

EFL students' readiness for e-learning: factors influencing e-learners' acceptance of the Blackboard™ in a Saudi university

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The purpose of this study was to recognise the perceptions of undergraduate students in different levels of the English department as to their readiness to accept e-learning as the dominant learning paradigm at King Khalid University (KKU), by probing the opinions of a sample of the EFL students. Descriptive research, involving a survey and in-depth interviews, was utilised to recognise and analyse teachers and students' perceptions of their attitudes towards e-learning, their readiness to accept it, and the factors facilitating or inhibiting e-learning. Recognition of these factors for building and applying the instruments in this study was done based on an extensive review of pertinent literature, outlining the important models and theories underlying technology acceptance paradigms in education. Findings have demonstrated that informants in this study have identified the facilitators and inhibitors of e-learning previously recognised in prior research. They also showed that students are ready to accept technology implementation and to shift to an e-learning model of education.

Introduction

Higher education, like many industries, realises the importance of technology for organisational growth and survival as a means of providing learning and increasing training efficiency (Govindasamy, 2002; Chen, Lin, & Kinshuk, 2008; Lin, 2011); no doubt then that "there are many organisations that spend a large portion of their budget on information technology to improve [student] performance or overall organizational performance" (Klaus, Gyires, & Wen, 2003, p. 106). Therefore, universities

are leveraging advances in computer-mediated communication (CMC) tools for online course delivery to enhance existing courses as well as full degree programmes. The benefits of e-learning have been elaborately discussed in earlier articles in recent years, but still research shows that a high rate of students who had started e-learning courses did not complete them (Dutton, Dutton & Perry, 2002; Liaw, 2008; Duan, He, Feng, Li & Fu, 2011; Stricker, Weibel, & Wissmath, 2011; Weibel & Wissmath, 2011; Lonn, Teasley & Krumm, 2011), which "suggests that something is not working properly in e-learning systems" (Liaw, 2008 p. 865). Liaw (2008) in this respect has aptly noted that "[b]y considering the responses of students who participated in e-learning courses, it is possible to better understand the reasons why students are often dissatisfied with the e-learning experience" (p. 865).

As such, identifying customers' (students') perceptions of and behavioural intentions and attitudes towards using technology for their learning can help exponentially in introducing e-learning endeavours into our educational systems in order to achieve equity of opportunities and expansion of higher education (see for instance, Lederer, Maupin, Sena, & Zhuang, 1998; Migliorino & Maiden, 2004; Albirini, 2006; Manochehri Sharif, 2009; Alshumaimeri, 2009); in this respect, Ko & Rossen (2004) have crudely put it that ...

The convenience of learning with technology applies equally well to adult learners, students from educationally underserved areas, those pursuing specialized or advanced degrees, those who want to advance in their degree work through credentialed courses, and any students who simply want to augment the curricular offerings from their local institutions. (Ko & Rossen, 2004, p. 3)

Technology helps students to achieve their educational goals and create new chances and choices. However, these chances and choices to acquire technologies that extend the learning environment may be influenced by the students' attitudes and behavioural intentions towards a new system of e-learning. Hence, there arises the need to check their perceptions of and attitudes towards technology use in their learning, and consequently in accepting technology as a learning leverage.

Problem of the study

The acceptance of new technologies has been the subject of a plethora of diverse studies in the past two decades (Lai & Li, 2005; Lin, 2011). In this context, issues of post-adoption usage and continuance intention have recently attracted similar research awareness and interests in galore (Lin, 2011; Lonn, et al., 2011). Therefore, the core investigation of the present study has been to recognize the perceptions of students as to their readiness to accept e-learning as the dominant learning paradigm at King Khalid University (KKU), to identify their motivational and attitudinal stances vis-à-vis e-learning, and to check the effectiveness of the language learning system of KKU (the Blackboard™) in integrating language skills, by probing the opinion of a sample of undergraduate students enrolled in different levels the English Department, College of Language and Translation, Abha across a wide range of courses delivered partially or fully online. Therefore, the problem of the present study has been established in the following research questions:

1. What are the factors influencing EFL students' learning of the online undergraduate courses in the English department?
2. How do students perceive their own self-efficacy during their use of the KKU LMS (the Blackboard™)?

3. Are EFL students ready to accept the current LMS medium (the Blackboard™) for delivering online courses?
4. What are the facilitators and motivators for integrating CALL in language teaching / learning?
5. What are the inhibitors of using CALL to integrate language skills?

Review of related literature

Learning Management Systems

Learning Management Systems (LMS) are web-based systems allowing instructors and / or students to share materials and interact online (Lonn, et al., 2011, p. 642). In this vein, Lonn & Teasley (2009) described LMS as follows:

Typical LMS provide a number of specific tools that support diverse functionality ranging from “materials management” to organize interactions between the student and the course content (e.g., syllabus, course readings, lecture slides), “interactive teaching” to organize interactions between the instructor and students (notifications, assignments, quizzes), and “peer learning” to organize interactions between students (peer review, group projects, student wikis). (p. 686)

Learning Management Systems have become actively ubiquitous in higher education institutions as hotly used mediums for instruction and learning throughout the world (Arroway, Davenport, Xu, & Updegrove, 2010; Smith & Caruso, 2010; Coates, James, & Baldwin, 2005; Browne, Jenkins, & Walker, 2006). These e-learning systems have gained wide currency in university educational institutions due to sparsely cited “gains in efficiency when using the technology over changes in teaching and learning activities” (Lonn, et al., 2011, p. 642).

LMS theorists have proposed four elements to be considered when developing e-learning environments: environmental characteristics, environmental satisfaction, learning activities, and learners’ characteristics (Liaw and Huang, 2007). Liaw (2008, p. 866) describes the factors of developing e-learning as: environmental characteristics, environmental satisfaction, learning activities and learners’ characteristics. Liaw (2008) further describes the factors influencing the effectiveness of LMS in learning and teaching as follows:

In e-learning environments, environmental characteristics, such as synchronous or asynchronous interaction, will create a high-level communicative environment that allows learners not only to share information, but also to determine how to retrieve useful information. Additionally, environmental satisfaction will enhance learners’ perceptions of technology that might promote their participation in the learning processes. Moreover, learning activities in e-learning provide a great chance for learners and instructors to share their knowledge and experience. In essence, when users feel less self-confident toward information technology, they also show less positive feelings toward the technology. (p. 865)

Moreover, other previous studies have indicated that e-learning adoption may be framed around three key factors: individual, system, and organisation. Analysis of these factors suggests that each key factor subsumes other intertwined sub-factors (Nanaykkara, 2007). Another study used six dimensions to assess the adoption’s factors, including stu-

dent dimension, instructor dimension, course dimension, technology dimension, design dimension, and environment dimension (Sun, et al., 2008).

Still a plethora of previous studies have recognised many factors having a direct or indirect effect on users' acceptance and adoption of new systems or services, including (1) user satisfaction (e.g., Hsu, Yen, Chiu, & Chang, 2006; Liao, Chen, & Yen, 2007), (2) attitude (e.g., Bhattacharjee & Sanford, 2006), (3) perceived usefulness (e.g., Roca, Chiu, & Martinez, 2006; Liao et al., 2007), (4) perceived ease of use (e.g., Roca et al., 2006), and (5) quality (e.g., Chiu et al., 2005; Roca et al., 2006). However, the relationship between the initial acceptance and post-acceptance of a service has seldom been explored from a negative critical incidents perspective.

As with all instructional milieus, the contexts of e-learning or traditional face-to-face learning environments lay a variety of constraints on the experiences of teachers as to real classroom practices. E-learning and traditional learning environments where learning transfer occurs, with similar relationships and experiences in the learning environment can hold across situations and the environment in which learning is to be applied (Brown, Collins, & Duguid, 1989; Halpern & Hakel, 2003).

Technology in and of itself does nothing to improve student academic achievement, but it can bring about changes in motivation and attitude, which are instrumental for enhancing academic achievement. Research, earlier surveyed, clearly documents a multitude of conditions that must or should exist so that technology can bear its fruit. Recognition of attitudes and inclinations towards technology use is primary amongst these factors inducing to successful technology implementation for learning and teaching (Lederer et al., 1998; Davis, 1989; Liaw, 2002; Migliorino & Maiden, 2004; Albirini, 2006). Even with rapidly changing technology tools, the following conditions are deemed essential for student academic benefits to be realized according to several studies (Sivin-Kachala & Bialo, 1994; Sweet, 2004; Cradler, 2003; Cradler & Cradler, 2002; Cradler, 2003; Ringstaff & Kelley, 2002; Barton, 2004; Hancock & Betts, 2002; Valdez, 2004; Honey et al., 2002; Bates & Poole, 2003; Beaver & Moore, 2004; Shields & Behrman, 2000; Azzam, 2006).

Faculty will need to develop their skills to achieve the greatest benefit from the virtual learning environment (O'Neill, Singh, & O'Donoghue, 2004). However, some traditional instructors do not want to be online instructors, and they should not be forced to make that change. Rather, those interested in teaching online should be provided the opportunity to learn about the changes and understand the strengths, weaknesses, and differences of technology-assisted instruction that will contribute to positive learning outcomes for students (Fein & Logan, 2003; Okojie & Olinzock, 2006). O'Neill et al. Further explain...

The educational needs of individuals are now seen to be continuous throughout a working life, as [labour] markets demand knowledge and skills that require regular updates (2004, p. 315).

Universities will need to prepare students for the virtual learning environment. Exposure to information technology systems early in their academic careers, it is generally believed, will help students and faculty to be more successful online (Volery & Lord, 2000). When considered in the early stages of the initiative they are geared more at better technology skills than at better teaching or learning skills or habits. This can create a hurdle for faculty and students lacking the necessary skills, experiences, and expertise to function successfully (O'Neill, et al., 2004). There are several theories explaining the background to using technology in education. Following is a review of the most important ones.

Technology Acceptance Model (TAM)

Learning systems acceptance models are grounded in prior empirical research with regard to information systems acceptance. A recent study has identified nine principal models in the field of IT acceptance (Terzis & Economides, 2011). The utility of these models has been empirically investigated in numerous previous studies. Each model tried to explain the determinants of IT acceptance and especially usage behaviour. The first model was the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975). The TRA model is considered the predecessor of the IT acceptance models. According to TRA, the technology acceptance model (TAM) has been developed to predict IT acceptance by using Perceived Usefulness and Perceived Ease of Use (Davis, 1989). Therefore, the TAM is the most popular model and it has been used in numerous studies regarding technology acceptance.

Attitudes and subjective norms are the two major constructs in TRA. As thus, Davis (1989) explored the prospect that beliefs influence attitudes that indicate intentions and generate behaviours by building upon the work done on TRA relative to technology acceptance. Davis thus conceived that "TAM's belief-intention-behaviour predicts user acceptance of IT" (Lederer et al., 1998, p. 195).

The perception of the usefulness and ease of use relative to a particular system shapes the attitude towards its use and behavioural intention to make use of that system. The model postulates that usage behaviours of individuals towards technologies are shaped by the experiences with the technology (Agarwal & Karahanna, 2000).

The perceived usefulness of a particular system depends greatly upon the degree to which that system will enhance performance (Davis, 1989; Lederer et al., 1998). If a technology-assisted system, such as Blackboard, is to be perceived by the user or student to be an appropriate alternative to classroom instruction it would have to demonstrate its usefulness to the student for it to be considered useful.

Davis, Bagozzi, & Warshaw (1989) indicated that perceived usefulness influences attitude towards its use. A positively perceived usefulness creates a positive attitude about the use of that particular technology.

Perceived ease of use is an individual's assessment that technology interaction will be relatively free of cognitive burden, i.e., ease of use reflects the facility with which the individual is able to interact with a particular software artefact. The model postulates that usage behaviours of individuals towards technologies are shaped by the experiences with the technology (Agarwal & Karahanna, 2000, p. 674).

Davis, et al. (1989) wrote that perceived ease of use has a significant impact and relationship with attitude towards use through its two mechanisms of self-efficacy and instrumentality. They explained that the easier a system is to use the stronger students' sense of efficacy and personal control regarding their ability to carry out the behaviours needed to use the technology. The perceived ease of use and attitude toward use relationship is intended to capture the intrinsically motivating aspects of perceived ease of use (Davis, et al., 1989).

The relationship between perceived ease of use and perceived usefulness indicate that technologies that are easy to use contribute to increased performance. Davis and colleagues explain this as follows:

Effort saved due to improved [perceived ease of use] may be redeployed, enabling a person to accomplish more work for the same effort. (Davis, et al., 1989, p. 987)

Theory of Reasoned Action and Theory of Planned Behaviour

The theory of reasoned action (**TRA**) and the theory of planned behaviour (**TPB**) are both used to measure human behaviour. **TRA** was developed first and **TPB** was created to address perceived deficiencies in **TRA**. Davis (1989) adapted **TRA** to model intentions towards accepting information technology, thus creating the **TAM**. "The **TRA** is a general model that explains and predicts behavioural intentions in many general settings." (Leong, 2003, p. 7) This is further explained by van Biljon & Kotze, (2008, p. 2665):

TRA is a general model and it does not specify the active beliefs for a specific behaviour. Therefore a researcher using **TRA** has to identify the beliefs that are relevant for subjects regarding the behaviour under investigation. For example, if **TRA** is applied to mobile phone use, people's beliefs regarding the benefits or liabilities of mobile phone use have to be identified by the researcher.

TRA posits that human behaviour is guided by individuals' behavioural (attitude towards the behaviour) and normative (subject norm) beliefs (Ajzen, 2002). Ajzen (2001, 2002) defined attitude towards the behaviour as the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question. Subjective norm refers to the perceived social pressures to perform or not perform the behaviour. When combined, attitude towards the behaviour (A) and subjective norm (SN) predict a person's behavioural intentions (BI). Therefore, according to the model ($BI = A + SN$), BI is an indication of the strength of a person's intention to perform the behaviour (B) (Leong, 2003). Ajzen (2002) explicates:

As a general rule, the more favourable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behaviour in question. . . . Intention is, thus, assumed to be the immediate antecedent of behaviour. (Ajzen, 2002, p. 1)

Both **TRA** and **TPB** models have examined and interpreted the different ways of predicting various behaviours and the outcomes associated with those behaviours. Both examine attitude towards behaviour and subjective norm to predict behaviour, and **TPB** adds perceived behavioural control to (a) predict and understand motivational influences on behaviour outside the individuals control, (b) identify how and where to target strategies for changing behaviour, and (c) explain virtually any human behaviour (Montano & Taplin, 1997). Central to each theory is that individuals are rational, use the information available to them in a systematic way, and consider the implications of their behaviour prior to engaging in those behaviours (ibid.).

Task-Technology Fit Model

The task-technology fit (**TTF**) model attempts to evaluate an organisation's technology suite rather than a single application by matching the capabilities of the technology to the fit with the task (Klaus et al., 2003). "This model represents fit research in the information technology area that links technology to performance" (Heine, Grover, & Malhotra, 2003, 3.6).

Therefore, higher task-to technology fits result in better performance. The **TTF** model consists of task characteristics, individual characteristics, characteristics of the systems and services, and user evaluations.

As the task characteristics or the abilities of the users change, the information systems and services must change accordingly to meet new demands. Therefore,

...task characteristics and individual characteristics moderate the relationship between the characteristics of the systems and services and user evaluations. (Leong, 2003, p. 11)

The **TTF** hypothesis argues that for an information system to have a positive impact on performance, it must be designed and utilised in such a way that it fits with the tasks it supports (Kim & Benbasat, 2000). It is, therefore, incumbent upon designers of systems to provide technologies that users need to perform task more efficiently. Poorly arranged data on a screen can negatively impact a user's performance in completing tasks.

These models explain and clarify how technology could be integrated in teaching and training. These explain the behavioural and attitudinal reaction to the use of technology both as a simulation and as assistance in the presentation of learning materials.

What can be implied from an extensive review of related literature and paradigms of technology implementation into education is that research has shifted from focusing on technology-related conditions such as hardware, software, and infrastructure issues since 1990s to the nascent issues related to perceptions of attitudes towards technology-enhanced learning environments and students and teachers' thinking and instructional planning for effective instruction.

Methodology

Method

Descriptive research, powered by qualitative evaluation involving in-depth interviews, was deemed useful for assessing the quality of some aspects of e-learning via Blackboard in the English department of the College of Languages and Translation, Abha. The researcher explored the **EFL** students' readiness to accept e-learning as a medium of instruction as well as assessed and evaluated, according to students' perceptions, some of the different aspects of e-learning, such as motivation for learning, online communication self-efficacy, language skills integration, and perceived facilitators and inhibitors of computer-assisted language learning (**CALL**). Supported by quantitative data, the survey-based investigation was buttressed by semi-controlled, in-depth interviews with students and teachers of both genres. The descriptive research design with qualitative data from interviews can provide useful information about the distribution of a wide range of characteristics and relationships between variables of the study, with the purpose being to "use questionnaires to collect data from participants in a sample about their characteristics, experiences, and opinions in order to generalize the findings to a population that the sample is intended to represent" (Gall, et al., 1996, p. 289). This approach of research can provide a basis for decisions that are significant in the evaluation of current educational practices (Patton, 2002).

Instruments of data collection

The survey instrument consisted of the **LMS** Survey of **EFL** E-learners in **KKU** developed by the research against a rich theoretical background, and Arabicised and standardised by the researcher. The survey form included close-ended Likert scale statements set in 7 domains. A semi-controlled interview guide was also built to check for the readiness and effectiveness

of e-learning in **KKU**. These instruments were used to measure the factors that are said to contribute to the effectiveness of online courses from student perspectives and to probe into their perceptions of their readiness to accept technology for learning and their perceptions of facilitators and inhibitors of e-learning in the English department.

Validity of the instruments

Inter-rater validation indicated the instruments were valid enough to collect the data they were meant to gather.

Reliability

The reliability of the **LMS** Survey has been determined using the Kuder-Richardson formula (21) (Brown, 1997, p.202). The reliability co-efficient computed for the 35 items was 0.76, which is a fairly high. The survey was administered to 7 faculty members and junior staff members to determine its reliability, manipulating a test-retest method. The reliability of the survey was determined using the Kuder-Richardson formula (21). The reliability co-efficient computed for the survey items was 0.87, which is high enough to make the survey reliable for administration.

Findings

A. Results from the LMS Survey of EFL E-learners in KKU

To recognise significant differences in learners' responses to the five sections of the online **LMS** survey according to factors relevant to academic level and computer proficiency of the informants, a Multivariate Analysis of Variance Analysis (**MANOVA**) was employed as is demonstrated in Table 1.

The results indicate that there were no significant differences detected as resulting from differences attributed to the level of study (academic level from level one to level eight) or differences resulting from computer literacy levels (designated on the survey as expert, moderate, beginner, unfamiliar). Therefore, the whole sample was treated as a homogeneous sample when the responses of the learners were analysed in the following tables. To determine the factors influencing **EFL** students' learning of the online undergraduate courses in the English department, frequencies, percentages, weighted percentages, and Chi^2 were used (see Table 2).

Table 2 shows Chi^2 values for the items from 1 to 9, all being significant at 0.01 except for item #5, which is insignificant. This further indicates that all informants agreed to the items of these two sections positively, suggesting that the factors related to learner control and motivation for learning in an online context impact **EFL** students' learning of the online undergraduate courses in the English department.

As can be seen from the weighted percentages, factors related to motivation for learning, especially improving from mistakes, being open to new ideas, moral and financial advantages of e-learning in **KKU**, and sharing ideas with others are primal amongst these factors germane to motivation for e-learning.

Table 1: MANOVA results for significant differences in responses to the survey according to the variables of the study (academic level & computer literacy)

Source	Dependent variable	Type III sum of squares	df	Mean square	F	Sig.
Academic level	1	26.207	7	3.744	1.984	.056
	2	3.889	7	.556	.457	.865
	3	1.722	7	.246	.471	.855
	4	2.678	7	.383	1.318	.241
	5	1.898	7	.271	1.016	.420
Computer literacy	1	1.920	3	.640	.339	.797
	2	3.689	3	1.230	1.011	.388
	3	3.356	3	1.119	2.144	.094
	4	.937	3	.312	1.076	.359
	5	.240	3	0.0798	.299	.826
Academic level * Computer literacy	1	3.423	1	3.423	1.814	.179
	2	0.01389	1	0.01389	.011	.915
	3	.985	1	.985	1.887	.170
	4	0.000317	1	0.000317	.001	.974
	5	.138	1	.138	.517	.473
Error	1	660.482	350	1.887		
	2	425.617	350	1.216		
	3	182.658	350	.522		
	4	101.609	350	.290		
	5	93.433	350	.267		

Table 2: Frequencies, percentages, weighted percentages, and Chi² for determining factors impacting EFL students' learning in an online context

Items	Agree		Neutral		Disagree		Weighted percentage	Chi ²
	Freq	%	Freq	%	Freq	%		
1	145	41.8	158	45.5	44	12.7	2.291066	67.33**
2	167	48.1	131	37.8	49	14.1	2.340058	63.24**
3	211	60.8	108	31.1	28	8.1	2.527378	145.52**
4	251	72.3	87	25.1	9	2.6	2.697406	263.82**
5	134	38.6	107	30.8	106	30.5	2.080692	4.36
6	301	86.7	41	11.8	5	1.4	2.853026	451.04**
7	212	61.1	121	34.9	14	4.0	2.570605	169.84**
8	154	44.4	122	35.2	71	20.5	2.239193	30.03**
9	178	51.3	91	26.2	78	22.5	2.288184	51.12**

Note: * means that the value is significant at 0.01; ** means that the value is significant at 0.05, in this table and in all tables below.

To determine how students perceive their own self-efficacy during their use of the learning online management system available at **KKU**, the same statistics were used as demonstrated in Table 3 below:

Table 3: Frequencies, percentages, weighted percentages, and Chi² for determining learners' perceptions of their online self-efficacy

Items	Agree		Neutral		Disagree		Weighted percentage	Chi ²
	Freq	%	Freq	%	Freq	%		
10	242	72.5	66	19.8	26	7.8	2.646707	237.22**
11	183	54.8	86	25.7	65	19.5	2.353293	71.18**
12	214	64.1	91	27.2	29	8.7	2.553892	159.28**

All Chi² values are significant at 0.01, indicating that learners were cognizant of their online communication self-efficacy. Weighted percents indicate that self-confidence expressing emotions through text comes in order before self-confidence in using online tools (e-mail, discussion), and both are in order before self-confidence in posting questions in online discussions.

Table 4: frequencies, percentages, weighted percentages, and Chi² for the use of e-learning for language skills integration, and their acceptance of the LMS as a medium for online course delivery

Items	Agree		Neutral		Disagree		Weighted percentage	Chi ²
	Freq	%	Freq	%	Freq	%		
13	173	51.8	100	29.9	61	18.3	2.335329	58.07**
14	166	49.7	133	39.8	35	10.5	2.392216	83.40**
15	236	70.7	75	22.5	23	6.9	2.637725	221.54**
16	161	48.2	120	35.9	53	15.9	2.323353	53.40**

With all Chi² values being significant at 0.01 as is showed in Table 4 above, the figures demonstrate that students were cognizant of their perceptions of their readiness to accept the current LMS medium for delivering online courses.

They think so because (1) the LMS gives them the opportunity to use drama video clips for developing their listening and viewing comprehension skills, (2) makes available textual material integrated with audio-video enhancements, (3) teachers incorporate video clips available in the Writing Tapestry courses which can potentially help integrate reading comprehension, listening comprehension and writing skills; (4) and finally, the LMS gives them access to supplementary material online for developing my English (e.g. text, graphics, advance organisers, audio, video, etc.) that integrates language skills.

In order to determine the facilitators and motivators for integrating CALL in language teaching / learning, Table 5 below was generated using responses of the informants on Section F of the LMS Survey.

Table 5: Frequencies, percentages, weighted percentages, and Chi² for determining the facilitators and motivators for integrating CALL in language teaching/learning

Items	Agree		Neutral		Disagree		Weighted percentage	Chi ²
	Freq	%	Freq	%	Freq	%		
17	135	40.4	150	44.9	49	14.7	2.257485	53.36**
18	167	50.0	83	24.9	84	25.1	2.248503	41.75**
19	187	56.0	65	19.5	82	24.6	2.314371	78.44**
20	239	71.6	70	21.0	25	7.5	2.640719	228.69**
21	153	45.8	127	38.0	54	16.2	2.296407	47.32**
22	80	24.0	165	49.4	89	26.6	1.973054	39.17**
23	163	48.8	70	21.0	101	30.2	2.185629	40.28**
24	91	27.2	118	35.3	125	37.4	1.898204	5.79*
25	150	44.9	132	39.5	52	15.6	2.293413	51.35**

All Chi² values are significant at 0.01, except for item #25, which is insignificant and item #23 which is significant at 0.05. This indicates that informants perceived the following factors as facilitators and motivators for integrating CALL in English teaching in **KKU** in the following order according to the perceptions of the informants as determined by Chi² and weighted percents:

1. Provision of administrative/technical support;
2. Availability of learning resources;
3. Commitment of instructors;
4. Integration of CALL with your EFL learning goals;
5. Support from **KKU** administration (E-learning Deanship);
6. Availability of teachers' time;
7. Systematic planning for CALL;
8. Providing training on hardware and software use in the LMS; and
9. Adoption of the whole **KKU** policy of computer use.

In order to determine the inhibitors for integrating CALL in language teaching / learning in **KKU**, Table 6 below was generated using responses of the informants on Section G of the LMS Survey.

Table 6: Responses of informants on Section G of LMS Survey.

Items	Agree		Neutral		Disagree		Weighted percentage	Chi ²
	Freq	%	Freq	%	Freq	%		
26	128	38.3	109	32.6	97	29.0	2.092814	4.39
27	161	48.2	113	33.8	60	18.0	2.302395	45.85**
28	187	56.0	84	25.1	63	18.9	2.371257	139.53**
29	97	29.0	139	41.6	98	29.3	1.997006	10.32**
30	81	24.3	99	29.6	154	46.1	1.781437	25.98**
31	213	63.8	77	23.1	44	13.2	2.505988	144.15**
32	183	55.5	106	32.1	41	12.4	2.430303	91.87**
33	168	50.9	90	27.3	72	21.8	2.290909	47.35**
34	197	59.7	92	27.9	41	12.4	2.472727	115.04**
35	197	59.7	98	29.7	35	10.6	2.490909	121.26**

All Chi² values are significant at 0.01, except for item #26, which is insignificant. This indicates that subjects of the study perceived the following factors as inhibitors for integrating CALL in English teaching in KKKU in the following order according to their perceptions:

1. Rapid changes in hardware and software technology;
2. Assumption that the computer demands a special curriculum and a special teacher to teach it;
3. Scepticism concerning the effectiveness of CALL;
4. Lack of appropriate software;
5. Lack of instructors' experience and skills in educational technology;
6. Lack of hardware;
7. Teachers' or students' resistance to change;
8. Lack of time;
9. Problems of scheduling sufficient computer time for different teachers' classes;
10. Lack of training for teachers to use CALL.

B. Results from the student and teacher interviews

The questions were designed using an open-ended format in an effort to allow the participants more flexibility in their response. According to Merriam (1998), interview questions in qualitative research should be less structured and more open-ended. For purposes of consistency and salience, interviews with students and teachers revolved around the basic questions (or variations on these) below:

- A. How did you benefit by e-learning?
- B. How did u use e-learning? What learning chances did Blackboard bring forth to you?
- C. What problems did you encounter in traditional learning but solved in e-learning?
- D. What motivated you to support our e-learning endeavours at KKKU?
- E. How do you envision the future of e-learning in KKKU?

Teachers' interviews

One teacher explained how effective the LMS is; she mentioned that “the system is designed to provide instant feedback during class time about strengths and weaknesses of the performance of students.” She further added that the LMS system has enhanced the interaction of students contrary to what took place in traditional lecturing with a correct response rate of 70.5%. She further added that the LMS was beneficial to overcome affective impediments or inhibitors that preclude students from active, interactive participation in classroom, adding that “Reticent and timid students showed great enthusiasm and they have proven their presence effectively.”

Another teacher adeptly quipped:

I strongly believe that e-learning has many benefits; I have observed that the most important benefit of this medium of instruction/learning is that it is flexible and user-friendly.

One more teacher added that

E-learning is also effective anywhere, anytime. I can give my classes in virtual classrooms synchronously or asynchronously in cyberspace.

Other teachers thought that e-learning is beneficial because it panders to all needs of students, and it accommodates to their varied learning styles. He said,

It is not only a matter of modal differences, but it is a difference of quality inputs, processes, and outputs of the whole educational system. E-learning enhances inputs, processes and outputs of this educational process occurring in cyberspace because it levels up to a quality education, new methods that enliven learner motivation, and excites lively discussions and interactions; in addition, information is presented in a multi-modal fashion that addresses a variety of learning and teaching styles.

In this line, another teacher said that the new medium

...provides access to tutorials and lectures that can be downloaded direct off the e-learning pages, ready for a multi-modal reception anywhere, anytime on the globe.

Therefore, many of the interviewees thought that e-learning could help their students with their studies and their study skills. There are several embedded applications and elements about e-learning such as videos, sound effects, graphics, and several other facilities which they could harness to get their virtual lectures at anytime often and again as much as they like, anywhere on earth, with just a click on the board.

As for the problems that teachers have perceived as impeding an efficient use of e-learning, most of the interviewees concurred that the most obvious problem with e-learning had to do with students' computer literacy levels. One teacher argued that

Students need to be inducted into the e-learning system with adequate, appropriate, and frequent training in order for them to be able to use Blackboard in an effective way.

Another teacher agreed that “student training into the use of Blackboard is a must”, while several other teachers also detected lack of facilities to adequately cater for all needs of students is also a prominent problem. One teacher said in this context that “there are few computer labs available for all colleges and all departments, and sometimes, we have to reserve the labs one or two weeks in advance.”

Another teacher argued that some students do not even have private laptops at home to help them pursue with asynchronous learning off-campus.

In addition, interviewed teachers agreed that some students may be unaware of how to utilize e-learning for their individual learning needs. This problem was solved when the university had sent an e-learning specialist for training students as to how to make the best use of e-learning.

As for the question on motivators for supporting the e-learning endeavour in **KKU**, teachers indicated that e-learning is a modern instructional trend that offers immense services for students, and it has prominently been a widely used mode of learning worldwide. One teacher noted,

Since ours is an age of accruing ICT when technology and informatics have invaded our life ubiquitously, I feel motivated to spread it in my community and I do support it in **KKU**.

Another teacher commented, "I love new innovations in education, and I think that this medium is profiting for us if we apply it in the best fashion." Another further added,

E-learning is rich in a plethora of benefits and learning opportunities that have made learning easier to pursue for a life... Also, e-learning promotes creativity and critical thinking amongst our students. In addition, curricular content can best be presented in e-learning formats, never available in traditional modes of learning.

As for future plans of incorporating e-learning in the university curriculum, teachers agreed that **KKU** is a pioneering university in **KSA** in terms of initiating e-learning endeavours to deliver its courseware. They argue that **KKU** was also prime amongst Saudi universities in providing e-training for faculty and students. One teacher commented,

E-courses are on the increase; students are more desirous of receiving their courseware online. This is ample evidence that **KKU** has a fantastic vision of the future as a nascent e-learning university.

Teachers in **KKU** are up to the standard in providing their courseware on the internet. One more teacher further commented,

We extend our helping hands to our students to make e-learning more effective, and we are ready to exert more effort to make the current practice a pioneering successful story in the history of e-learning in **KSA**.

Students' interviews

As for the benefits of e-learning over traditional learning, most students interviewed agreed that e-learning facilitates inter-personal communication off campus, which is not available with traditional modes of learning. Through e-learning, students can communicate with their professors via course e-mail or chat rooms, e-bulletins and discussion boards off campus synchronously or asynchronously anywhere on the globe. Communicating with faculty via course e-mail, chat rooms, and discussion boards is really one method of e-learning. This has given students the chance to communicate with their teachers on a continual basis for submitting assignments, making queries, asking for explanations, without being ever restricted by time or locale constraints.

One student commented,

In point of fact, the experience was new and enjoyable. We had a variety of approaches to e-learning in **KKU**. In my studies for my master's, the focus has been on how to extensively use computers for my learning; lessons were prepared by students, set via Microsoft Word, and presented via Microsoft PowerPoint.

Students began to master computer and Internet skills when students made massive use of the World Wide Web for searching how to prepare and develop lesson plans, how to do assignments, and how to use online learning – this helped a lot in enhancing their online learning skills.

Another student further added,

None can ever deny the informatic revolution brought about by computers in our life, especially in our educational life. Our experience with e-learning makes it clear how important this mode of learning has become in our lives – a successful experience spawning out of tremendous efforts exerted by the e-learning deanship in **KKU**, especially as far as Blackboard and Flash are concerned. We used both systems in our learning of computer courses in the master's programme. We had firsthand experience with the two e-learning systems, and we had serious discussions about the use of both systems in our teaching as available via the e-learning deanship website. We had been introduced to the theory of e-learning as well as to practical applications of the two systems which we made use of in designing our Flash projects.

Another student added,

Since my early errands with e-learning, I could quickly realise the big difference between traditionally delivered learning and e-learning. I had a chance at both modes, but the difference, I could realize, was patently huge. It is different when you communicate in cyberspace with your professors via course email at any time, in any place wheresoever's on earth. Swiftly! Marvellously! Not ever tedious or boring! Not a query is asked but quickly will there be an explanation or a reply that indicates fleet interactivity between students and teachers or peers when feedback is accessibly available on the spot when assignments are submitted or evaluations are carried on.

One more comment by another student sums up the benefits of e-learning in a nutshell:

All such advantages of e-learning made me identify the success of the e-learning experience in all scopes – this experience has really added to my success and to the success of **KKU** as an emerging e-learning university that any student should be proud of joining as an e-learner.

As for the problems and inhibitors that students encountered with this new experience of e-learning, most students agreed that they needed more training, and more facilities to cater for all their needs. Like any new idea, difficulties crop up at the beginning, but are later solved with some degree of individual variation thereto. However, overcoming emerging problems was not impossible – we could manage our own success; we had great ambitions which motivated us to continue our graduate studies in this new e-milieu. Most students agreed, however, that the significant challenges which they encountered could be tacitly summed up in the following points:

✦ Some students were not interactively responsive to the new mode of e-learning;

- ✧ Less support was presented to the students by the **KKU** authorities so as to activate e-learning on campus;
- ✧ Older versions of curricular activities are better suited to the traditional fashion of presentation rather than e-learning modes; these need to be upgraded to be compatible with the e-learning environment;
- ✧ Students indicated that they need updated methodologies of pedagogy and andragogy that are commensurate with the mission of e-learning and that can make it an efficient method of self-directed learning.
- ✧ E-learning has successfully dealt with many defects about traditional learning such as:
 1. Insufficient time in classroom;
 2. Students were unable to discuss and enquire freely in classroom due to problems of shyness or time constraints;
 3. It fosters more activity on the part of students who initiate discussions and assignments that can be easily uploaded, solved and marked online;
 4. Students can better communicate with one another and with course instructors at any time.

They also agreed that individual variations in learning is another big problem overcome with e-learning; some students who are slow learners can go back to taped lectures and rewind as often as they please while fast learners can make use of their lectures once without wasting classroom time. As such, problems with individual differences can be done away with.

As for motivators for students to support the e-learning endeavour at **KKU**, many of the students interviewed agreed that their teachers had a great influence on them, which was quite influencing for them to be actively involved in e-learning. Others thought that "We also experienced the benefits of e-learning to the advantage of our own learning efforts." Another student added, "I use e-learning extensively in my life; e-learning offered more opportunities for teacher-learner communication to the good of learning in the best way possible."

Another student added in this vein that

One big motive for learning over Blackboard are our professors; the traditional unidirectional method of lecturing and inculcation have become obsolete; as students we no longer can learn under these circumstances due to time and locale constraints, not to mention the classroom factors which are not effectively conducive to active learning. E-learning has broken these barriers and learning has become student-centred.

As for the future envisioned for e-learning in **KKU**, students agreed that the future of e-learning is bright, for e-learning will offer "more opportunities for teacher-learner communication to the good of learning in the best way possible." A student's comment encapsulates his vision, when he said,

The future of e-learning is gorgeous; it will push us forward in our pursuits towards success and progress; it can disseminate knowledge and lead up to advancement. I would finally like to extend my heartfelt thanks and gratitude to the people working in the e-learning deanship for whatsoever they did to promote this medium of learning in **KKU**, our beloved university.

In the long run, e-learning will reduce educational costs and make learning more effective; it will change the concepts of university learning sooner or later. A student explains,

E-learning will facilitate traditional learning besides its own specific advantages, given the wonderful communication techniques available with it; it will also save time and effort, as well as break the red tape embedded in procedures with enrolment in traditional educational programmes; information exchange will be more easily accessible and more fun.

Discussion

This study was launched in order to identify the perceptions and inclinations of students with regard to technology use for learning English. Prior research showed that success of technology implementation largely depends on the perceptions of such inclinations and attitudes towards technology acceptance (Lederer, et al., 1998; Davis, 1989; Liaw, 2008; Migliorino & Maiden, 2004; Albirini, 2006). Students and teachers alike who entertain positive attitudes or perceptions about using the computer/internet are more willing to and likely to integrate this technology into their learning and teaching practices. In this respect, some earlier research indicated that there is a positive and significant relationship between learner independence and individual learner attitude, as there is between enhanced communications and individual learner attitude and ease of technology use and individual learner attitude (Manochehri & Sharif, 2009; Alshumaimeri, 2009). This has been referred to as readiness for online learning, which is defined in terms of three aspects: (1) students' preferences for the form of delivery as opposed to face-to-face classroom instruction; (2) student confidence in using electronic communication for learning and, in particular, competence and confidence in the use of Internet and computer-mediated communication; and (3) ability to engage in autonomous learning (Warner, Christie, and Choy, 1998).

The present study, commensurate with prior research (Ryan and Deci, 2000; Wang and Beasley, 2002; Hung, Chou, Chen, and Own, 2010; Terzis & Economides, 2011), has identified several factors that impact the learners' acceptance of technology use for learning, namely, motivational factors and learner control factors.

Findings from the survey and from interviews indicated that amongst these influential factors, openness to new ideas, innovations, and extrinsic rewards and advantages, sharing ideas with others, ubiquity of learning resources in the online context, etc. are amongst these influential factors recognised in this study as in prior research, too (Hsu, Yen, Chiu, & Chang, 2006; Liao et al., 2007; Terzis & Economides, 2010).

Results from this study also warrant evidence from previous research indicating that e-learning environments are conducive to better communication self-efficacy (Compeau & Higgins, 1995; Eastin & LaRose, 2000; McVay, 2000; Roper, 2007). The study indicated that students were cognizant of their communication self-efficacy in internet learning environments when they use text communication, chat, bulletins and discussion channels better than face-to-face communications in traditional learning environments. This is also compatible with prior research which suggests that shy or timid students are inclined to participate more in online environments than in traditional learning environments (Palloff & Pratt, 1999).

In this vein, McVay (2000) also indicated that instructors are required to create opportunities for more active, interactive, online interactions and communications between

students and themselves in e-learning contexts. By the same token, Roper (2007) suggested that successful learners should make the most of online discussions, which may provide opportunities for richer discourse and thoughtful questions as a technique to engage both fellow students and instructors. Qualitative data from interviews support these findings (Finley & Hartman, 2004; Manochehri & Sharif, 2009):

- ✧ Interview data with teachers and students asserted that e-learning is conducive to more lively discussions and interactions,
- ✧ Students are given the chance to communicate with their teachers and peers on a continual basis for discussing or submitting assignments, making queries, asking for explanations, or
- ✧ Students are able to talk about their courses without being ever restricted by time or locale constraints, or by interpersonal impediments related to shyness, social anxiety or negative attitudes towards e-learning
- ✧ In addition, the present study, commensurate with prior research (e.g., Wang & Chan, 1995; Shlechter, 1991; Cox, et al., 1988), has identified a variety of facilitators of implementing e-learning, which participants in the present study have also recognised. For instance, the present study has identified the following as potentially important facilitators of e-learning acceptance; these factors have also been identified in prior research:
 - ✧ Provision of administrative support has been identified as an important facilitator, consistent with research by Cox, Rhodes & Hall (1988);
 - ✧ Availability of resources (Wang & Chan, 1995);
 - ✧ Commitment of instructors and other who are involved; commitment communicates support, and any individual who is about to try a new material or procedure needs to know that there is support from higher levels (Chapman, 1990);
 - ✧ Availability of teachers' time (Chin & Hortin, 1994; Ely, 1990);
 - ✧ Systematic planning for e-learning (Shlechter, 1991; Branson, 1991); and
 - ✧ Adoption of the whole **KKU** policy of computer use. (Cox, et al., 1988)

By the same token, the following have been perceived by participants in the survey as in the interviews as inhibitors to the implementation of e-learning. These inhibitors were previously recognised in similar research. For instance, this study has identified rapid changes in hardware and software technologies and lack of appropriate software had been found to inhibit the adoption of e-learning in **KKU**; this is commensurate with prior research elsewhere (Smith & Yellen, 1991; Mackowiak, 1991; Wei, 1993).

Furthermore, the assumption that the computer demands a special curriculum and a special teacher to teach it was also recognised as a barrier by informants on the survey as by interviewees, alike. In this context, Hammond et al. (1995) and Dunkel (1987) indicated that instructional goals embedded within a piece of courseware often fail to match the goals of the course it purports to support if educational software for almost every subject in the curriculum is available, but its quality is poor or the quality of teachers implementing this technology is poor. This is also related to a sceptic attitude towards the use of technology (Alshumaimeri, 2009; Manochehri Sharif, 2009); teachers and students together have to believe in the power of technology in order for it to give fruition. Therefore, Marcinkiewicz (1994) suggested that simply having more hardware does not in itself persuade teachers to begin to use it.

the same basis of lack of hardware and software. Lack of training for teachers or inadequate teacher training has contributed to a lack of computer use (Hammond et al., 1992; Mackowiak, 1991; Wei, 1993; McCarthy, 1988).

Therefore, teachers' training in software evaluation is essential for e-learning acceptance, adoption, and continued implementation (Johnston, 1987) because continued in-service training for teachers will help against teachers' resistance to technological change and consequent acceptance of technology.

Furthermore, lack of time was also perceived as a significant inhibitor; this is consistent with prior research findings which had shown that teachers lack time to get to know e-learning programmes, prepare and integrate new e-learning software, develop software, and set up or maintain equipment (Cox, et al., 1988; Hammond et al., 1992).

Conclusion

The increased use of various modes of e-learning is a national policy of the Saudi government. Therefore, recognition of perceived attitudes towards and capabilities of e-learning is instrumental for recognising facilitators and inhibitors of e-learning in university education, and its impact on technology acceptance.

While this study has explored such factors related to faculty and students' perceptions and attitudes towards technology acceptance, additional research is needed to determine in a more exact manner, the relative importance of the factors (e.g. by designing a study to measure multiple regression and autocorrelations).

However, there are several limitations of the present study which should be addressed in future studies. First, the present study takes situational factors such as e-learning experience of students and teachers, and the negative critical incidents into account, the effects of these factors on the users' acceptance and readiness to integrate technology into their learning are considered only in the context of a single institution – rather within a department in a college, which is just a unit in a huge university. These situational factors may influence the generalisability of the results of this study.

A future study, thereupon, should assess whether other factors such as general internet experience, educational experience, gender, the cultural background, and e-learning experience at other institutions also have a moderating effect. Further research as such may provide more accurate guideline as for priorities in handling the facilitating and inhibiting factors.

Furthermore, as LMS research broadens to examine different implementations across institutions, technical factors should also be taken into account in future research endeavours.

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