



المحور الأول: تطبيقات وممارسات التعلم المبتكر... أفكار وتجارب.
Theme I: Innovative Learning Applications and Practices.

**e-Learning Readiness among Academic Staff and Students
at Umm AlQura University**

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e-Learning Readiness among Academic Staff and Students at Umm AlQura University

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Abstract: Background: In Saudi Arabia, there is a call to advance education and promote e-Learning culture in higher education. As the e-Learning Deanship of Umm AlQura University established, it was focusing on evident-based practice. For successful implementation and deploying of e-Learning tools and environment, there was a need to establish students and staff status. Aim of the study: The study investigated academic staff and students' readiness and competence of e-Learning and their needs, expectations and preferences. Method: Two surveys were developed and demonstrated between March-June 2013. Results: 311 academic staff and 628 students participated in the paper-based and electronic surveys. However academic staff believed of the importance of technology and advantages of e-Learning, they reported a limited use of technology tool in teaching practice and show neutral attitude to employ e-learning tools. The study also indicted students' competent use of ICT but modest experiences to employ them for learning. It is believed that academic staff did not adopted e-learning tools perfectly, however, they did not prefer the conventional teaching style. Both groups agreed for the need of better infrastructure to support the e-Learning practice in UQU. Conclusion: There is a positive perception of e-Learning among academic staff and students at UQU but the absence of efficient training, culture awareness, and supporting infrastructure affecting efficient employing of technology and e-Learning tool in teaching and learning practice. This is the main focus of the Deanship in the coming two years.



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Background of the study:

The development of information and telecommunication technology applications worldwide, change the face of education generally and higher education in particular. In Saudi Arabia, there is a call to advance education and promote e-Learning culture in higher education institutes. The national Centre for e-Learning and Distance Learning was established as a national reference and centre of excellence in this field. Universities and higher education institutes also established e-Learning Deanships or Centres for efficient employment of e-Learning technology and environments.

The Deanship of e-Learning and Distance Learning at Umm AlQura University (UQU) established in 2010, to develop and deploy advanced technology, e-Learning tools, and modern state-of-the-art e-Learning environments. Thus Deanship contributed to the advancement of UQU's teaching and learning practice that encourage engaging and self-directed learning experiences.

For successful implementation and deploying of e-Learning tools and environment, there was a need to establish students and staff status: Investigating students and staff current and desired use of technology, learning experiences, and concerns. The result of such study could enlighten the deanship future plans and projects.

Aim of the study:

This study investigated Umm AlQura University's academic staff and students' readiness and competence of e-Learning and their needs, expectations and preferences.

Rational of the study:

Measuring academic staff and students readiness, needs, expectations and preferences facilitated identifying the gap between customers' competencies and readiness, and the Deanship objectives and vision. In addition, stating the status of staff and students, in the early stage of establishing the e-Learning tools and environment, facilitated better evidence-based practice and enlighten the Deanship subsequent projects and initiatives.

Literature review:

The rapid development of Information and Communication Technology (ICT) and the considerable growth of technology-based solutions have advocated the development of a "new paradigm for learning and teaching" (Smart and Cappel, 2006). e-learning has grown tremendously over the past several years as technology has been integrated into education and training: Employing e-Learning ranges between, supporting, blended and open learning. This innovation led to a substantial change in the role of teachers and students in the learning process: Teachers became facilitator rather than provider of knowledge, and students were required to be self-directed learners rather than passive ones.

Deploying effective e-Learning tools and environment is a challenge that required multi-faceted approach: the readiness of the institute's infrastructure, willingness and competence of staff members, and the emotional readiness and skills of students. Campbell and Swift (2006) demonstrated that for successful adopt of e-Learning tools, both students and staff have to

change their attitude, belief, behaviours, perspective and habits. Al-alak and Alnawas (2011) noted that the critical success of e-Learning is on the positive attitude of users towards the e-learning system. On the other hand, Lee and colleagues (2009) confirmed that the success of e-Learning depended mostly on the applied educational model that considered learners' needs and the educational goals.

Many studies investigated learners' satisfaction of e-Learning activates as a tool for the evaluation and development. Student attitudes towards e-Learning have been identified as critical to the success of e-learning. Generally, in developing countries, students positive attitudes toward e-Learning (El-Gamal & El-Aziz, 2011). Nassoura (2012) related such positive attitudes towards e-Learning because it had a positive impact on their motivation as well as self-esteem. A study by Rhema and Miliszewska (2014) demonstrated that there was a statistically significant correlation between student attitudes toward technology and their levels of access to various technologies.

There is belief that e-Learning minimize the role of teacher in the educational process. However, the real change is in the adopted pedagogy and the new role of the teacher and students. Bonk (2000) highlighted that staff must develop different skills and play different role for successful use of technology in teaching and learning. Research also suggested that academic staff limited experiences of IC discouraged them to use computer-based teaching (Rosen et al, 1995).

Study Method:

This study is a cross sectional descriptive study. Two Online and paper-based 5-Likert scale surveys were developed based on literature review of relative research to investigate UQU staff and students' readiness and competence of e-Learning and their needs, expectations and preferences.

- Survey I was designed and addressed to UQU academic staff to fulfil the following objectives:

1. Investigate the extent of academic staff using basic information and communication technology (ICT) and employ them in their teaching practice,
2. Explore academic staff perceptions towards the students' preferences of technology and their ability to utilise these technology in the learning process,
3. Explore to what extend the academic staff at UQU are ready and desirous to employ e-Learning in the academic environment,
4. Investigate academic staff's perceptions of the role of the university in providing and supporting the new learning technology, and supporting the e-Learning practices in UQU.

- Survey II was designed and addressed to UQU students to fulfil the following objectives:

1. Investigate the reality of students' utilization of ICT 's tools,
2. Investigate the extent of students' employment of ICT's tool in learning practice,
3. Explore students' perceptions towards academic staff employment of technology and e-Learning tools in usual teaching practice,
4. Explore to what extend the students at UQU are ready and desirous to use and employ e-Learning,

5. Investigate students' perceptions of the role of the university in providing and supporting the new learning technology, and supporting the e-Learning practices in UQU.

Each survey was piloted on five candidates (5 student and 5 academic staff): final surveys were reviewed based on the comments and suggestions of pilot study. The paper-based and e-survey were demonstrated between March –June 2013. The Statistical Package for the Social Sciences (SPSS 21) was used for analysis.

Results:

311 academic staff and 628 students completed the paper-based or electronic surveys. The majority of respondents' academic staff were female (52%), non-Saudi (51%), assistant professor (40%), between the age 31-40 (40%, with a mean of 40.33 and standard deviation of 9.297), and with experiences of teaching less than ten years (73%, with a mean of 8.5 year and standard deviation of 9.1). Respondents were affiliated to 13 colleges of UQU. The majority were from the college of sciences and the college social sciences, 15% and 14% respectively.

The academic staff was asked to reflect on the programs that students use in exchanging their documents and complete their homework, 57 % (N=280) of the staff respondents found e-mails is the most common technology that students used in their learning. There was a clear evidence of frequent use of social network 22% (N=109). The data also showed that 50 % of the sample prefers traditional approach of teaching face to face supported by the mean of new technology. 43% of respondents reported that they prefer blended learning. The least prefer teaching approaches were the traditional and distance learning, 5% and 1% respectively. Finally, the data highlighted that around half of the respondents attended on-line courses 49% (N=153).

The academic staff use of information and communication technology and the way they have employed ICT in their teaching practices were investigated. They were provided with 11 statements in two parts of the survey in order to respond to. The scale included five degree of responses (5= always to 1=never). Statistics indicated that the mean scores for their responses were narrowly ranged from 4.71 to 1.99 in the first part, and from 2.32 to 1.68 in the fourth part. The mean of the academic staff's responses in the first part were (M=3.53) while in the fourth part were (M=1.95).

The academic staff perception towards the students' ability of using ICT and their preferences in e-Learning was investigated. They were provided with 5 statements to respond to. The scale included five degree of responses (5= always to 1=never). Statistics that the mean scores for their responses were narrowly ranged from 4.12 to 3.53. It is noticed that there is no significant difference between the mean scores for the responses. The mean of the academic staff's responses were (M=3.42).

The academic staff readiness to employ e-Learning was investigated. They were provided with 6 statements to respond to. The scale included five degree of responses (5= strongly

agree to 1= completely disagree). Statistics indicated that the mean scores for their responses were narrowly ranged from 4.06 to 2.59. The mean of the academic staff's responses were (M=3.37).

The academic staff perception towards the university role in providing and supporting e-Learning was investigated. They were provided with five statements to respond to. The scale included five degree of responses (5= strongly agree to 1= completely disagree). Statistics indicated that the mean scores for their responses were narrowly ranged from 4.00 to 3.21. The mean of the academic staff's responses were (M=3.63).

Using Pearson's product-moment correlation coefficients, relationships between the academic staff responses were investigated. There was a strong, positive correlation between the academic staff attitude towards technology and e-Learning, and their perception towards the students' ability to use technology and e-Learning [$r = .231$, $n = 301$, $p = .000$]. Moreover, a strong positive correlation was found between the academic staff with positive attitude towards e-Learning and their readiness to employ e-Learning in their university [$r = .224$, $n = 298$, $p = .000$]. In addition, another strong positive correlation was found between the academic staff readiness to employ e-Learning and their perception towards students' ability in using e-Learning [$r = .206$, $n = 298$, $p = .000$] (see Table 1).

Table 1. Pearson's correlations for academic staff responses (Sig 2-tailed)

		Q1	Q2	Q3	Q4
Q1	Pearson Correlation		.231**	.224**	.064
	Sig. (2-tailed)		.000	.000	.270
	N		301	298	297
Q2	Pearson Correlation	.231**		.206**	.030
	Sig. (2-tailed)	.000		.000	.604
	N	301		298	297
Q3	Pearson Correlation	.224**	.206**		-.022-
	Sig. (2-tailed)	.000	.000		.705
	N	298	298		297
Q4	Pearson Correlation	.064	.030	-.022-	
	Sig. (2-tailed)	.270	.604	.705	
	N	297	297	297	

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

With regards to the student' survey, 628 students completed the survey. The majority of respondents were Saudi 96%, female 66%, and affiliated to the Faculty of Islamic studies 32%. Regarding respondents' GPA, while there are around 227 missing responses, most of the students have 3 and above 48 % (with a mean of 2.36 and standard deviation of 0.797), which means the general GPA of the students is average. The range of sample's age is from 17 to 31 years, with a mean of 20.96 and standard deviation of 1.91.

Analysis of students survey showed evidence of frequent use of technology, ubiquitous access to the Internet service and using social networks. However, students are not familiar with e-Learning courses, which means they are qualified enough to use technology and they ready to learn by e-Learning but they need to be motivated (see Appendix 1).

Students' use of information and communication technology (ICT) in their learning was investigated. They were provided with 8 statements in order to respond to. The scale included five degrees of responses (5= always to 1=never). Statistics indicated that the mean scores for their responses were narrowly ranged from 4.42 to 2.45. The general mean of this part was (M=3.38).

Students' perceptions towards the academic staff ability of using e-Learning tools were investigated. They were provided with 5 statements to respond to. The scale included five degrees of responses (5= always to 1=never). Statistics indicated that the mean scores for their responses were narrowly ranged from 3.4 to 2.2. The mean of the students' responses were (M=3.02).

Students' readiness to employ e-Learning was investigated. They were provided with 5 statements to respond to. The scale included five degrees of responses (5= always to 1=never). Statistics indicated that the mean scores for their responses were narrowly ranged from 3.83 to 3.27. The mean of the students' responses were (M=3.59).

The students' perception towards the university role in providing and supporting e-Learning was investigated. The students were provided with four statements to respond to. The scale included five degrees of responses (5= always to 1=never). Statistics indicated that the mean scores for their responses were narrowly ranged from 2.65 to 2.46. The mean of the students' responses were (M=2.56). As shown in Table 1-18, there is no big difference in the students' responses towards the university role in supporting e-Learning.

In order to minimize any bias and error that might have arisen, the questionnaire was created by a specialist in statics and reviewed by three experts in the same area. The reliability of the questionnaire was assessed by calculating the internal consistency coefficient, Cronbach's alpha, which is one of the most commonly used methods for evaluating and assessing internal consistency (Yamani, 2014). The Cronbach's alpha coefficient is usually expressed as a correlation coefficient and values of 0.70 and above is generally accepted as representing high reliability' (Usoro, Majewski & Bloom, 2010, p. 60). The academic staff and students' surveys were demonstrated to have good internal consistency; with Cronbach's alpha were .776, and .783, respectively, which suggest the reliability of scale.

Discussion:

This study is part of holistic approach to review and document the current status of e-Learning at UQU in terms of existing initiatives and activities, the available infrastructure, and the readiness of the faculty and students for e-Learning. As deduced from this study, there is a positive attitude among the academic staff and students at Umm Al-Qura University towards implementing e-Learning in their university.

The academic staff believed that e-mail is the most powerful tool that students use in their learning; this finding consists of the finding from students' survey and consist with the findings of several studies that also investigated the role of e-mails on the students' education. These studies emphasized that e-mail is a significant tool to enhance students-

instructor and students-students interactions that extend outside the universities walls (Hassini, 2006; Halic, 2011; Young, Kelsey & Lancaster, 2011). The current study reveals that using e-mails by the academic staff was ranked as a third activity that they are using in communicating students or other colleagues. Moreover, some e-Learning activities, such as using e-library and university's forum are less likely to be used by the students in UQU. Harris and Sandor (2007) indicated that within e-Learning environment, discussion forums are a significant tool in order to provide for student-student interaction. Clarke (2004) and Ortiz (2001) mention that employing different materials in e-Learning—such as e-mails, forums, chats, online discussion and computer games—cause students to use many different computer skills to access these materials. Thus, Umm Al-Qura University should increase the awareness among the students to use the different e-Learning tools in order to obtain a successful implementation of e-Learning in UQU.

On the other hand, around 22% of the academic staff believed that students are using social network in their learning. This finding is inconsistent with the finding from students' survey as there was evidence of frequent use of technology, ubiquitous access to the Internet service and using social networks. More than 76 % of the students reported using Facebook and around 66 % using Twitter. This could be interrupted as follow, educators at UQU are not fully aware about the significant role that technology plays in the students' life in general and in their education in particular. The current study reveals that around 50 % of the academic staff at UQU prefers to teach the students by the traditional way with implementing some supported of the mean of technology, followed by blended learning.

Since 2001, Prensky emphasizes that students are increasingly growing up in an age of new technology with which they are accustomed to dealing, and it is normal for them to have many technological devices, such as video cameras, computers and mobile telephones (Yamani, 2014). The new generation is termed by Prensky as 'Digital Natives' (Prensky, 2001). Young people have been totally normalised by the new digital wave, and are still continuously immersed in new wave of technology. They are growing up as the 'digital generation'—a generation who have started using technology in all their normal activities, including in their learning (Klopfer et al., 2009). The current study reveals that the academic staff at UQU have positive attitude towards implementing e-Learning at UQU, as more than 79 % were agree to apply such step. In addition, there was no significant difference in the academic staff attitude between male and female, or between Saudis and non-Saudis. Furthermore, there is no significant difference in the sample's general attitude towards implementing e-Learning in UQU based on their age, work experience and academic rank.

Searching on the Internet is reported as the most activities that academic staff and students are using in the learning process. In Yamani's research (2014) highlighted intensive use of social media, particularly searching on the Internet and sending e-mails among the students. Furthermore, Clarke (2004) indicated that searching skills is one of the features distinguishing e-Learning system from traditional skills. Rashty (1999) mentioned that students have the opportunity to learn 'how' more than 'what', because they use many different skills to learn, such as searching skills.

The vast majority of the academic staff indicated positive perception regarding the students' ability in using ICT. They perceived that students are generally skilled in using technology and they are ready to use e-Learning. A report conducted by the National School Boards Association (NSBA) (2007) stated that education is one of the most common topics discussed among students on social networks. Hence, students who have grown up in the digital wave are poised to obtain the benefits of e-Learning (Federation of American Scientists, 2006; Shaffer, 2007; Yamani, 2014). Furthermore, students perceived that the academic staff is generally less likely to use e-Learning system in their teaching practice. Thus, students believe that the academic staff does not prefer the conventional teaching style but at the same time they have not adopted e-Learning tools perfectly.

In addition to the aforementioned findings, the current research also investigated the academic staff and students' perception towards the university role in providing and supporting e-Learning at UQU. The academic staff at UQU has a positive perception towards the university role in providing and supporting e-Learning and new technology. However, despite being satisfied towards the university role, the sample believed that the university infrastructure is not ready to implement e-Learning effectively at UQU. On the other hand, respondent students show negative perception towards the university role in providing and supporting e-Learning and new technology. Thus infrastructure development, and staff and students support is a premium agenda for UQU.

This study applied in 2013 as the Deanship of e-Learning and Distance Learning building its capacity and infrastructure. Reporting current practice and status of e-learning is essential and will be an indicator of the efficiency of the Deanship plans and projects in the coming few years.

Conclusion:

The study indicated competent use of technology among staff and students at UQU with a positive perception of e-Learning in general and modest application. While academic staff had relatively suspicious believe of students ability to utilized e-learning tool for education. Students were unsatisfied with academic staff use of technology and e-Learning tool in teaching. Both group need initiatives to utilize available platforms and tool in teaching and learning practice.

The Deanship must bridge the gap between the two groups and elevate the definition of quality teaching and learning practice. Efficient training and culture awareness supporting infrastructure are essential in this phase.

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Appendix 1. Demographic Data from Participants (N=628)

		No.	%	
1	Do you have computer at home	Yes, I have my own computer	515	82
		Yes, I have a sharing computer with my family	102	16.2
		No, I don't have computer at home	11	1.8
2	Do you have smart tablet, such as iPad or Galaxy	Yes	413	65.8
		No	215	34.2
3	Do you have smart phone	Yes	539	85.8
		No	89	14.2
	If yes, what are you using your smart phone in (select one or more)	In calling and sending texts	349	55.6
		In sending e-mails	190	30.3
		In communication through social network, such as Facebook and Twitter	403	64.2
4	Do you have Internet at home	Yes	581	92.5
		No	47	7.5
5	Usually, where are you using the Internet	Home	272	43.3
		university	6	1
		Through your mobile	350	55.7
6	How many times you are using computer	never use computers	26	4.1
		One time fortnightly	58	9.2
		Twice a week	91	14.5
		Once a day	175	27.9
		More than once a day	277	44.1
7	What are the social networks you are using (you can select more than one).	Facebook	424	67.5
		Linked In	10	1.6
		Twitter	419	66.7
		Other	106	16.9
8	Have you activated your official e-mail on the university website	Yes	356	56.7
		No	185	29.5
		I do not know about this service	86	13.7
	If yes, do you prefer to use your university e-mail in communicate with friends and academic staff?	Yes	196	31.2
		No	156	24.8
9	Have you studied any subject supported by e-Learning tools?	Yes	247	39.3
		No	380	60.5
	If yes, have you enjoyed such experience?	Yes	197	31.4
		No	47	7.5
10	Have you tried to develop your skills electronically?	Yes	171	27.2
		No	456	72.6

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