

Affects for e-Learning from the Perspective of Teachers: an Investigation

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Abstract:

This study sought to explore the affective factors that influence effective language instruction, especially, attitudes and motivation, and how language instructors' motivation to and attitudes towards e-learning affect students' achievement in courses delivered online via Blackboard®. The findings indicate that instructors had positive perceptions towards using e-learning as an assistive teaching tool, which are mostly influenced by the instructors' demographics and experience. It was also demonstrated via introspective interviews that instructors were highly motivated, instrumentally and intrinsically, in using e-learning tools in their teaching. Based on these findings, pedagogical implications and suggestions for effective e-learning are presented.

Keywords: Online EFL learning, e-learning, motivation, attitudes

ملخص:

هدفت هذه الدراسة إلى التعرف على بعض العوامل الوجدانية المؤثرة في تعلم اللغة الفعال وهما الاتجاه نحو اللغة والدافعية، وكيف أن اتجاهات المعلمين ودافعيتهم نحو استخدام منصات التعلم الإلكتروني تؤثر في الإنجاز عند الطلاب وفي المقررات الإلكترونية التي يتم تدريسها من خلال بيئة بلا كورد. بينت نتائج الدراسة التي استخدمت المسح الوصفي أن مدركات المعلمين كانت إيجابية بصفة عامة نحو استخدام منصة التعلم الإلكتروني "بلا كورد" كأداة معينة في التدريس، كما بينت النتائج الاستبطانية من خلال المقابلات الشخصية أن المعلمين أظهروا دافعية ذاتية لاستخدام منصة التعلم الإلكتروني "بلا كورد" في تدريسهم. وانتهت الدراسة بخاتمة وضع فيها تضمينات البحث في التدريس وتوصياته للبحوث المستقبلية.

الكلمات المفتاحية: التعلم الإلكتروني؛ العوامل الوجدانية المؤثرة؛ الدافعية؛ الاتجاهات.

I- Introduction

Researchers have been investigating factors thought to be important in the cognitive process of language learning. These include emotional factors, though such factors have not been fully excogitated in the literature. Moreover, there are only a few empirical studies that identify the role of emotions in computer-based language learning (Boekaerts, 2007; Pekrun, Goetz, Titz, & Perry, 2002; Rouhani, 2008; Zembylas, 2008).

Even in the current practice of teaching English as a foreign language (EFL) online, affective factors, such as attitudes and motivation, have not been given due recognition despite well-informed research findings on the role of emotions in e-learning contexts (Dirkx, 2001; 2006; Shuck, Albornoz, & Winberg, 2007; Yorks & Kasl, 2002). According to Dirkx (2001, 2006), some researchers and practitioners of e-learning at the university level still assume that affective factors are less integral to learning than other factors. When e-learning was in its infancy, Alavi and Leidner (2001) advocated the exploration of “the explicit relationships among technology capabilities, instructional

strategy, psychological processes, and contextual factors involved in learning”.

By the same token, several higher-education institutions are currently involving their faculty in online instruction activities to achieve authentic learning and enhance learning performance and gain national and international accreditation, whereas others are “hopping onto the bandwagon, simply because they do not want to be left behind” (Liaw, Huwang, & Chen, 2007, pp. 1068-9). However, learners in higher-education institutions in developing countries are accustomed to traditional teaching methods and may have difficulties using e-learning systems, and despite the fact that information and communication technologies (ICT) have been gradually introduced, learners are still in the early stage of adoption and implementation of such tools (Miller, Lu, & Thammeter, 2004; Lennon & Maurer, 2003). In both cases, universities in these countries are taking this involvement seriously as part of teachers’ annual appraisals. By considering the responses of instructors who participate in e-learning courses, it becomes possible to better understand the reasons why language teachers are (dis) satisfied with their e-learning experiences. As such, identifying

instructors' perceptions of and motivational and behavioural intentions and attitudes towards the integration of technology into their teaching can provide enormous help in firmly establishing e-learning endeavours in our educational systems to achieve an equality of opportunities and expand higher education (see for instance, Alshumaimeri, 2009; Lederer, Maupin, Sena, & Zhuang, 1998; Migliorino & Maiden, 2004; Albirini, 2006; Manochehri Sharif, 2009).

Prior research indicates that people with more positive attitudes towards e-learning environments and online instruction tend to exhibit intentions to use such tools as an integral part of their learning and teaching (Liaw, 2007; 2008). Indeed, no matter how advanced or capable a technology is, its effective implementation depends upon users having a positive attitude toward it as well as having a higher level of self-efficacy in using computers for learning (Wu, Tennyson, & Hsia, 2010), intrinsic motivation (Davis, Bagozzi, & Warshaw, 1992) and extrinsic motivation (Teo, Lim, & Lai, 1999; Roca & Gagné, 2008).

This study was also inspired by prior research performed by Liaw, et al. (2007), which emphasised the significance of affective factors in predicting and improving e-learning usage and raised calls for advocating

further research into instructors' attitudes and motivation patterns regarding the use of e-learning for course delivery. Given these considerations of the significance of research into issues of post-adoption use of e-learning tools and continuance intention, attitudes and motivation have recently attracted similar research awareness and interests (Abdullah, Abidin, Luan, Majid & Atan, 2006; Lin, 2011; Lonn, et al., 2011).

Accordingly, this study attempted to evaluate the situation that currently exists with respect to teacher attitudes and motivation as well as to elucidate the problems teachers encounter in the adoption of e-learning in tertiary education institutions. The main research question of this study reads: How do Saudi university language instructors feel towards using e-learning tools in their teaching?

From this main research question, the following sub-questions were formulated:

- 1- What are the attitudes of language instructors towards integrating e-learning assistive tools into their teaching?
- 2- How are language instructors motivated towards using e-learning tools in their teaching?

In addition, this study sought to look at the problems that might affect instructors' decision to adopt e-learning in their instructional delivery. Findings from such research can help increase the usability and accessibility of online courses.

Literature review

The learning management system of Blackboard (Release 9) is designed to allow students to access and respond to teachers' announcements, assignments, lectures, course mail and other evaluation procedures and rubrics; such features help introduce students to the syllabus, material and assignments of a given course.

The learning management system (LMS) of Blackboard is used for e-learning, as it consists of the tools used for class management and for student administration and progress tracking. In addition to these standard LMS tools, the system has additional features and tools necessary to address continuous assessments, which were implemented during this study as effective learning features (Hoic-Bozic, Mornar&Boticki, 2009). These features meet the requirements suggested by Liaw (2004) in the design and implementation of effective e-learning, namely, instructional structure and interaction.

There is a plethora of research on technology and education, yet there are still unanswered questions about the incentives for students and teachers to use e-learning. Prior research conducted at university institutions (Aldosari, 2010a; 2010b; 2011; Alshumaimeri, 2009; Fageeh, 2011; Mekheimer, 2012)

indicates that for many students and teachers, e-learning is still difficult to accept, despite the fact that INT employed for e-learning purposes has become more user-friendly and accessible than ever.

However, this research also indicates that university institutions have already carved out pathways to foster the implementation of e-learning in three formats: partially supported e-learning, mixed e-learning course delivery and full-fledged course delivery (Fageeh, 2011). However, these incentives do not sufficiently motivate teachers and students. The reasons for this reluctance to accept e-learning models have been associated with the faith and attitudes of teachers and learners (Manochehri& Sharif, 2009; Alshumaimeri, 2009; Fageeh, 2012; Juhdi, Abd Hamid & bin Siddiq, 2010), cultural values, technology affordance and achievement factors (Ali & Katz, 2010; Judi, et al., 2010; McClelland, 1987).

Attitudes towards INT in e-learning

Previous research on attitudes (See reviews in Triandis, 1971; Ajzen and Fishbein, 1977; Blumefeld, 1992; Davis, et al., 1989; Ajzen, 1988) has elaborated on the concept of attitudes and their effects on (computer-based) learning, indicating that attitude comprises affective, cognitive and behavioural components. Liaw (2002) claims that constructs of user attitudes toward computer and Internet technologies should be divided into three major types of

measurements: affective, cognitive and behavioural. Additionally, Jones and Issroff (2005) argue the importance of considering both affective and social components when trying to understand user attitudes. Thus, user attitudes towards e-learning could be studied from various perspectives, such as in terms of affective, cognitive, behavioural or social components.

Attitudes towards e-learning are generated by the learner's salient beliefs about the consequences of continued use and his or her evaluation of these consequences (Ajzen, 1988). Such beliefs regarding usefulness and the outcomes of use provide strong internal incentives for the adoption of e-learning (Davis, et al., 1989).

Therefore, a positive attitude towards the consequences or outcomes of computer use results in a higher rate of usage. The attitudes formed by beliefs and beliefs regarding computer use can exist on several levels, for example, a utilitarian level. Blumefeld (1992) observed that teachers' beliefs about the unique potential of computers to motivate students and enhance their self-esteem also influence decisions about computer use.

Individuals' positive attitudes towards e-learning determine how effective the implementation of e-learning techniques and methods can be: if teachers and students entertain

more positive attitudes towards networked computers for their learning, then they would have greater behavioural intentions to use them to learn (Liaw, 2007; Liaw, et al., 2007).

Thus, instructors' behaviours to accept or reject e-learning is determined by their intentions to produce and exhibit such behaviours in learning institutions; these intentions are also influenced reciprocally by attitude (positive or negative), subjective norms (e.g., perceived institutional pressures imposed by college teacher evaluation procedures, educational reform endeavours, total quality management criteria, bandwagon effects, etc.) and beliefs about the usefulness and ease of use of INT. Hence, the presence of motivated teachers and students with positive attitudes towards the outcomes of e-learning media results in a higher rate of usage (Abidin, et al., 2006; Liaw, et al., 2007; Mekheimer, 2012).

Motivation theories

Categorically, motivation is viewed from three perspectives: a) content motivation, as is the case with Maslow's hierarchy of needs or McClelland's achievement motivation theory, in whose perspective motivation is the need to gain self-esteem and self-achievement and satisfy the need for power and affiliation; b) process motivation, a perspective that stresses intrinsic factors in generating and maintaining an individual's efforts in

learning, as in Adam's goal-setting theory; and c) integrated motivation, which emphasises intrinsic and extrinsic factors influencing human behaviour, as in Lawler's integrated expectancy model.

Johns (1996) defined motivation as the extent to which persistent effort is directed towards a goal (Johns, 1996), whereas Law, Victor and Yu (2010) defined learning motivation in particular as the extent to which a student invests persistent effort towards learning. Motivation in this sense is categorically either intrinsic or extrinsic; it can be triggered intrinsically by individuals and externally by sources depending on the situational variables and environmental factors of a given learning setting (Law, et al, 2010; Ryan & Deci, 2000). Learning behaviours or patterns of behaviour are determined and directed by a conscious expectation of the individual to exert effort leading to the accomplishment of a desired goal or outcome (Porter-Lawler, 1968).

According to Chen, et al. (2011), learning motivation is conditioned by expectation and value and is redefined as "a cognitive, decision-making process through which the individual chooses desired outcomes, and sets in motion the actions appropriate for their achievements" (p. 83).

However, instructors' and students'

motivation has received little attention in discussions about e-learning (Nehme, 2010). Within the context of e-learning, Salmon's five-stage e-moderating model for teaching and learning online (2000) frames motivation as the springboard for any online learning system. For this motivation to be positively effective in e-learning situations, Nehme (2010) suggests that achieving access motivation for an e-learning system requires that students' needs be met by identifying their learning goals and recognising their anxiety levels, which may have a negative impact on their accessibility and motivation (p. 277).

Cognitive, emotive and social factors: an overarching perspective

Cognitive learning theories have emphasised the role of affect in learning, though such research remains generally scarce (Currin, 2003; Picard et al., 2004; Wang & Kang, 2006; Shen, Wang & Shen, 2009). Admitting the significance of affective personality factors, motivation and emotion are correlated positively with learning goals, leading researchers to believe that learning occurs during an emotional episode and that affect generally directs the learner's motivation (Keller & Suzuki, 1988; Kort, Reilly and Picard, 2001; Stein and Levine, 1991).

As noted in prior research, engaged learners are behaviourally, intellectually and emotionally involved in their learning tasks (Wang & Kang, 2006; Wang, 2007).

Models of technology acceptance requires the administrators of LMSs to hire the right people, ensure that the appropriate elements and resources are in place to succeed, assess learning results through learning outcomes and provide ongoing feedback to learners. Thus, cognitive, emotive and social factors of learning are recognised as critical elements of an LMS when used as input for continuously assessing learning outcomes. These input elements together transform the LMS into a learning system run and controlled by the cognitive, emotive and social presence of instructors and learners, which ultimately generates engagement in the e-learning process as a whole. Consequently, e-learners will not only have the opportunity to accomplish their learning goals but will also be actively involved in the learning process.

Prior research indicates that perceptions of the usefulness and ease of use of e-learning technology influences students' attitudes towards behavioural intentions and actual use of LMSs (Agarwal & Karahanna, 2000; Fageeh, 2011). Davis, et al. (1989) showed that perceived usefulness efficiently gears learners' attitudes towards LMS use. Thus, positively perceived usefulness creates positive attitudes regarding the use of LMSs for e-learning (Davis, et al., 1989; Fageeh, 2011).

Several models have been developed to explain the need for e-learning LMS to be incorporated into everyday learning activities, such as the theory of reasoned action (TRA) and theory of planned behaviour (TPB), both of which were proposed to account for and predict behavioural intentions to use LMSs in e-learning (van Biljon & Kotzé, 2008; Davis, 1989; Leong, 2003). These models posit that learning is guided by attitudes and motivation (Ajzen, 2002; Leong, 2003). In this vein, Ajzen (2002) explains:

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)

A review of pertinent research and literature suggests that both attitudes towards LMS use and motivation for learning in these new environments are explained by the behavioural and attitudinal reaction to the use of technology both as a simulation tool and aid in the presentation of learning materials.

To summarise, there has been a qualitative shift in research paradigms with regard to technology implementation for e-learning, suggesting that the focus has moved from technology-related conditions (e.g., availability of hardware and software), a focus on infrastructure, to a issues relevant to perceptions of

personality factors involved in e-learning (e.g., attitudes and motivation) or the metastructure involved in planning and implementing effective e-learning.

Method

The results of descriptive research, involving both qualitative in-depth interviews and attitude surveys, were used to assess teachers’ and students’ perceptions of attitudes towards and motivation for e-learning via Blackboard in the English Department of the College of Languages and Translation of King Khalid University at Abha (KKU).

This study made use of two types of surveys: a quantitative data survey

consisting of a 24-item questionnaire and a qualitative data survey administered online via oral interviews with 33 English language teachers of both genders.

Sampling

A total of 93 (75 males and 18 females) purposefully selected English language teachers from the College of Languages and Translation, both the male campus and the female campus, in a selected district were requested to participate in this study. The participants’ teaching experience ranged from less than five years to more than 15 years, and the instructors were trained at different colleges and universities. Table (1) shows the distribution of the sample according to various characteristics.

Table 1: Attributes of the sample

Variable		N	Percentage %	Total	
				N	%
Nationality	Saudis	23	24.7	93	100
	Non-Saudis	70	75.3		
Gender	Males	75	80.60	93	100
	Females	18	19.4		
Teaching Experience	1-5 yrs	27	29	93	100
	5-10 yrs	26	28		
	10-15 yrs	12	12.9		
	More than 15 yrs	28	30.1		
Qualification	Ph.D.	60	64.5	93	100
	MA	21	22.7		
	BA	12	12.8		

Instruments

Two introspective, perceptual instruments were used in the study. The first was a questionnaire given to the English language teachers, and the second was a structured interview with selected teachers in the English department conducted to recognise the instructors' attitudes towards and motivation for e-learning in their teaching and online course-work delivery via Blackboard.

Validation of Instruments

To assess the validity of the questionnaire and the interview script, both tools were emailed to a jury of 17 teachers in the English department who have had prior expertise with e-learning and teaching online. The jury approved the face and content validity of the instruments. The questionnaire items and the interview script questions were appropriately reworded based on the recommendations of the jurors.

Furthermore, the internal consistency of the survey items regarding faculty attitudes towards e-learning applications at KKU was calculated based on the total score of each dimension and the total score of all items of the survey. Table 2 summarises the item-total correlations of instructor attitudes of each dimension score with respect to the total score.

Table 2: Correlation analysis of item-dimension correlations

Dimensions		r*
1	Perceived self-efficacy	0.70
2	Perceived enjoyment	0.44
3	Perceived usefulness	0.65
4	Perceived system satisfaction	0.46

r* Corrected item-total correlation; $p < 0.01$

Reliability of the Questionnaire

To estimate the reliability of the questionnaire, the Cronbach Alpha coefficient method was used. The alpha value of the total items of the questionnaire reached 0.60, which indicates the reasonable reliability of the instrument. Table 3 summarises the Cronbach Alpha values for the four dimensions of the questionnaire.

Table 3: Cronbach alpha values for the four dimensions of the questionnaire

Dimensions		p
1	Perceived self-efficacy	0.74
2	Perceived enjoyment	0.50
3	Perceived usefulness	0.62
4	Perceived system satisfaction	0.51
Total score		0.60

$P < 0.05$

Procedures for data collection simply included handing out the questionnaire online to the targeted sample and

instructing the participants to complete the questionnaire and send it back online to the researcher. Selected participants, approximately 35% of the total sample, were asked to volunteer for the interview. Regarding the attitudes survey, participants were requested to check the box that most closely represented their reaction to each of the items in the questionnaire. Participants were also asked to fill in information about their age group, sex and language education background.

Results

A total of 93 questionnaires with valid responses (75 from the male sample and 18 from the female sample) were considered for data analysis. The data gathered via the questionnaire were converted to empirically

verifiable numerical values. The numerical values +5, +4, +3, +2, and +1 were assigned to the responses Strongly agree, Agree, Undecided, Disagree and Strongly disagree, respectively. The statistical procedure employed to test the research hypothesis had to be a non-parametric test; thus, the Kruskal Wallis and Mann-Whitney U tests were used to analyse the collected data. Raw data gathered from the survey study were analysed using SPSS Version 14.0.

Results with regard to instructors' attitudes

To answer the first research question probing the attitudes of faculty towards e-learning in Saudi universities, mean scores, ranks, frequencies and percentages were calculated, as summarised in Table 4.

Table 4: Calculated Means, ranks and percentages of informant responses

Item No.	N	Means	Ranks	SA		A		U		D		SD	
				Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
PERCEIVED SELF-EFFICACY													
1	93	3.59	1	19	20.4	45	48.4	1	1.1	28	30	0	0
2	93	1.81	7	47	50.5	32	34.4	3	3.2	7	7.5	4	4.3
3	93	3.32	2	17	18.3	14	15.1	8	8.6	30	32.3	24	25.8
4	93	1.80	8	39	41.9	44	47.3	-	-	10	10.8	0	0
5	93	2.70	6	27	29	26	28	-	-	28	30.1	12	12.9
6	93	2.71	5	9	9.7	25	26.9	3	3.2	42	45.2	14	15.1
7	93	2.94	3	13	14	35	37.6	3	3.2	29	31.2	13	14.5
PERCEIVED ENJOYMENT													
8	93	2.68	4	13	14	44	47.3	4	4.3	24	25.8	8	8.6
9	93	2.75	6	12	12.9	40	43	5	5.4	31	33.3	5	5.4
10	93	4.23	1	29	3.2	60	64.5	-	-	4	4.3	-	-
11	93	4.19	3	32	34.4	3	57.5	2	2.2	6	6.5	-	-
12	93	3.04	5	9	9.7	36	38.7	6	6.5	34	36.6	8	8.6
13	93	4.23	2	39	41.9	47	50.5	-	-	3	3.2	4	4.3
14	93	3.41	4	7	7.5	17	18.3	7	7.5	54	8.1	85	8.6
PERCEIVED USEFULNESS													
15	93	2.65	2	13	14	45	48.4	-	-	32	34.4	3	3.2
16	93	2.22	4	17	18.3	58	62.4	2	2.2	13	14	3	3.2
17	93	3.19	1	10	10.8	24	25.8	2	2.2	52	5.9	5	5.4
18	93	1.90	5	38	40.9	38	40.9	5	5.4	12	12.9	-	-
19	93	2.46	3	7	7.5	15	11	1	1.1	61	65.6	9	9.7
PERCEIVED SYSTEM SATISFACTION													
20	93	3.75	4	20	21.5	51	54.8	7	7.5	9	9.7	6	6.5
21	93	4.54	3	50	53.8	43	46.2	-	-	-	-	-	-
22	93	4.60	2	60	64.5	30	33.3	-	-	2	2.2	-	-
23	93	4.64	1	60	64.5	33	35.5	-	-	-	-	-	-
24	93	2.66	5	8	8.6	18	19.4	4	4.4	60	64.5	3	3.2

Results Regarding Perceived self-efficacy

The most highly ranked items of the self-efficacy dimension was item No. 1, which reads "I feel confident making online instruction," with a mean score of 2.59 and an agreement percentage of 68.8%, followed by item No. 3, which reads "I feel confident using e-learning environments," with a mean of 3.32. Generally, the responses of the informants regarding this dimension indicate a positive attitude towards perceived self-efficacy.

Results Regarding Perceived enjoyment

The responses of the informants regarding the dimension of perceived enjoyment indicates an overall agreement that the use of e-learning is fun and that respondents enjoy integrating video, audio, graphics and animated material into their teaching. Item No. 13 exhibited the highest rank for this dimension, indicating that teachers enjoy the use of instant messaging, emailing, discussion boards, the virtual classroom of Blackboard and Elluminate! Live Sessions in their teaching; this item received an agreement percentage of 92.4% and a mean score of 4.23 out of 5.

Results regarding Perceived usefulness

With respect to the third dimension of perceived usefulness, the highest ranked item was item No. 17, which reads "I believe using online instruction is useful for teaching," with a mean score of 3.19 out of 5. The second highest ranked item was item No. 15, which reads "I believe using e-learning environments is helpful for learning." which gained a mean score of 2.65. Overall, the responses of the informants regarding this dimension indicate a more negative attitude towards the usefulness of e-learning. Perhaps the teachers failed to appraise their own uses of e-learning systems.

Results Regarding Perceived system satisfaction

With respect to the dimension of perceived system satisfaction, an overall positive attitude was detected. The highest ranked item was item No. 22, which reads "I am satisfied with using online instruction". This item received the highest percentage of agreement (97.8%), with a mean score of 4.61 out of 5. Overall, the survey of the perceived attitudes of faculty towards the use of e-learning technology reveals an overall positive attitude towards the self-efficacy of the informants using the system, their perceived enjoyment of using this system, their perceived usefulness of this system and their overall satisfaction with the e-learning system.

Results Regarding Instructors' Motivation

A total of 33 teachers, both males and females (35% of the total sample), participated in a structured interview conducted online via discussion boards of the online learning system of Blackboard in order to identify teachers' motivation towards the use of e-learning tools and whether they were intrinsically or extrinsically motivated to use these techniques. Generally, the teachers were more intrinsically than extrinsically motivated towards using assistive e-learning tools. To identify the informants' intrinsic motivation, they were asked questions that examined four indicators of intrinsic motivation: self-worth and satisfaction, competence, interest and determination (Cameron and Pierce, 1994). To identify their extrinsic motivation, the participants were asked questions that probed the effects of using Blackboard on the recognition of accomplishment, available incentives and benefits, present and future career advancement and promotion, evaluation of the organisation and administration and the facilities and working conditions that are available to actively involve teachers in e-learning endeavours. These indicators of extrinsic or instrumental motivation have been implied in prior research (Blumefeld, 1992; Dilworth, 1991; Porter, 1993; Sedeberry & Clark, 1990).

Despite the fact that most of the informants expressed positive feelings regarding their motivation for integrating e-learning into their teaching, all such respondents were young or middle-aged. Of the very few informants who were resistant in some way to using these technologies in their teaching were three native speakers, two males (one American, the other Romanian) and a female (South-African). By the same token, all of the Saudi teachers that were interviewed indicated that they are frustrated by the low levels of performance exhibited by students not only in language proficiency but also in computer literacy and competency in using the LMS.

Finally, it appears that most of the teachers interviewed were enthusiastic and motivated towards the use of e-learning tools in their teaching of English. They also saw the computers made available as motivation for students in the learning process and as tools with pedagogical potential through which lessons can be delivered, explained or illustrated in a more interesting and entertaining way.

Conclusions and Implications

The rapid transformation of education into a digital business, supported by rapid developments in e-learning interactive multimedia software, has made provided language educators the opportunity to use powerful learning technology tools to enhance their teaching. In wealthy

countries such as Saudi Arabia, technology may be available for teachers and students alike, but the enthusiasm to use it for learning must be there. Higher-education institutions require highly motivated and competent users to become the supporters for the creation of a new culture in education. Therefore, all Saudi universities and teacher training institutions have taken positive steps in equipping pre-service teachers with knowledge and skills in information technology.

In addition, prior research and relevant literature on e-learning has shown that both external factors, including social environment and learning management systems, and internal factors, including the individual characteristics of teachers and students, are crucial for the efficient adoption, implementation and diffusion of e-learning. Thus, a higher level of individual computer self-efficacy is positively associated with a higher level of learning performance, which increases the use of e-learning (Wu, Tennyson, & Hsia, 2010), an observation that has also been proven true by the findings of this study. This study has also proven that motivation, both internal and instrumental, is strongly associated with the effective adoption of e-learning environments; the findings presented herein are in

agreement with prior research findings on intrinsic motivations (Davis, Bagozzi, & Warshaw, 1992) and extrinsic motivations (Teo, Lim, & Lai, 1999; Roca & Gagné, 2008), which are believed to be important factors for encouraging learners and instructors to use e-learning systems. The results of this study also indicate that perceived self-efficacy, perceived system satisfaction, perceived usefulness and perceived enjoyment have direct positive effects on the intention to use an LMS efficiently, as they have direct positive effects on the intention and motivation to use e-learning – findings commensurate with those of prior research (Lee, 2010; Roca and Gagné, 2008).

However, the challenges faced by teachers that shaping their motivation and attitudes are vast and complex and affect teachers on a personal level. When applying a learning tool or system, it is necessary to investigate both teachers' and learners' attitudes toward that tool or system. Essentially, understanding their perceptions toward learning environments is a crucial issue that must be addressed to enhance teaching performance and learning effects, which is why teachers' and learners' emotional reactions to the use of technology for teaching and learning should be seriously considered. English language teachers must always use a variety of tools to produce successful learning experiences, and the computer is one of them. Technology cannot be

sidelined, and in this case, the computer and the Internet are resources that can enhance teaching and promote the successful performance of students.

The results of this study confirm that instructors are willing to use e-learning environments to aid their teaching activities. The results also provide evidence that instructors are highly motivated, both extrinsically and intrinsically, to apply e-learning technology in delivering their coursework online, believing that e-learning could be an assistive teaching tool. This attitude is well suited to raising awareness about the use of technology in higher-education learning. The findings of this study imply that creating technology awareness, motivation and changing faculty and learners' behaviours and attitudes is required for the success of future e-learning adoption, implementation and diffusion. Because learners and teachers are habituated to traditional teaching approaches (Miller et al., 2004), especially in developing countries where ICT is still in its infancy of adoption, some Saudi teachers' motivation and attitudes were observed to be negatively affected by students' reluctance to respond to e-learning activities on Blackboard, perhaps due to the intricacies of the system. These findings related to system design are commensurate with

research findings reported by Lennon and Maurer (2003), who indicated that system design should be easy to use or else it will create confusion among users.

Furthermore, ongoing training for users of LMSs is a necessity. Therefore, it is important to provide computer and Internet training for users to become familiar with e-learning technology and enhance users' skills and attitude toward technology. This notion is consistent with the results reported by Lee (2008), who observed that the provision of computer support and training to learners by universities strongly influence learners' perceived ease of use and usefulness of learning systems.

Finally, Saudi universities should adopt the following strategies to enhance e-learning adoption, implementation and diffusion and thereby promote and increase e-learning technology use: (a) disseminate up-to-date and useful e-learning training workshops with the purpose of increasing technology awareness and providing training to all types of technology users, both learners and faculty; (b) expand e-learning services while promoting the usefulness and convenience of such services by providing Internet access in classrooms and other infrastructures that promote e-learning; (c) establish and redesign the user-friendly websites of e-learning systems and promote the ease of use of electronic learning services for both faculty and students alike; and (d) increase users'

motivation towards e-learning use and improve their positive attitudes towards overall self-efficacy, enjoyment, usefulness and satisfaction with a given system.

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