoration of schools that were damaged during the attack, by preventing

the entry building materials, and the impact on the environment appropriate to the learning process in light of the high rate of students in the ranks of some of the schools, and increase the number of schools operating on double shifts, and the impact on the absorptive capacity of the students. The report monitors the effect of depriving thousands of students and students from the Gaza Strip, an education at the universities of the West Bank, in the disciplines of their choice, which are vital and necessary to the population, because of the continued siege and closure. (Rights, 2010-2011). The results suggest there is a significant and positive relationship between Impediments and e-learning effectiveness (.585).

Moreover, Palestinian infrastructure needed to support and achieve two goals to treatment impediments. The first goal is to provide Information data that sheds light on what is going on in Palestine regarding e-learning. second goal will clarify how information technology, e-learning programs, electronic libraries, twining programs, international courses, worldwide research initiatives, electronic homepages, and other tools of communications, are developed in Palestinian schools and universities.

The Most universities trendy today, depends on the type of tools e-learning, and the traditional role of universities will change to pieces, and education programs in place will be more open to adopt the open programs and default programs for certain courses, and e-learning in the future will be integrated for all types of universities and programs that are offered, and will be used normally, will not return e-learning something special and separate from the system-based learning and teaching, but will be a natural and integrated part with him, so as not to be referred to him as something separate.

E-learning has become for the time being, something essential, as the addition of elearning infused learning system of strategic importance in our society, especially in the universities on two levels:

- Institution: Change some of the patterns of traditional education to further the use of educational technology available.
- Students: To facilitate students' learning process (follow-up, communication, interaction, etc ...).

5.2 Study Limitations:

The results discussed in this chapter are preliminary and should be accepted with some reservations. Researchers are aware that there are some limitations and obstacles that must be considered in the investigation in the future First, the study was conducted in one university and thus, the findings cannot be generalized to other university using elearning mode of study. Another limitation was related to utilization of only survey as a method of data collection. The used of triangulation method which include interviews with students, academic staffs, and administrators; observation of the e-learning that took place and analyzing historical documents such as students' and academic feedback reports concerning the use of e-learning, so it is necessary to be cautious in conclusions regarding causality, and may allow researcher to develop a rich understanding of the effectiveness of the system.

In summary, while there are some limitations and obstacles that must be considered in the investigation associated with the approach Palestinian education are used here and given the exploratory nature of the study, the results of this research provide useful findings that should be of interest to both researchers and practitioners.

5.3 Recommendation for Future Research:

E-learning indicates the use of to improve Infrastructure learning in higher education. However, it may contain a myriad of systems, from students employing e-mail and accessing course work online while taking course to programs offered totally online to the students but the present study was exploratory in nature, and given the small sample size, it would be beneficial for future research to consider the following suggestions:

5.3.1 Technical requirements such as:

1. Technological infrastructure, high-capacity range, a strong server and special software, such as education management software (LMS). And some organizational and administrative buildings, systems and modern management.

- Support many elements of e-learning effectiveness in the study in order to gain a more complete understanding regarding the factors needed for the system;
- 3. The development of solutions barriers and challenges to the usage of e-learning that may be correlated with the e-learning effectiveness;
- Emphasis on spreading the culture of e-learning and promote the concept of civil society institutions and institutions of public education, higher education and in society in general.
- 5. Develop design the curricula of different academic levels, under supervision of a group specialists in educational curricula teaching methods, and computer software designers, to cope with keep pace with requirements of knowledge age.

5.3.2 The humanity requirements:

- 1. Provision experts in all control system, and special training for lecturers and students covered by the system;
- 2. Expand the study to include students and academic staff from other universities so as to enhance the consistency of the results;
- Support requirements the present study but with large and more diverse group of e-learning users that include the academic staffs of the university;
- 4. Can used other method of data collection such as interview to gain more in-depth view of the system.
- 5. Expedite completion of the infrastructure systems, e-learning in all areas of Palestinian universities, and work to achieve integration of all educational

systems management in universities related to the educational process directly, also adoption of technical specifications standard modern of all the techniques used to ensure maximum benefit of e-learning systems.

5.4 Conclusion:

This chapter has discussed results of the study in light of the literature and limitations. The aim of this study was to examine factors that are critical for e-learning effectiveness. The results indicate that instructor characteristics, student characteristics, technology and Impediments, were all important for e-learning to be effective. However, the findings must be interpret with through the examination of factors that contribute to the e-learning effectiveness, a more complete understanding of the kind of factors needed to enhance the usage of e-learning will be achieved.

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Appendices

Appendices (A) Questionnaire

Appendices (B) Abbreviation

Appendices (C) Descriptive

Appendices (D) Reliability

Appendices (E) Correlations

Appendices (A) Questionnaire



COLLEGE OF BUSINESS UNIVERSITI UTARA MALAYSIA E-learning in Educational Context

Dear Participant,

Thank you for agreeing to participate in this research.

We would appreciate it very much if you could answer the questions carefully as the information you provide will influence the accuracy and the success of this research. It will take no longer than 30 minutes to complete the questionnaire. All answers will be treated with strict confidence and will be used for the purpose of the study only.

I hope you will be able to assist me by completing the enclosed questionnaire. All information provided will be treated as private and confidential. It will be solely used for the purposes of my project paper (BPMZ6996). As is normally in academic research, I shall not disclose the names of individuals who provided me with particular information. All data will be analyzed in a collective manner and not attributed to named individuals.

If you have any questions regarding this research, you may address them to me at the contact details below.

Thank you for your cooperation and the time taken in answering this questionnaire.

Yours sincerely,

SARI A. A . ALAKKLOUK (808903) MSc Management Candidate Universiti Utara Malaysia H/P: +60-195185904 E-mail: <u>sare.sare22@hotmail.com</u> Please indicate the degree of your agreement or disagreement with each statement, and put() for any option into the box the appropriate number.

SD= strongly Disagree, D= Disagree, N= Neutral, , A= Agree, SA = Strongly Agree

SECTION A : PERSONAL BACKGROUND Please tick () the given box OR fill in the blank that represents your answer:				
1. Gender:				
1. \Box Male \Box 2.Female				
2. Age:				
1. \Box 18-22 years old 2. \Box 23-26 years old.				
3. \Box 27-30 years old 4. \Box More than 30 years old.				
4. Since I start my course at AL-Quds Open University, I have completed semesters. (This does not include the current semester).				
5. Number of years experience as e-learning user:				
1. \Box Not I have experience 2. \Box less than 1 year				
3. \Box 1-3 years 4. \Box 4-6 years				
5. \Box Morethan 6 years				

SECTION B : INSTRUCTOR CHARACTERISTICS

Using the following scale, please tick () the given box that represents your <u>most</u> appropriate answer.

		SD	D	N	Α	SA
1	The instructor is enthusiastic about teaching the class	□1	□2	□3	□4	□5
2	The instructor's style of presentation holds me interest	□1	$\Box 2$		□4	□5
3	The instructor is friendly towards individual students	□ 1	□2	□ 3	□4	□5
4	The instructor has a genuine interest in students	□ 1	□2		□4	□5
5	Students felt welcome in seeking advice/help	□1	□2	□ 3	□4	□5
6	The instructor encourages student interaction	□ 1	□2		□4	□5
7	The instructor handles the e-learning units effectively	□1	□2	□ 3	□4	□5
8	The instructor explains how to use the e- learning components	□1	□2	□ 3	□4	□5
9	I feel the instructor is keen that we use the e-learning based units	□ 1	□2		□4	□5
10	We were invited to ask questions/receive answers	□ 1	2		□4	□5
11	We were encouraged to participate in class	□ 1			4	
12	The instructor encourages and motivates me to use e-learning	□ 1	$\Box 2$		4	
13	The instructor is active in teaching me the course subjects via e- learning				4	

SECTION C : STUDENT CHARACTERISTICS Using the following scale, please tick () the given box that represents your<u>most</u> appropriate answer.

		SD	D	N	Α	SA
1	The e-learning encourages me to search for more facts than the traditional methods	1	2		□4	□5
2	The e-learning encourages me to participate more actively in the discussion than the traditional methods	1			□4	□5
3	I enjoy using personal computers	□1	□2	□ 3	□4	□5
4	I use the personal computers for work and play	□1	□2	□ 3	□4	
5	I was comfortable with using the PC and software applications Before	□1	□2	□ 3	□4	□5
6	I took up the e-learning based courses	□1	$\Box 2$	□ 3	□4	□5
7	My previous experience in using the PC and software applications helped me in the e-learning based courses	□1	□2		□4	□5
8	I am not intimidated by using the e-learning based courses	1	□2	□ 3	□4	□5
9	I learn best by absorption (sit still and absorb)	□1	□2	□ 3	□4	
10	I learn best by construction (by participation and contribution)	□1		□ 3	□4	□5
11	I learn better by construction than absorption	□1	□2	□ 3	□4	
12	I only read messages in the discussion group	□1	□2	□ 3	□4	
13	I do read as well as participate in the discussion group	□1	□2	□ 3	□4	□5
14	The instructor initiated most of the discussion	□1	□2	□ 3	□4	
15	The students initiated most of the discussion	□1	□2	□ 3	□4	□5

SECTION D : TECHNOLOGY Using the following scale, please tick () the given box that represents your <u>most</u> appropriate answer.

		SD	D	N	A	SA
1	Easy on-campus access to the Internet	□1	□2	□ 3	□4	□5
2	Did not experience problems while browsing	□1	□2	□ 3	□4	□5
3	Browsing speed was satisfactory	□1	□2	□ 3	□4	□5
4	Overall, the website was easy to use	□1	$\Box 2$	□ 3	□4	□5
5	Information was well structured/presented	□1	□2	□3	□4	□5
6	I found the screen design pleasant	□1	□2	□ 3	□4	□5
7	I could interact with classmates through the web	□1	□2	□ 3	□4	□5
8	I could easily contact the instructor	□1	□2	□ 3	□4	□5

SECTION E : IMPEDIMENTS Using the following scale, please tick () the given box that represents your <u>most</u> appropriate answer.

		SD	D	N	A	SA
1	The impediments the e-learning units effectively		$\Box 2$	□ 3	□4	□5
2	Policy crossings closures make Poor infrastructure e-learning	□1	□2		□4	□5
3	Crossings closures make the instructor handles the e-learning units effectively		□2	□ 3	□4	□5
4	I full comfortable with using the PC and software policy crossings closures		□2	□ 3	□4	□5
5	Easy on-campus access to the Internet with crossings closures		2		□4	□5
6	Did not experience problems while browsing with power outages	□1	$\Box 2$	3	□4	□5
7	I could easily contact the instructor with crossings closures	□1	$\Box 2$	3	□4	□5

SECTION F: E+LEARNING EFFECTIVENESS

Using the following scale, please tick () the given box that represents your <u>most</u> appropriate answer.

		SD	D	N	A	SA
1	Easy access to Web site	□1	□2	□ 3	□4	□5
2	Web site contained useful graphical and features	□1	□2	□ 3	□4	□5
3	I felt personally involved in the course	□1	□2		□4	□5
4	I believe that I will be able to use this technology easily in the future	□1	□2		□4	□5
5	This type of multimedia technology interferes with communication in the classroom	□1	2		4	□5
6	I would recommend this type of distance learning course to someone else	1			□4	□5

Thank You For Taking the Time To Complete This Survey

Appendices (B) Abbreviation

Concept Abbreviation

Concept	Abbreviation
QOU & ELLUMINATE	Software
SUP	Support confirmatory factor
Cronbach's Alpha	Software SPSS model
ELE	E-learning and Effectiveness
IC	Instructor Characteristics
CS	Student Characteristics
Т	Technology
Ι	Impediments

Appendices (C) Descriptive:

Descriptive Statistics								
	N	Minimum	Maximum	Mean	Std. Deviation			
Gender	211	1.00	2.00	1.3649	.48256			
Age	211	1.00	4.00	3.1611	.79439			
Experice	211	1.00	5.00	3.1043	1.08607			
Valid N (listwise)	211							

Descriptive Statistics

Descriptive Statistics

	Ν	Minimum	Maximum	Mean	Std. Deviation
ELE	211	1.00	5.00	3.0774	.89550
Valid N (listwise)	211				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IC	211	1.00	5.00	3.1972	.66541
Valid N (listwise)	211				

	Ν	Minimum	Maximum	Mean	Std. Deviation
SC	211	1.00	6.67	3.2493	.67296
Valid N (listwise)	211				

Descriptive Statistics

	Ν	Minimum	Maximum	Mean	Std. Deviation
Т	211	1.00	5.00	3.1214	.78508
Valid N (listwise)	211				

	Ν	Minimum	Maximum	Mean	Std. Deviation
I	211	1.00	5.00	3.1916	.79731
Valid N (listwise)	211				

Appendices (D) Reliability:

Reliability Statistics

Cronbach's			
Alpha	N of Items		
.764	13		

Reliability Statistics

Cronbach's	
Alpha	N of Items
.716	15

Reliability Statistics

Cronbach's	
Alpha	N of Items
.733	8

Reliability Statistics

Cronbach's	
Alpha	N of Items
.718	7

Appendices (E) Correlations:

Correlations					
		Gender	Age	Experice	
Gender	Pearson Correlation	1	.156 [*]	.136 [*]	
	Sig. (2-tailed)		.023	.048	
	Ν	211	211	211	
Age	Pearson Correlation	.156 [*]	1	.852**	
	Sig. (2-tailed)	.023		.000	
	Ν	211	211	211	
Experice	Pearson Correlation	.136 [*]	.852**	1	
	Sig. (2-tailed)	.048	.000		
	Ν	211	211	211	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations							
		ELE	IC	SC	Т	I	
ELE	Pearson Correlation	1	.452**	.495**	.563**	.585**	
	Sig. (2-tailed)		.000	.000	.000	.000	
	Ν	211	211	211	211	211	
IC	Pearson Correlation	.452**	1	.482**	.482**	.327**	
	Sig. (2-tailed)	.000		.000	.000	.000	
	Ν	211	211	211	211	211	
SC	Pearson Correlation	.495**	.482**	1	.536**	.418**	
	Sig. (2-tailed)	.000	.000		.000	.000	
	Ν	211	211	211	211	211	
т	Pearson Correlation	.563**	.482**	.536**	1	.635**	
	Sig. (2-tailed)	.000	.000	.000		.000	
	Ν	211	211	211	211	211	
I	Pearson Correlation	.585**	.327**	.418**	.635**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
	Ν	211		211	211	211	

Correlations