Moving Towards e-Learning Paradigm: Readiness of Higher Education Instructors in Palestine

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E-learning paradigm has grown significantly in the tertiary education sector in Palestine. For Palestinian education, e-learning has become a necessity rather than a luxury to mitigate the negative effects of the ongoing Palestinian-Israeli conflict on the access to quality education. Substantial investment has been made in developing the e-learning approach since 2002. However, the use of e-learning by higher education instructors is still underutilized and considerable efforts should be made to enable them to take full advantage of the potential of e-learning. Thus, the purpose of the research reported in this paper is to investigate the factors that affect the attitude of higher education instructors towards the adoption of e-learning through a proposed Technology Acceptance Model (TAM) with multidimensional; socio-technical and organizational factors. Triangulation data were collected through semi-structured interviews and a questionnaire. Different teaching staff at Birzeit University from a cross section of different academic programs was asked to identify patterns and variations in their experiences, perspectives, and interpretations about the adoption of e-learning. The study findings show that instructors have positive attitudes to embark on e-learning initiatives. This research further demonstrates that individual characteristics and technological factors have a significant influence on instructors to adopt e-learning. However, organizational factors were found to be the most significant determinant for adopting e-learning. Political will and the capacity of the university to respond quickly and appropriately to the transition change is crucial to facilitate wider adoption. In practice, this requires decision makers to take an active interest in and provide visible support for the e-learning approach in order to 'bridge the chasm' between early adopters and the early majority and promote the rate of diffusion of the e-learning approach.

INTRODUCTION

The swiftness of ICT developments opens up the possibility for a new paradigm of teaching and learning process. E-learning has been internationally recognized as a significant approach for improving the quality of learning for all by facilitating 24/7 access to education and by supporting a collaborative learning process (Watson *et al*, 2004; Cruthers, 2008). The effectiveness of such approach, however, is constrained by fundamental issues such as acceptance, which impact teachers and learners' abilities and willingness to utilize this style properly. Thus, there is a need to acknowledge the importance of assessing readiness of organizations, teachers, and learners to adopt this learning approach (So and Swatman, 2006). According to Thowfeek and Hussin (2008), special attention should be paid to teaching staff in the implementation process of an e-learning system, as they play a central role in the effectiveness of online delivery learning.

Educational development in Palestine is described as a challenging experience due to the ongoing Palestinian-Israeli conflict and repeated emergencies. For many years the educational services have been deeply affected by the frequent closure and mobility restrictions particularly since the *Al-Aqsa Intifada* (meaning "uprising" in Arabic) in September 2000. This has been exacerbated by the *Wall* which the Israelis began to construct in June 2002, which cuts through a number of cities and villages and which has created barriers to movement, separating teachers and students from their education institutions (PMEHE, 2004). These politically-driven demands clearly demonstrate the need for cutting-edge technology to enhance access to quality education for all students. Therefore, e-learning has become a necessity rather than a luxury (British Council, 2006). With the cooperation of many international organizations, substantial investment and considerable efforts have been made in developing the e-learning approach since 2002. However, the use of e-learning by higher education instructors is still underutilized. Since e-learning is a new approach in the context of Palestine, its early acceptance is important for its effective introduction.

The research literature on adopting e-learning has grown significantly. Much of the literature in developed countries examines the characteristics of individuals while in developing countries most studies focus specifically on access to technology and contextual factors (Andersson and Grönlund, 2009). In the context of Palestine, university staff capability and inclination to adopt e-learning is rarely considered. Therefore, the main purpose of this study is to investigate the factors that affect the attitude of academic staff at Birzeit University towards the adoption of an e-learning approach through

a proposed Technology Acceptance Model (TAM). As there is no standard set for TAM, the proposed adoption model is a holistic approach using multi-dimensional, pedagogical, socio-technical, and organizational factors (Nanayakkara and Whiddett, 2005) to provide a more comprehensive under-standing of the considerations for successful implementation of e-learning. This can help an organization to identify the most important strategic issues it will face when transitioning to e-learning.

The remainder of the paper is organized as follows. Section 2 covers the literature review from recent studies of the context of e-learning implemen-tation and adoption. Section 3 looks at the e-learning initiative in Palestine. Section 4 presents the methodology applied for this research while Section 5 presents the overall findings and discussion of the results of the proposed acceptance model of e-learning based on the Palestinian context. The paper closes with the conclusion and suggestions for future research.

E-LEARNING ADOPTION

In contemporary information system research, a number of studies have investigated how and why individuals adopt new information technolo-gies based on well-known theories (Venkatesh *et al.*, 2003). One approach has been to consider individual acceptance of new technologies according to behaviour and intention (Davis, 1989; Taylor and Todd, 1995) based on the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975). Accord-ing to TRA, attitudes towards behaviour and subjective norms are the core constructs of behavioural intention. One method that is widely applied and based on TRA is the TAM developed by Davis (1989). Davis posits that an individual's intention to use a system is determined by two primary belief factors: perceived usefulness and perceived ease of use. Other researchers have studied the adoption of new systems according to the characteristics of the new technologies based on the perspective of Diffusion of Innovation Theory (DIT) (Rogers, 1983; 2003). DIT posits characteristics of users and tools that influence the early adoption of new technologies (Rogers, 1983; 2003). These characteristics include the relative advantage, compatibility, complexity, trialability and observability. Based on these theories, several technology acceptance models (TAM) have been formulated, incorporating different constructs of determinants of users' intention to accept new tech-nologies (Venkatesh *et al.,* 2003). Thus, there is no standard set of TAM.

In the field of e-learning, several studies reveal different factors that have significant effects on the academic staff adoption to e-learning (Thowfeek and Hussin, 2008). Schifter (2000) among others investigated the factors that support or inhibit intention to adopt e-learning. He found that motiva-tion factors were personal motivation to use technology in teaching, oppor-

tunity to improve teaching or develop new ideas, opportunity to diversify program offering and greater flexibility for students while factors that inhibit the academic staff include lack of technical support provided by the institutions, lack of release time, concern about the faculty workload, lack of grants for materials/expenses, and concern about the quality of courses. McNaught *et al.* (2000) added that issues related to policy change and funding are other factors that have influenced the adoption and use of an e-learning approach. A study was conducted by Nanayakkara and Whiddette (2005) who investigated the intention of academic staff in a polytechnic in New Zealand to use e-learning. They emphasized that the intention to use e-learning is significantly related to three key categories: individual characteristics and individual perceptions, e-learning system characteristics and external system characteristics, and organizational support and organizational characteristics. Agboola (2006) also evaluated the awareness and perceptions of academic staff in using e-learning tools at the International Islamic University Malaysia. He found that e-learning training and e-learning confidence were of practical importance in predicting both e-learning adoption and e-learning readiness. Thowfeek and Hussin (2008) also revealed several factors that potentially influence e-learning acceptance by the Sri Lankan higher education instructors: students and instructors' readiness, which includes awareness, training and confidence; the need for e-learning, i.e., the type of program or courses suitable for this mode; infrastructure; institutional support; motivation and incentives; and the e-learning system itself.

Attitude towards e-learning initiatives also have an influence on teaching staff involvement (Breen, 2001). According to Rogers (2003), adoption of a new innovation technology among the members of a social system takes time. There is what is called an adoption curve for innovation that illustrates the rate new ideas and technology spread through cultures. This model classifies adopters into five categories; innovators, early adopters, early majority, late majority, and laggards. According to Moore (1999), it is more likely to cross the 'chasm' between early adopters and the early majority, increasing the rate of diffusion. To do so successfully, methods and procedures to facilitate wider adoption are required. In this issue, Shannon and Doube (2003) highlighted that, in the change process, there are challenges for universities to: further develop and disseminate a culture, policies and strategies that value web-supported teaching, provide support to alleviate time and workload pressures, provide adequate staff development, and training and provide infrastructure and tools to meet the needs of teaching staff and students.

In the same vein, Andersson and Grönlund (2009) propose a conceptual framework for the challenges for e-learning with a particular focus on developing countries. They group the challenges into four major strands: charac-

teristics of individual teachers and students, course content design and delivery, technological challenges, and contextual challenges. They point out that teachers generally are more motivated and committed when they feel supported by their schools. The schools can support the teachers by providing technical support, training, assistance, or just showing the commitment of the institutional leaders. Andersson and Grönlund (*ibid*) further indicate that several papers address how beliefs and attitudes of decision-makers in a political system will affect the growth of both technology and e-learning in a country. Political support from policy makers will ensure that appropriate policies are made and also encourage schools to adopt e-learning.

To sum up, the value of e-learning to the education process will rise with the increasing number of adopters who may use the innovation to its fullest potential. Therefore, the effectiveness of introducing e-learning requires early acceptance by academic staff who play an important role in the implementation process.

E-LEARNING IN PALESTINE

Educational institutions in Palestine are consistently endeavoring to provide quality education for all in situations of emergency and crisis. The increased demand for education and the limited resources available for traditional learning coupled with physical and security obstacles makes the proposed e-learning innovation a viable program (EL-Harazin, *et al.*, 2007).

One of the most significant implications of the ongoing conflict in Palestine is ICT proliferation. Palestinians consider ICT an indispensable tool for their survival and life continuity and to facilitate the emergence of more connected societies whose fabric becomes consolidated through access to the Internet and information (Saidam, 2007). As a consequence, for Palestinians, using ICT became a staple feature of policy recommendations from the international community such as the World Bank, the United Nations Development Programme (UNDP), the European Union and others (Zuriek *et al.*, 2006). Access to the Internet started as early as the beginning of the 1990s. Palestine, and in particular Birzeit University, was the first in the region to connect to the Internet (Rabayah *et al.*, 2008).

Recently, there was rapid growth of e-learning across the higher education sector in Palestine. Almost all universities in Palestine are offering some type of online education. Birzeit University is considered one of the pioneering institutions in Palestine in an introducing e-learning initiative. In March 2002, Birzeit University developed a portal called Ritaj (meaning "the great portal" in Arabic) which allows on-line access to course materials and some administrative services. Students can register for their classes, exchange information, receive course messages from their instructors, search

the library for books, access course materials, look up their grades, and stay updated on their academic and financial records. On the other hand, instructors post lecture notes and communicate with students via bulletin boards. In 2002, over 2000 academic staff and students utilized Ritaj. This was fundamental to enable the University to complete the academic semester in August 2002 despite closures, curfews, and other disruptions. Students who had limited access to the classrooms could still participate and learn using the Ritaj portal.

Since 2005, many e-learning donor-funded projects started. Among them, the Mediterranean Virtual University (MVU) is a two-year EU-initiative which was launched in 2005 by the Danish Aalborg University. The project is a collaborative effort of eleven Mediterranean and northern European universities aiming to design online engineering and information technology degree courses, pilot them locally and internationally, and then enable learners globally to study online. The Unit for Learning Innovation (ULI) team at Birzeit University developed four courses: Introduction to the World Wide Web; Software Development and System Programming; Programming for the World Wide Web, and Coding and Information Theory. BIZ-REH is another example in which the ULI team developed a number of e-enabled courses such as: chemistry and Math for 9th grade; two undergraduate courses, English for Journalists and English Communications; and one post graduate course on Computer Modeling of Water Distribution Systems. MedForist (EUMEDIS Program) was also a donor-based project to develop e-business programs including e-Commerce, Enterprise Resource Planning, Customer Relations Management, and Supply Chain Management. Another unit at Birzeit University involved in developing online courses is the Ibn Rushd Unit. This unit has also developed many courses including: Psychological Foundations of Education; Introduction to University Teaching; Palestinian Labor Law; the Political System in Palestine; Principles of Palestinian Commercial Law; and Coronary Heart Disease. The learning management system, MOODLE is now a widely adopted technology at Birzeit University and all courses are delivered face to face and online.

METHODOLOGY

The research was conducted in two phases using both qualitative and quantitative methods:

Phase 1: Qualitative- semi-structured interviews:

Qualitative research interviews are widely used where exploratory work is required, such as introducing new technology (Bryman, 2005). Since qualitative data allows for value-driven interpretation and better understanding of the real situation (*ibid*), semi-structured interviews were conducted

with 12 teaching staff at Birzeit University, from a cross section of different academic departments (Education, Psychology, Nursing, Biology, and Accounting). Each interview lasted approximately 40 minutes. The type of questions includes both opened and closed ones that were derived from the literature review (Appendix A).

Phase 2: Quantitative – questionnaire:

The purpose of the survey is to investigate instructors' intentions towards adopting the e-learning paradigm and to identify any differences among various disciplines and to make extensive coverage feasible. The questionnaire was developed, based on data collected from phase 1. On a five-point Likert-type scale with 1=strongly disagree to 5=strongly agree, participants were asked to respond to a number of items concerning their opinion of e-learning approach. These items are grouped into six sets including: perceived usefulness, perceived self-efficacy, social influence, facilitating conditions in addition to the general information and intention to adopt e-learning approach in the future (Appendix B). The survey targeted 100 faculty members from various disciplines in several different universityies in Palestine. A total of 88 faculty responded to the non-random survey. The content validity of the questionnaire was assessed by asking two experts in e-learning to provide their judgments on the items. The reliability of the constructs was examined using Cronbach's alpha.

The quantitative data from the survey were analyzed using descriptive statistical techniques and triangulated alongside the qualitative analysis of the semi-structured interviews. The analysis of the data was structured into three major themes which represented the key elements of the proposed TAM: social/individual characteristics and technological factors, and organizational/contextual factors. The following section presents the results of the study.

FINDINGS AND DISCUSSION

Social/ Individual Factors

There was a consensus among participants in the semi-structured interviews that e-learning is an appropriate delivery tool for providing all students the opportunity to access course materials even though not all students have access to the Internet. Access 24/7 allows students to learn at their own pace anytime and from anywhere. This is confirmed by approximately 70% of the respondents to the questionnaire. Participants indicated that the flexibility of e-learning has the potential to overcome communication

problems and restrictions on teachers and students movement and this is a significant benefit to Palestinian students and lecturers. More than 66% of respondents agreed that a further advantage of e-learning was online collaboration which involves communication and interaction between faculty members and learners and among learners. Some participants, however, expressed their concerns about the difficulty to establish a social context in the online environment. Online communication "is not simply a process of shifting from speaking and listening to reading and writing" (Mann, 2003 p. 119). Therefore, it is important for both students and instructors to be prepared for meaningful communication and interaction with each others. Social networks have become available in the information age with the arrival of Web 2.0 such as Wiki, Blog, Facebook, Myspace and Twitter, can be used to support a social constructivist approach to facilitate student-centred learning process (Dalsgaard, 2006). These tools have the capacity to engage both students and instructors in collaborative activity, knowledge sharing, reflection and debate.

The majority of the participants also indicated that e-learning enhanced the quality of learning in different ways by making it possible to use a wider range of resources that may otherwise be too difficult or expensive to use. Furthermore, the findings have shown that 77% of the respondents 'strongly agree' or 'agree' that that e-learning accommodate multiple learning styles using a variety of delivery methods geared to different learners and providing interactive instruction in a wide-range of text, diagrams, and images with video and sound which makes learning effective and more interesting than traditional methods of learning. Another important benefit of the e-learning process as highlighted by many participants was professional development. Over 58% of the respondents agreed that they would like to keep up with the new learning paradigm which requires new pedagogical skills for developing online course delivery to meet the 21st century students' learning needs.

Although all participants perceived the usefulness of e-learning initiatives, many participants indicated that not all staff has been able to embrace the e-learning initiative immediately. 70% of respondents agreed that they preferred face-to-face methods rather than online courses. Resistance to change by a segment of instructors requires the development of new skills and attitudes. Therefore, a programme designed to raise awareness will help to change faculty members' opinions about adopting e-learning and encourage them to use it effectively as one interviewee remarked: *"e-learning implementation is not something spontaneous or impulsive ... empowering the instructors is the starting step to create widespread interest...".* In the same line 65% of respondents also agreed that e-learning approach is valuable if the university has a clear strategy for raising awareness and supporting the use of online courses.

Another issue indicated by the participants was the importance of peer influence as a factor in their use of e-learning. More than half of the respondents 'agree' that they would be more likely to use the new learning approach if their friends encouraged them and if they were persuaded by others of the potential of this e-learning to improve education "*It is expected that many teachers don't like change .. unless they are leading it!*" At the same time, they pointed to the significant role of the university to mandate them to engage in e-learning implementation in the early stages. Most participants (77%) 'strongly agree' or 'agree' that they would use the e-learning approach in the future if managers recommended it. This supports the view of Thowfeek and Hussin (2008), who suggested that mandatory use e-learning applications have a significant influence on promoting e-learning.

Another concern raised by many participants was students' readiness towards e-learning. Since Palestinian students come from secondary schools with traditional teaching/learning methods where the teacher is always in control, perhaps not all students are able to learn independently and take the responsibility for their own learning (Shraim and Khlaif, 2010). Only 42% of respondents agreed that e-learning would facilitate learner-centered approach. This finding indicates that appropriate support from the instructors are needed to enhance learners' autonomy and active learning through keeping track of students' progress and motivating and stimulating them to participate regularly in the different learning activities. Some participants also indicated that the content of various courses such as cost accounting requires a blended approach. Therefore, an effective process may be neither entirely e-learning nor face-to-face. A combination approach seems to be more appropriate.

The success of e-learning will also depend on instructors becoming confident and capable to deliver online courses (Hadad, 2007). This study also indicated that lecturers who have more experience in using the Internet and attending training programs in e-learning are more likely to have a positive attitude and a stronger intention to use newly introduced e-learning. This finding is consistent with prior studies such as Thowfeek and Hussin, 2008; Nanayakkara and Whiddette, 2005. However, these skills are insufficient to use e-learning elements effectively as indicated by 76% of respondents. The majority (87%) of participants expressed their needs for training because they were unfamiliar with the technology associated with the use of e-learning tools such as multimedia, chat-room, wikis, and blogs. They also repeatedly commented that they need other specific training in technology-enhanced instructional design, pedagogical strategies and quality assurance in order to develop their skills and competences needed to effectively design and deliver online courses. "*A big challenge for the faculty is how to develop the content in new pedagogical methods and as such more meaningful and motivating for the learners*." They emphasized that the one-shot training

given to them is not sufficient. Respondents generally reported that continuous training is essential to keep them up to date with how to integrate ICT in learning and teaching process with only 21% disagreeing with that.

Further, three-quarters (78%) of respondents were not completely confident about their ability to use e-training and online tutorials. They prefer personal coaching to become familiar with the new e-learning technologies, particularly in the early stage.

Technological Factors

The main technological factors that have influenced the use of e-learning as identified by the respondents are: infrastructure, technical support and human-computer interaction (HCI).

For a successful transition to e-learning, both students and teachers should have access to reliable and affordable bandwidth and a robust network (Andersson and Grönlund, 2009). The findings revealed that 88%, of the respondents have access to the Internet on a daily basis. However, not all students and academic staff have access to robust computers and high-speed Internet connections out the university. This 'digital divide' issue was frequently mentioned in the interviews as one the factors that has negative influence in e-learning implementation in Palestine.

Technical support is another technical issue that was reported. Academic staffs are not familiar with educational multimedia techniques. Participants are only involved in uploading the materials in Power point or Word documents. Moreover, 90% of respondents were fully agree that there is a lack of instructional designers and multimedia experts to help them develop the content of e-learning courses in the form of animation and multimedia. Interviewees indicated that the lecturers did not have time to develop their skills for preparing interactive content. Several participants also acknowledged the technician support from the university IT team. However, the support is often by telephone rather than onsite and many seemed hesitate to ask for help. "*I was having many technical problems… I would not contact the technician because I just thought I should be able to figure it out by myself*". Therefore, it is crucial that communication between the academic staff and IT team be timely and ongoing.

Besides technical support, another element that may facilitate the use of e-learning is the friendliness of the educational technologies. Some participants indicated that they were unfamiliar with the Moodle environment, and they always asked for assistance such as in preparing quizes, importing multimedia presentations with audio, video and Flash movies. Other participants regarded registration to access Moodle as one of the obvious obstacles facing participants. Participants also expressed concerns about the importance of moving e-learning beyond learning management systems. One comment-

ed that "*no doubt that Moodle provides excellent tools for managing learning, however it tends to put learners in a rather passive role unsuited for assessing learning activities such as group work and project work.*"

Organizational Factors

Transformation to e-learning can be effective if there is political will (Shannon and Doube, 2003; Andersson and Gronlund, 2009). Political advocacy was raised repeatedly by participants. One respondent said: "*I think it* [e-learning] *is demanded, but it does not matter if the academic staff has the interest, it does not matter if the technology is in place – if there is no political will, nothing will change*". A high percentage (88%) of respondents indicated that they would adopt e-learning approach if their managers recognize their efforts in using e-learning. Many participants were put off using their online courses because of the negative attitude and belief about the innovation of e-learning methods by top managers. E-learning is still not widely accepted by many policy makers at Bizeit University. Many participants reported that there is a growing awareness of the importance of introducing e-learning, but there was reluctance from the policy makers to allow them to exercise full online sessions. This is due to a lack of understanding of the e-learning concept and the confusion between e-learning and distance education. Participants also claimed that the policy makers thought that e-learning is simply being used by students as a replacement for face to face teaching methods and this is not in line with the educational philosophy at the Birzeit University. It is clear that it is necessary to clarify what is meant by e-learning as an ICT-based pedagogical innovation and not just a technology innovation. Political support is needed in order to provide a solid, enforceable, and accountable framework for the implementation of the e-learning approach. Hence, changes of attitude at the top management level are crucial to facilitate a high degree of academic involvement.

Institutional support is likely to be fundamental for maintaining the motivation and commitment of instructors to adopt e-learning models (*ibid*). The majority of respondents, nearly 86% reported that for effective e-learning implementation, the university should provide the required resources for creating an enabling environment by setting up clear strategy and policy, raising awareness, training, and improving infrastructure. Capital investment is anticipated to be high at the initial stage; there will need to be substantial expenditure on hardware and training programmes. This is a challenge for the future. In the meantime, forging links with international and local communities and maintaining a dialogue with multiple groups will be necessary to assure financial support for improving the ICT infrastructure and capacity building. 60% of the respondents also pointed to the importance of the systematic evaluation of the e-learning piloting. Feedback will be used to

make decisions about sustaining and spreading the e-learning initiatives and to identify problems that are likely to arise so that they can be solved. Another critical issue highlighted during the interviews was the time needed for preparing the instructional materials and managing the learning process in digital format. Instructors need to be available at regularly scheduled times to encourage and motivate students in various learning activities. The new role of instructors should be supported by managers (Siragusa *et al.*, 2007). Therefore, the need to revise current policies and regulations such as releasing workload to develop online courses has a significant influence in instructors' adoption of e-learning. This is confirmed by nearly 82% of the respondents who agreed to the statement "I would adopt e-learning approach if I receive incentives from the university."

The majority of participants reported that multi-unit in the University are involved in developing online courses as donor-funded e-learning projects rather than through a planned process. This finding suggests that appropriate forms of coordination should be considered to ensure that the diverse efforts of different units are coherent and mutually support one another rather than compete. The innovation and implementation of a sustainable e-learning approach should be part of a systematic integration of technology into the learning processes of the University. This finding supports other literature such as MacDonald Thompson (2005).

Finally, the participants were questioned about their intention to adopt e-learning approach in the future. Over the half of respondents, 53% indicated that they 'strongly agree' or 'agree' that they would like to experiment with the ICT for teaching and learning. It cannot be expected that most teachers and students will be quickly convinced by a new learning style (Shraim and Khlaif, 2010). Meanwhile, commitment to create incentive environment to facilitate wider adoption are required.

CONCLUSION

This research explores how academic staff comes to accept and use an e-learning approach effectively through formulating a model of technology acceptance of e-learning. The proposed model is a holistic multi-dimensional approach which includes the socio-technical and political considerations that can contribute to the success of e-learning.

The result of the study indicates that there are several determinants that have influence in their intention to adopt e-learning including perceived usefulness to e-learning, perceived self-efficacy, social influence, reduced workload, HCI, students' readiness, accessibility and connectivity. However, the main challenge to the successful implementation of e-learning lies in the organizational aspect rather than socio-technical factors. To foster ef-

fective e-learning processes requires politicians' commitment and attitudinal change. The role of politicians to enable or constrain the process is dependent upon the efforts that will be made to initiate changes. Therefore, raising awareness among the top management to accept these initiatives is the first important prerequisite for supporting the adoption and implementation of e-learning approach. Several themes emerged from this study such as the importance of pedagogical methods move and the needs to move e-learning approach beyond learning management systems.

Future work in this area will focus on tracking learners' perspectives toward e-learning through developing a questionnaire, to address their needs in the e-learning policy framework.

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Appendix A

Semi-structured interview questions

1. <u>General Information:</u>

1.1 **Age Group**   ☐ **25-34**   ☐ **35-44**   ☐ **45-54**   ☐ **55-64**

1.2 **Gender**   ☐ **Female**   ☐ **Male**

1.3 **Department**

_____

1.4 **What course(s) are you using e-learning mode for? (Undergraduate, postgraduate)**

_____

1.5 **Describe your course(s):**

   ☐ Full online

   ☐ Mixed (F2F & online)

   ☐ F 2 F

1.6 **How long have you been using e-learning mode? (tick one)**

   ☐ 1 term
   ☐ 2 terms
   ☐ 3 terms
   ☐ Between 1 and 3 years
   ☐ Between 3 and 5 years

1.7 **Are you involved in the development of initiating your on-line courses?**

If yes, how?

_____

_____

If no, why?

_____

_____

If no, where did you find them?

Probe:

☐ The material were provided by my institution / IT or learning department.

☐ A colleague advised me to use the materials.

☐ I looked for materials myself.

☐ Others……

_____

2. Individual Factors:

2.1 Characteristics

2.1.1   How much experience do you have of using:

	Quite a bit of experience	A lot of experience	Extensive Professional
Computer-based applications?	☐	☐	☐
Internet-based information systems?	☐	☐	☐
Web-based learning tool/s?	☐	☐	☐

2.1.2   Who initiated your experience in e-learning?

☐ Yourself / self development.

☐ Your university/ training session.

☐ Colleagues.

2.2 Attitudes

2.2.1   How do you define "e-learning?"

_____

_____

2.2.2   How valuable do you think e- learning tools are in Higher Education teaching?

☐ Not at all valuable

☐ A little valuable

☐ Neither valuable or invaluable

☐ Valuable

☐ Extremely valuable

2.2.3 Why do you use e-learning

Probe:

I used e-learning components because…

☐ appropriate to my course content.

☐ my institution required it.

☐ my students asked for it.

☐ e-learning belongs to modern teaching. I don't want to be left behind.

☐ e-learning offers opportunities that face-to-face teaching cannot offer.

☐ using e-learning components saves time.

☐ others:

_____

_____

2.2.4 Do you think that e-learning initiative can offer benefits to you and your students?

Probe: If yes, please state.

☐ 24/7 accessibility

☐ Making communication easier with the teacher, individual students and groups of students;

☐ Making it possible to use a wider range of resources that may otherwise be too difficult or expensive to use;

☐ Motivating and supporting students to take responsibility for their own learning-shifting from instructor-centred approach to learner-centred approach;

☐ Supporting an increasingly large and diverse student population with little increase in teaching time;

☐ Accommodates multiple learning styles using a variety of delivery methods geared to different learners;

☐ Other ....

_____

_____

2.2.5 What are the main challenges facing you in running e-learning courses?

Probe:

☐ lack of technical infrastructure and resources.

☐ lack of technical skills.

☐ lack of pedagogical skills.

☐ lack of technical support.

☐ lack of students' readiness.

☐ lack of institutional support.

☐ other:

_____

2.2.6 Do you have the impression that you have to spend more time on a course with e-learning than on a traditional course?

☐ Yes, e-learning involves more work (preparing materials, contact students, solve technical problems, giving feedback ....).

☐ I don't know.

☐ No, there is no difference

☐ No, e.-learning saves time.

3. <u>Technological Factors:</u>

3.1 Infrastructure

3.1.1 How much access do staffs at your department have to the Internet:

Anyone   _____

Anytime   _____

Anywhere   _____

3.2 Technical support

3.2.1 From where do you get technical support?

Probe: Technical assistance is provided by:

☐ helpdesk for all ICT questions

☐ teacher/ colleague via e-mail, telephone, classes, …

☐ frequently Asked Questions

☐ other:

3.2.2 Which mean do you prefer to get e-learning support?

☐ Online tutorial

☐ Personal assistance from IT department

☐ Personal assistance from a colleague

☐ Training sessions in my university

☐ Training sessions outside the university

☐ Other:

_____

3.3 Human computer Interaction (HCI)

3.3.1 What determines your choice of e-learning materials?

☐ User friendly

☐ Interactivity

☐ Accessibility

☐ Flexibility

☐ Content

☐ Lay-out

☐ Platform

4. <u>Organizational / contextual Factors:</u>

4.1 In your opinion, the most important factors in creating a successful e-learning initiative

Probe:

Political will:

> Does the university have a plan to overcome any negative attitude you and others have had with e-learning?
>
> Does the university have a strategic plan for introducing e-learning?
>
> Does senior management in your department support (encourage) you to the transition change? (Rewards, certificate, workload reduction….

Organization capacity:

- Does the university have a training plan for the teachers in the use of technologies?
- What kind of training did you get? and how often?
- What kind of training do you need?
- Are infrastructure / resources sufficient and good enough in your university?
- Did the university fund your course development?
- Did the university evaluate the piloting of e-learning process?
   If yes, did you participate?

5. <u>Readiness</u>

5.1 How committed are you, personally, to e-learning? Are you ready?

Appendix B

Questionnaire

Dear Faculty Member:

Please take a few minutes to respond to this survey asking about your experience and attitude about e-learning paradigm. Your responses are anonymous and confidential. Any information provided from you will be securely stored and used for research purpose only.
Thank you for your consideration.

1. **General Information:**

1.1 **Age Group** ☐ **25-34** ☐ **35-44** ☐ **45-54** ☐ **55-64**

1.2 **Gender** ☐ **Female** ☐ **Male**

1.3 **Department** ☐ **Humanities** ☐ **Scientific**

1.4 **How often do you connect to the Internet?**

☐ **Rarely** ☐ **Weekly** ☐ **Twice a week** ☐ **Every day**

1.5 **From where can you access the Internet?**

☐ **Home** ☐ **University** ☐ **Public Hall**

2. Perceived Usefulness

Items	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
2.1 Using e-learning would enable me to enhance my teaching practices and professional development					
2.2 e-learning would create a flexible learning environment 24/7 accessibility					
2.3 e-learning would make communication easier with the teacher, individual students and groups of students.					
2.4 e-learning would enhance quality of education by providing interactive instruction in a wide- range of methods .					

2.5 e-learning would facilitate learner-centered approach.					
2.6 e-learning would accommodating multiple learning styles using a variety of delivery methods					

3. Perceived Self-efficacy

Items	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
3.1 I need some training and technical help to use online courses					
3.2 My IT experience is sufficient to use e-learning tools					
3.3 My IT skills help me to develop an online course					
3.4 I could use the online tutorial to learn how to use e-learning elements					

4. Social influence

Items	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
4.1 I will use e-learning if my friends recommended me to use it?					
4.2 I like to share ideas on elearning with my colleagues					
4.3 I will use e-learning if my managers ask me to use it?					

5. Facilitating conditions

Items	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
5.1 My university has a regular training on integration technology in teaching					
5.2 My university conducts systematic evaluation of the e-learning piloting.					
5.3 I would find experts to assist me develop the content of online courses.					

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
5.4 I would adopt e-learning approach if I receive incentives from the university					
5.5 I would adopt e-learning approach if the resources available for me to deliver my course online					
5.6 e-learning approach is valuable if my university has a clear strategy for raising awareness and supporting the use of online courses					
5.7 I would adopt e-learning approach if my department recognizes my efforts in using e-learning					
5.8 My university has a unit that provides assistance for developing online courses.					

6. Intention to adopt e-learning approach in the future

Items	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
6.1 I would like to experiment with the ICT for teaching and learning in the future					
6.2 I prefer Face to Face methods rather than online courses					

7. Please provide any overall comments about the e-learning approach as well as any suggestions you have for improving the program

_____

_____

_____

_____

_____