Toward High Quality E Learning Systems: Evidence from Saudi Arabia

Salem Alkhalaf\textsuperscript{a},
Steve Drew\textsuperscript{a},
Anne Nguyen\textsuperscript{a},
Thamer Alhussain\textsuperscript{b}

\textsuperscript{a}School of ICT, Griffith University, Gold Coast, Australia
\textsuperscript{b}College of computer sciences and information technology, King Faisal University, Saudi Arabia

salem.alkhalaf@griffithuni.edu.au, s.drew@griffith.edu.au,
a.nguyen@griffith.edu.au, thamer_om@hotmail.com
Abstract

This paper explores the capability level of e-learning systems through data collected from two of the Kingdom of Saudi Arabia's (KSA) most respected universities. Their strengths and weaknesses in e-learning and system accessibility will be investigated and assessed according to the highest of quality levels. So far, however, there has been little attention paid to the issue of measuring the impact of e-learning in the forms of learning and teaching in higher education institutions in the KSA. In response to this gap in the literature, this study addresses the impact of e-learning systems in higher education institutions in this context. This study adopts a quantitative approach for students and a qualitative approach for staff members to investigate the impacts and underlying reasons. The study was carried out on the basis of information system (IS) success as well as the impact measurement framework in the population sample of students and faculty members using e-learning in the KSA. The findings of this study indicate a perceived positive impact of e-learning systems on higher education. For example, participants look to these systems for ease of use and expect them to be user friendly.

Keywords
Quality, e-learning systems, impact measurement, Saudi Arabia

Introduction and background

A high level of attention has been given to the future of education in Saudi Arabia. Accordingly, educational institutions are exploring a wide range of technologies to provide more options for course delivery to students with the aim that these technologies will be used most effectively within the higher education sector. One of the recent popular technologies in education is collaborative e-learning which plays a significant role in increasing the number of students enrolling at universities. This has been most notable in Saudi universities since Saudi Arabia started promoting education through e-learning (Al Saif, 2005).
Saudi Arabia is anticipated to be one of the fastest growing countries in the world in the e-learning area (CITC, 2012). According to Communication and Information Technology (CITC, 2012), the number of Internet users has rapidly increased from 200,000 users in 2000 to 11.4 million users in 2011, which is about 43.6% of the total KSA population (see Figure 1). In the last few years, the number of students enrolled in institutions of higher education in Saudi Arabia has also grown rapidly (CITC, 2012). As a response to the increased number of students, many higher education institutions have introduced and offered e-learning systems as a tool to facilitate delivery of course content and enhance access to courses and subjects by both students and teachers (Al Saif, 2005; S. Alkhalaf, Nguyen, Nguyen, & Drew, 2011; Ibraheem & John, 2012). As a result, many of these institutions have turned to e-learning systems as a means to broaden and enhance access to their courses and subjects (AlSaif, 2005).

Reflecting this trend, a growing number of research studies have been conducted on e-learning in the KSA (Al-Shehri, 2010; Alkhalaf, Nguyen, & Drew, 2010; Alwalidi & Lefrere, 2010). Movement and development in the e-learning area seems to be fast and strong, especially at the universities in the KSA (Al-Shehri, 2010).

Collaborative e-learning environments in particular have been deemed advantageous, because, according to a study by Tomsic and Suthers (2006, p. 63), “the formation of new collaborative ties is more significant for learning through information sharing in social networks than raw frequency of interaction”.

Figure 1: Internet market evolution for the KSA (2001–2010) (CITC, 2012)
According to Liaw and Huang (2007), collaborative e-learning environments are based on the studied support of the use of computers for collaborative environments; this, in turn, is based on research conducted on how students learn. Collaborative e-learning environments can be the place where computer or information technology facilitates increased interaction between learners for the purpose of exchanging knowledge. Liaw and Huang argue that computer-supported collaborative environments are often open, safe, and trustworthy, and offer equal opportunities among the educated to participate without restriction to multiple levels of knowledge. Collaborative e-learning environments can offer learners extensive opportunities for open learning controlled by the learners themselves. They can also activate the knowledge and information of learners, where they not only learn new knowledge, but are also able to forge connections between their prior knowledge and the newly acquired information. The collaborative e-learning environment makes it possible for learners to cooperate in the exercise of critical reflection, negotiation and consensus building. Furthermore, they can participate in discussions and meetings, similar to meetings in face-to-face environments. In addition, learners are encouraged to exchange ideas and perspectives and use the information and knowledge to benefit their search for the best solution to any problem. Collaboration can increase individual learning experiences and encourage learners to pursue new visions and viewpoints. These benefits are all based on a set of effective interactions, including synchronous or asynchronous. When learners do not cooperate in a positive way, the social and cognitive benefits of group learning are missing.

Previous research has identified some existing difficulties to the use of current e-learning systems; some of these include: poor opportunities for social interaction, the absence of face-to-face interaction, and the exchange of different views (Chatzara, Karagiannidis, & Stamatis, 2011). Therefore, using collaborative e-learning tools can help to overcome these perceived difficulties of e-learning and enhance the interaction between students to effectively share knowledge and ideas, which can aid in the development of mutually beneficial relationships. Other difficulties might be revealed in this sort of e-learning, for instance, individuals with diverse skills and cultures interacting to create conflict; however, this sort of problem can be resolved (Li, Lau, Shih, & Li, 2008).

Currently, the Internet offers a convenient and appropriate place for course content, to give students the opportunity to access it whenever and wherever they want to. Accessing course content through the Internet improves students’ information skills and enhances their ability for self-directed learning. In this regard, training in using the available tools of e-learning and even the use of Internet for both faculty members and students is required to maximise the potential benefit from the use of such technologies (El Mansour & Mupinga, 2007).

Difficulty adapting to the online social and learning context is another problem which may
arise when students are not well-versed in handling and using technology: “The greater a student’s skills and comfort with the tools of online learning, the better she [sic] is able to adapt to the social aspects of the experience and find both satisfaction and success with the course” (Mykota & Duncan, 2007).

A particular issue in Saudi culture in e-learning is that there is no face-to-face interaction possible between participants of opposite genders. Silence can be interpreted in many ways and can cause difficulty in the synchronous communication process. Without the body language used in face-to-face interaction, faculty may have difficulty determining whether students have understood the topic of discussion. Asynchronous communication, on the other hand, allows the student to stay silent but still gives them the option to respond without a deadline (Zembylas & Vrasidas, 2007).

**IS-Impact Measurement model**

Learning design is one of most significant in the development of e-learning systems and tools (Dalziel, 2003). According to Wang et al. (2007), an e-learning system is classified as a type of Information System (IS). A number of studies on web-based learning have been conducted to measure the effectiveness of this mode of learning compared with traditional classroom learning for different courses at different educational levels (Zhang & Nunamaker, 2003). However, very little research has been conducted to evaluate the impact of these systems on the organization and its stakeholders (Aceto et al., 2007). Moreover, Wang et al. (2007) noted that there is little contribution in the literature about the effectiveness of e-learning systems, particularly in the KSA.

Gable et al. (2008) state that an appropriate framework should cover the quality impact over the widest context that is affected by the use of any system, such as an e-learning system. Initially, a theoretical framework is identified which is applicable to Saudi universities and educational institutions. The model found is called the IS Success/Impact model by DeLone and McLean; it suits any educational environment as it incorporates the whole environment of e-learning (DeLone et al. 1992). Previous research assumes that the model is suitable for any educational environment. Therefore, the dimensional theory was used to cover the issues which measure the IS success and/or impact. This study has adopted the IS-impact measurement model as it considers the success of educational systems through the measurement of four aspects of the underlying information system (Cao & Elias, 2009). Moreover, this model has been selected for this study, as mentioned in previous research, as most reliable compared to other models available in the literature and has dimensions that look for the success of educational systems (S. Alkhalaf, Drew, & Nguyen, 2012; Elias, 2011).

A number of models relevant to the use of techniques and technology in e-learning have
been reviewed to find the most appropriate model for this research. These models include: the IS Success Model (1992), the Balanced Scorecard (Gable et al. 2008; Kaplan et al. 1996), and Sedera and Chan’s IS-Impact Model (2008). The DeLone and McLean IS Success Model was found to be the most cited model in IS research (B. Myers, Kappelman, & Victor, 1997) and has the most applicable dimensions that relate to learning systems.

Most of the models have been concerned with the measurement of companies, institutions, and financial profits in measuring the IS Impact (Gable, Sedera, & Chan, 2003). A review of the literature shows that the latest model developed by researchers is the IS Impact Model, and this is also a measurement model for IS evaluation (Gable et al., 2003; Gable et al., 2008). This model is the most useful for measuring e-learning systems because it comprises 41 measures including six dimensions: System Quality; Information Quality; Use; User Satisfaction; Individual Impact; and Organizational Impact (Cao & Elias, 2009; Gable et al., 2008). According to researchers (Gable et al., 2008; Rabaa’i & Gable, 2010), user satisfaction and IS use are a result of the success (before and after), rather than being instrumental in building the success. Moreover, system quality and information quality each, or both, affect use and user satisfaction (Wang, Wang, & Shee, 2007).

In addition, Gable et al (2008) believe that the construct of the Use dimension in the IS-impact measurement model is unsuitable for measuring IS Success. Furthermore, Gable et al. (2008) and García-Machado, Roca, and de la Vega (2012) state that another dimension, “user satisfaction has been measured indirectly through Information Quality, System Quality and other variables in prior studies” (Gable et al., 2008). Thus, we are left with only 37 measures from 4 dimensions. A review of previous studies in IS fields, e-learning systems, IS success, end-user computing satisfaction, system

Figure 2: Modifying the IS Measurement Model (Salem Alkhalaf et al., 2010; Gable et al., 2008)
use, and other areas related to IS measurement and evaluation was carried out in order to find the most suitable variables for measuring the success of e-learning systems (Bonk, 2002; El Mansour & Mupinga, 2007; Gable et al., 2003; Gable et al., 2008; Hooper, 1992; Latchman, Salzmann, Thottapilly, & Bouzekri, 1998; Liaw & Huang, 2007; Maneschijn, 2005; Naidu, 2006; Okamoto, 2003; Rabaa'i & Gable, 2010; Reuben, 1988; Suthers, Vatrapu, Joseph, Dwyer, & Medina, 2006; Tomsic & Suthers, 2006; Wang, 2003; Wang & Liao, 2007; Wang & Tang, 2004; Wang, Tang, & Tang, 2001; Wang et al., 2007; Zembylas & Vrasidas, 2007).

In relation to the above, this paper focuses on measuring the impact of e-learning system on faculty members.

### System Quality

According to Gable et al. (2008, p. 290), “System Quality is a measure of the performance of [the IS] from a technical and design perspective.” So the variables for this operate as follows in

<table>
<thead>
<tr>
<th>Dimension/item</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ1: The e-learning system allows a high level of customization for different courses</td>
<td>(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)</td>
</tr>
<tr>
<td>SQ2: The e-learning system provides for personalized information presentation</td>
<td>(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)</td>
</tr>
<tr>
<td>SQ3: The e-learning system is easy to use</td>
<td>(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)</td>
</tr>
<tr>
<td>SQ4: The e-learning system is user-friendly (easy to learn)</td>
<td>(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)</td>
</tr>
<tr>
<td>SQ5: The e-learning system provides a high level of availability (ease of access)</td>
<td>(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)</td>
</tr>
<tr>
<td>SQ6: The e-learning system provides an appropriate level of on-line assistance and explanation (help and training)</td>
<td>(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)</td>
</tr>
</tbody>
</table>
SQ7: The e-learning system provides interactive features for an effective user experience  
(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)

SQ8: The e-learning system provides satisfactory support to users of the system (help and training)  
(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)

SQ9: The e-learning system has features that support the needs of a range of different courses (flexibility)  
(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)

SQ10: The e-learning system has a high level of reliability  
(Gable et al., 2008, p. 390)

SQ11: The e-learning system provides high-speed information access (efficiency)  
(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)

SQ12: The system developers interact extensively with users during the development of the e-learning system (sophistication and user-centred design)  
(Gable et al., 2008, p. 390; Wang et al., 2007, p. 1798)

The hypothesis for this construct is that System Quality as above is positively associated with the use of collaborative e-learning system.

Methods

The research underlying this paper involved a mixed-methods approach. Informed by the findings of previous studies of e-learning in the KSA, a series of interviews were conducted to obtain qualitative information. Based on this information, as well as a review of related studies involving user satisfaction surveys, a questionnaire instrument was then designed and used to collect quantitative ratings.

This study adopts a positivist paradigm of research. According to M. D. Myers (1997) and Walsham (1995), the positivist school is concerned with researchers achieving substantive information and discovering facts that could be repeated by other researchers (M. D. Myers, 1997;
Objectivity can be maintained through the use of scientific methodologies, as well as through the use of mainly logical rules, calculations and assumptions to test theories and to obtain independent and unbiased results (M. D. Myers, 1997).

This study uses the positivist approach because it seeks to test a theory and uses a hypothesis to achieve a high quality e-learning system. This is attained by using the IS-impact measurement model; a quantitative study adopting a questionnaire form to collect data is the means by which the goals of this study are accomplished.

The analysis was carried out through a quantitative study of the data, which were collected through a questionnaire. The survey questionnaire was distributed to e-learning students at both Qassim University and King Abdulaziz University in order to evaluate the current e-learning systems already in use at these universities. The questionnaire was designed based on the IS measurement model (Gable et al., 2008). The student survey includes and measures three dimensions: Individual Impact, System Quality and Information Quality. The questionnaire was presented to 800 students; 560 of these were returned, but 32 of these were excluded as they were deemed incomplete. Therefore, a total of 528 questionnaires, 328 from male participants and 200 from females, were included in the analysis (S. Alkhalaf, Drew, & Alhussain, 2012). As mentioned earlier, this paper focuses on system quality which consists of twelve measures or “variables”.

Moreover, four faculty members (teachers using e-learning systems) from King Saud University, and one from IT management and one from academic development at Qassim University, were selected at random for the interviews. Ten staff members rejected the opportunity to take the interview as they felt they did not have enough data to offer about e-learning in their university. The only requirement was that they had conducted teaching that involved use of e-learning technology. The questionnaire instrument consisted of 38 questions, which were developed following a comprehensive review of a large number of recent surveys of user perceptions and satisfaction in the ICT, IS and e-learning fields (Mansour and Mupinga 2007; Gable et al. 2008; Wang et al. 2001; Wang and Liao 2007a; Wang et al. 2007b). Interviews were stopped when questionnaire answers became repetitive. The interview stage provides validation and enhancement of data collected at the earlier survey stage.

Findings

Statistical analysis of the 38 questions was carried out using the Statistical Package for Social Sciences (SPSS). As mentioned above, only 12 items in this paper measuring the impact of e-learning systems on system quality are included. The frequency and percentage of responses for
each of the twelve variables are analysed, as well as their Chi square values and levels of significance. Also, the data obtained from staff member interviews will be used in the discussion to strengthen and enhance the statistical results of the survey.

Table 2: Relative Numerical Distribution and Standard Deviation (SD), Including the Relative Weight (RW) Values of Variables Related to System Quality

<table>
<thead>
<tr>
<th>Strong agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strong disagree</th>
<th>M</th>
<th>SD</th>
<th>RW</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>74</td>
<td>15.3</td>
<td>225</td>
<td>46.5</td>
<td>118</td>
<td>24.4</td>
<td>45</td>
<td>9.3</td>
</tr>
<tr>
<td>2</td>
<td>71</td>
<td>14.8</td>
<td>203</td>
<td>42.4</td>
<td>114</td>
<td>23.8</td>
<td>70</td>
<td>14.6</td>
</tr>
<tr>
<td>3</td>
<td>198</td>
<td>40.8</td>
<td>182</td>
<td>37.5</td>
<td>71</td>
<td>14.6</td>
<td>30</td>
<td>6.19</td>
</tr>
<tr>
<td>4</td>
<td>172</td>
<td>35.5</td>
<td>190</td>
<td>39.3</td>
<td>81</td>
<td>16.7</td>
<td>31</td>
<td>6.4</td>
</tr>
<tr>
<td>5</td>
<td>68</td>
<td>14.1</td>
<td>130</td>
<td>27</td>
<td>158</td>
<td>32.8</td>
<td>87</td>
<td>18</td>
</tr>
<tr>
<td>6</td>
<td>104</td>
<td>21.4</td>
<td>218</td>
<td>44.9</td>
<td>93</td>
<td>19.2</td>
<td>50</td>
<td>10.3</td>
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<tr>
<td>7</td>
<td>99</td>
<td>20.5</td>
<td>218</td>
<td>45</td>
<td>108</td>
<td>22.3</td>
<td>46</td>
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<tr>
<td>8</td>
<td>78</td>
<td>16.3</td>
<td>201</td>
<td>42</td>
<td>114</td>
<td>23.8</td>
<td>62</td>
<td>12.9</td>
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<tr>
<td>9</td>
<td>88</td>
<td>18.5</td>
<td>214</td>
<td>45</td>
<td>113</td>
<td>23.7</td>
<td>48</td>
<td>10.1</td>
</tr>
<tr>
<td>10</td>
<td>102</td>
<td>21.1</td>
<td>209</td>
<td>43.3</td>
<td>104</td>
<td>21.5</td>
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<tr>
<td>11</td>
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<td>25.1</td>
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<td>43.9</td>
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<tr>
<td>12</td>
<td>97</td>
<td>20.1</td>
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<td>37.1</td>
<td>120</td>
<td>24.9</td>
<td>52</td>
<td>10.8</td>
</tr>
</tbody>
</table>

** Significant at 0.05
* Significant at 0.01

Items (N): 1. The e-Learning system allows a high level of customization for different courses; 2. The e-Learning system provides for personalized information presentation; 3. The e-Learning system is easy to use; 4. The e-Learning system is user-friendly (Easy to learn); 5. The e-Learning system provides a high level of availability (Access); 6. The e-Learning system provides an appropriate level of on-line assistance and explanation (User requirements); 7. The e-Learning system provides interactive features for an effective user experience; 8. The e-Learning system provides satisfactory support to users of the system (Help and training); 9. The e-Learning system has features that support the needs of a range of different courses (Flexibility); 10. The e-Learning system has a high level of reliability; 11. The e-Learning system provides high-speed information access (Efficiency); 12. The system developers interact extensively with users during the development of the e-Learning system (Sophistication & user centred design).
The Chi-square Goodness of Fit Test shows the values for each item related to individual responses regarding the third dimension of the questionnaire, which is “System Quality”. The value of Chi-square for each item is higher than the critical value of 0.05 and the probability level of 9.49 for significance, with 4 degrees of freedom. This indicates that, for each item, there is a significant difference between expected and actual values for the dimension Individual Impact. This means that these results are not statistically coincidental.

The survey results from Table 2 clearly indicate that the most important response among the variables within System Quality is Item 3: “The e-learning system is easy to use.” The majority of students have a positive view of the functionality of the e-learning system, with mean scores between 3.20 and 4.11 out of 5, and the importance of the relative range is 72-88%, with all variables near 70% and the standard deviation ranging from 0.940 to 1.147.

The results for Item 1 were that 61.8% agreed and strongly agreed that the e-learning system provided a high degree of customization for different courses and increased their desire to join the relevant training courses in order to enhance their knowledge and skills. For Item 2, 42.4% of respondents reported that e-learning enabled information to be presented in a personalised way. One interviewee, a teacher using an e-learning system, reported there were privacy benefits for students as they were able to check their course results in private because they were secured with individual profiles, usernames and passwords.

In response to Item 3, 37.5% of respondents confirmed that the e-learning system now available at their university was easy to use, thanks to its high-tech hardware and software, while for Item 18, 39.3% confirmed that the system of e-learning was easy to learn, as a result of the higher level technology used. This is important, because it supports the existence of an environment that makes the collaborative e-learning very successful. As mentioned by two study participants, both teachers, e-learning was incorporated into daily life; it was found that people used e-learning and collaborative e-learning as part of their study, but also with anything in their daily routine which required the use of technology. Two other participants, also teachers using e-learning systems at university, were starting to use a special learning management system JUSUR LMS. Because this LMS supports the Arabic language, the system is easier to use.

In response to Item 5, 32.8% of those questioned found that the e-learning system at their university offered ease of access, thanks to the fact that both Qassim University and King Abdulaziz University had provided the relevant advanced technology across each university. As mentioned by one teacher using an e-learning system, some arguments and allegations by students against using e-learning systems were concerned with ease of access; for instance, he reported the students complained that they did not have Internet service, even if it was available, or that the system was not working properly and therefore not available, or they could not access their accounts in order to accomplish key tasks such as submitting their assignments.
For Item 6, 44.9% of respondents confirmed that the e-learning system provided the appropriate level of assistance and interpretation via the Internet, while 45% of respondents to Item 7 confirmed that the e-learning system’s interactive features offered an effective user experience. One respondent, a teacher using an e-learning system, confirmed that e-learning provided an open space for students enabling them to share information and interact with each other. According to Curtis et al. (Curtis & Lawson, 2001), when students find the website easy to navigate or use, they find the e-learning system very easy to understand. For example, simple website navigation, such as opening email with only three rather than five clicks to read website material, was preferable. As Storey et al. (Storey, Phillips, Maczewski, & Wang, 2002) comment: “If it [the tool] was functional and easy to use, I would be in favour of it.” For Item 8, 42% of those questioned responded that the e-learning system provided satisfactory support for users, in the form of assistance and training. One respondent, a teacher using the e-learning system remarked: “The system chat is available 24 hours, and technical support exists for the system and I’m often on all day long.” The fact is, the user support provided by the e-learning system means the teacher is accessible most of the time because of email and instant messaging; thus, the students know him and trust in him and the system to find solutions to their problems when they need.

Item 9, 45% of respondents reported that the e-learning system was flexible and had features that supported the needs of a variety of courses. Cattafi and Metzner (2007) confirmed the importance of media (audio and video) in collaborative e-learning environments when they said, “More computing resources have to be made available, and shorter sessions might improve the motivation of learners”; their suggestions aim to make the system more useful and they recommend the creation of resources in different forms of media, such as audio and video. As mentioned by one teacher-respondent, “the e-learning system is needed, but face-to-face classes are still required for some of the time because the current e-learning system cannot cover the requirements of all courses and subjects”.

For Item 10, 43.3% answered that the e-learning system was reliable, while 43.9% confirmed that the e-learning system was efficient in Item 11, offering high-speed access to information. Qassim University and King Abdulaziz University had worked to provide all of the relevant documents to meet the needs of students relating to their individual studies. The respondents confirmed that the reason for the lower percentile rating for reliability and efficiency (43.3% and 43.9% respectively) was that not all students got high internet speed off campus, although they were able to obtain the e-learning materials online.

In response to Item 12, 37.1% confirmed that the system developer interacted extensively with users during the development of the e-learning system, consulting on form and design. According to three interviewees, this low rating was due to the fact that the current e-learning system did
not easily support educators’ occasional need to add or change something to the online material, although the system developer reported that this was a possible feature for e-learning systems and it could be put in place.
Conclusion

Three respondents (an Academic Development officer, an IT manager of an e-learning system, and a teacher using e-learning) argued that a collaborative strategy was necessary to make the group project more successful for e-learning. Responses from students at two major Saudi Arabian universities, Qassim University and King Abdulaziz University, suggested that the system of e-learning consistently provided ease of use, ease of learning and high-quality documentation. The system acted for the benefit of students and their scientific and technical learning.

Research literature in the field of e-learning systems in KSA still requires further contribution as the field remains relatively uncharted; specifically, the evolution of the system used to measure organizational impact needs further study. This motivates researchers to explore this area of research with the aim of increasing the expected impact of e-learning systems in Saudi Arabia’s top two universities, Qassim University and King Abdulaziz University. This survey, based on the IS Success/Impact Measurement Framework, was taken from a large sample of students and faculty members using e-learning in both universities to gain perspective on the quality of the system. It is clear from the discussion above that the qualities of an e-learning system that have the most positive impact in both universities are: (a) the e-learning system is easy to use; (b) the e-learning system is user-friendly (easy to learn); and (c) the e-learning system provides high-speed information access (efficiency). Thus, by using the e-learning system provided by their university, participants can undertake education effectively. Therefore, members look to the system for ease of use, which means the system makes it easy for the students to find what they need related to their courses, to improve their computer skills, and to make effective use of the current system. However, the current system needs further improvement in terms of user interface design, as the degree to which the system is user-friendly is key to users being willing to participate in the system. Finally, the system’s connection speed and user-responsiveness are important features that must not be neglected. This study of e-learning systems relied on the user-experiences of students and faculty members was examined according to current information system (IS) success as well as the impact measurement frameworks. The overall findings of this study indicate a perceived positive impact of e-learning systems on higher education by those involved in tertiary learning and teaching in the KSA.
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