

Evaluating Students' Satisfaction with the E-Learning System at Umm Al-Qura University

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Abstract

This research aims to evaluate the satisfaction levels of information science department students at Umm Al-Qura University with e-learning, in addition, it investigates the strength and the weakness indicators of e-learning system from students' point of view.

To achieve these goals, a descriptive analysis methodology used in this research to evaluate Students' satisfaction, the sample consisted of (60) participants were selected from information science department students in the university within summer semester of the academic year 2019/2020. The sample are asked to complete a 5-point Likert scale questionnaire to collect the required data. Validity and reliability of the questionnaire were guaranteed.

The results revealed that students are highly satisfied with e-learning. The chi-squared value (264.53) indicated that the students' responses to the questionnaire items were intentional and were not equal in the preference. In addition, there are many strength indicators within the e-learning represented in developing students' knowledge, skills and attitudes well. Diversity of activities and evaluation methods to suit students' needs are investigated, supporting the faculty members role in monitoring student activities, availability of interaction between the learning community from anywhere and at any time. However, the weakness indicators are mainly represented in the lack of face-to-face human interaction between student, faculty member and between the student and his peers. The study findings contribute to existing understanding of students' satisfaction levels to reinforce

efficiency of students' satisfaction toward eLearning Systems. Moreover, help decision makers and stakeholders at the higher education institutions to plan and reinforce the students' satisfaction in e-learning environments effectively.

Keywords: E-learning; Learning Management System (LMS); Satisfaction; Evaluation; Higher education

Introduction

The scientific and technological revolution is one of the major changes that characterizes our contemporary world, and we are witnessing its effects on various fields. The education institutes especially universities as one of the most important institutions of society had to respond to this technological revolution by employing the elements of this technology in activating its operations and achieving its goals (El-Sabagh, 2011).

In light of the great development in the computers & the internet services, many concepts have emerged such as, E-Learning, and virtual universities that have brought a qualitative shift in the job of educational institutions so that, the major aim becomes the development of students skills which qualify them to face the current changes, and prepare them to become one of the main elements in developing and modernizing their societies. eLearning has emerged as one of the fastest trends in today's education, it become the foundation of online learning environment. (Hussein, 2011; Khlifi & El-Sabagh, 2017).

Zahir (2009) and Gupta (2017) stated that the primary goal of using eLearning is to improve student learning, prepare them for the labor market, provide flexible educational tools for a faculty member, and provide an opportunity for society institutions and parents and to be more involved in the education process. Similarly, Ali (2011) mentioned that most international universities tended to use this type of education, in recognition of the many advantages it achieves, both on the economic level through the profits that it generates on universities, or at the academic level by providing educational opportunities for people who may be difficult to join the education system in its traditional way, in addition to its contribution in solving many of the problems faced by university education.

Consequently, many specialists in education expect that this type of education will become the prevailing outline in education soon, due to its characteristics and advantages. On the other hand, there are many difficulties and Challenges faces the e-learning employment, especially at Saudi universities such as the need for self-discipline, missing social interaction, lack of instructor contact, poor time management, and technological difficulties (Al-Hamiri,2014; Al-Rehily, 2014; Al-Sharif, 2016; Dalae, 2017; Al- Howaish and Mahjoub, 2018).

Therefore, there is a need to evaluate the e-learning system at Umm Al-Qura University from the point of view of the first beneficiary, which is student by identify the student's satisfaction about the applied e-learning system. Al-Azawei (2019) mentioned that the addressing e learning issues such learners' satisfaction in Arab countries is essential as these countries have different situation in term of their learners' characteristics and culture. Mallinson and Nyawo(2008) emphasized on the importance to evaluate various e-learning systems and analyze their efficacy, where the deployment of e-learning offers an opportunity to build the skills required for the 21st century knowledge-based economy.

Learner satisfaction represents an important factor in any measurement for the educational process quality, especially for online systems (Palloff & Pratt,2007; Kishabale, 2019). Consequently, the main objective of this research is to evaluate the Students satisfaction level with the e-learning system at Umm Al-Qura University, as well as defining a list of strength and weakness indicators within e- learning system from the point of view of the students.

The following research questions are:

- (1) What is the level of students' satisfaction with the e-learning system in information science department at Umm Al-Qura University?
- (2) What are the strength indicators of e- learning system from students' points of view in information science department at Umm Al-Qura University?
- (3) What are the weakness indicators of e- learning system from students' points of view in information science department at Umm Al-Qura University?

The paper is organized as follow (a) Literature reviews and conceptual framework section (b) The Methodology section (e) The Results and discussion section (f) Finally, Conclusion & implications section.

Literature Reviews and Conceptual Framework

The use of e-learning in universities and higher education institutions is not limited to the use of technology only, but also to prepare individuals who are able to face societal challenges and obstacles and be able to lead society towards the best in light of the information technology revolution that sweeps away all society institutions. Considering the above, the current research will talk over the following subsections:

E-Learning Concept

The concept of e-learning did not appear suddenly, but it was established and developed through many stages and generations that started from the eighties until it reached the current form, as follows: (Lal & Al-Jundi, 2008; Tolba, 2010; Downes, 2012; Gros & García-Peñalvo, 2016).

The first generation: It started in the eighties and it contained CD-ROMs, where the interaction between the student and the content.

The second generation: In the nineties with the emergence of the internet, and interaction availability appeared between the student and his peers and between the student and the teacher remotely and is essentially

characterized by the application of computer games to online learning.

The third generation: It based on Learning Management Systems (LMS), where massive amounts of online resources are developed to supplement other educational resources available on the Internet, which known as Learning Objects. This generation represents the stage in which interaction mechanisms have started through messaging systems and discussion forums.

The fourth generation: The most important feature that distinguishes this generation is the sharing of content via the Internet. The online content is more specialized, as it combines materials created by the institution and materials created by students. In addition, reflection -oriented tools such as blogs and e-portfolios, and more interactive activities, such as games, are also developed to enhance and enrich the learning experience. Web-based solutions are extended to other devices, leading to the reinforcement of mobile learning activities.

Gros and García-Peñalvo (2016) mentioned that there are many definitions that dealt with the term e-learning, through its development. In light of these definitions that were mentioned by Zaitoun(2005), Khan(2005), Mostert and Hodgkinson-Williams (2006), Rosenberg (2006), Rossi (2009), Wang, Ran, Liao, and Yang (2010). In conclusion, e-learning concept can be defined in this research as follow: "A system that works to provide hypermedia content based on web, to enable the learner to interact actively with the content, the instructor, and his peers, whether synchronously or asynchronously, with the possibility of completing the learning process from anywhere, at any time".

E- Learning Components

E-learning has basic components, and it has been reviewed in many studies and literature: (Dabbagh, 2005; Amer, 2007; Salam, 2009; Zaher, 2009; Al-Anzi, 2011; Basak, Wotto, and Paul, 2018). By analysis, these studies and literatures the components of e- learning can be identified as shown in figure 1.

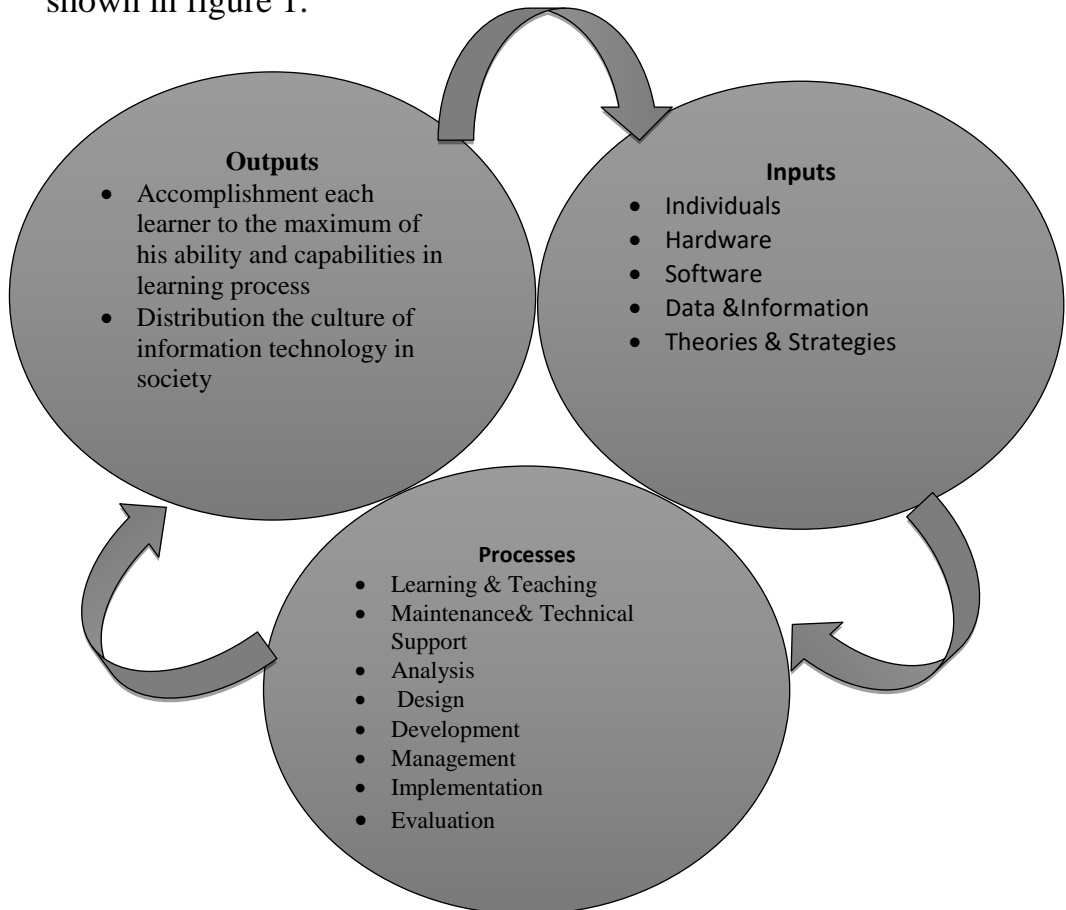


Figure 1. E-Learning Components

As Illustrated in Figure 1. E-learning consists of three interactive and integrated elements: The inputs which are represented in individuals (student - instructor - manager - programmer - educational designer, and so on). The hardware, which is represented in computers, storage media, networks,

and communication devices. The programs are represented in operational programs such as Windows and application programs such as office programs, multimedia players and web browsers. The data and information that represents the data and information of the content, students, teachers, and educational institution. The theories and related strategies that represent the theoretical basis for understanding e-learning such as behaviourism, cognitivism, constructivism and communicative theory. These theories regulate the principles explaining how students acquire, retain, and recall knowledge, help the predictions of learning outcomes, and are used as aids in selecting educational tools, treatment methods, and strategies that enable learners to pass instructional goals efficiently and effectively (Khalil & Elkhider, 2016)

The Processes that take place within the e-learning system, which are represented in teaching processes by the teacher and the learning processes by the student. As well as analysis, which means identifying the problem and proposing solutions, design, means the determination of what learners must accomplish. Development refers to the producing of e-learning materials, implementation means the learner's interaction with the previous e-learning materials to achieve learning goals and acquire the requirement knowledge and skills; finally, evaluation refers to the processes of measuring effectiveness and sufficiency of education, and judging its quality. (McGriff, 2000)

The outputs of the e-learning system, which have two levels: Output at the individual level, where each learner will reach the maximum level that his abilities and capabilities enable him to learn, and a result at the societal level, which is the dissemination of information technology culture in society. As well as the society will obtain individuals who are able to develop inputs and processes of e-learning.

E-Learning Management Systems (LMS)

Learning management systems are internet-based applications that are used to plan, implement, and evaluate a certain learning process. The learning management system usually affords the instructor with a technique to create and present content, monitor student involvement and evaluate their performance, and they can provide students with the ability of using interactive features such as discussion of topics, video meetings and discussion forums (Al-Jarf, 2008). Zaher (2009) added that the idea behind the e-learning management systems is to organize e-learning processes and tools, and manage them within integrated system to operate and manage all instructional activities, including educational presentations, discussion forums, file sharing, task management, lesson plans, educational curriculum and chat. These are sometimes called virtual learning environments or e-learning systems. There are two categories of e-learning management systems: (Jawdat, 2005; Al-Musi & Al-Mubarak, 2005).

- a) Public systems, that are designed by global commercial companies and which an educational institution, or individual, can use to submit e-courses.
- b) Special systems for some educational institutions and universities to meet their own need or are designed by some researchers and faculty members to provide their own electronic courses.

General or public systems are divided into two types: open-source systems that can be used to provide e-courses free and some modifications can be made to the supported databases such as the Moodle system. The other is the closed source systems that are available for use in providing e-courses in exchange for money, and those systems databases cannot be modified such as the Black Board system.

Zahir (2009) considers that the most important systems used in the Arab countries are the ATutor, Moodle, Claroline,

DokeosWeb CT, Blackboard, and Nuvvo systems, which are programmed in several languages such as PHP and JavaScript, with the use of a published database on the Internet to support and feed with proper data.

Through reviewing many literatures that dealt with the use of e-learning management systems such as Moodle, D2L, WebCT, Nicenet, Blackboard, in presenting some courses online, it demonstrates the effectiveness of these systems in providing and managing many courses, including the computer Science course at the British Open University. (Junaidu, 2004; Al-Jarf, 2005; Jones & Jones, 2005; Lincoln, 2009). By looking at the Blackboard system used in Saudi universities and which provides virtual learning environment characterized by flexibility and Effectiveness. It offers the following tools (Khalel, 2008; Al-Najar, 2010; Al- Salloum & Radwan, 2013):

Content management tools that they specialize in managing operations related to the content of academic subjects, including scientific content building, and making it available anywhere and anytime with providing a rich environment with resources and multimedia. Providing the ability to support the content with useful links, as well as providing a dictionary for the course to allow the possibility of adding special terms for each course.

Communication tools that provide synchronous communication tools (text chat, and conferences), and asynchronous (email, discussion forums); in addition to contribute to building a virtual learning community that transcends time and space.

Assessment tools where there are applications for the design and production of assessment and survey tools, including various types of tests, automatic correction, grade monitoring, and display of results in various forms.

Management tools which include extracting reports in the form of complete records of learners' entry and exit times, the time spent by the learner, the areas he visited and the activities he implemented to help the faculty member in tracking learners' achievements, monitoring their performance and guiding them.

E-Learning Advantages

By reviewing what were mentioned by Al-Karam and Al-Ali (2001), Marc (2002), Guckel and Ziemer (2002), Nicholas (2003), Wagner, et al., (2008), Zaher (2009), Basak, Wotto, and Paul (2018) mentioned. The advantages of e-learning can be summarized as follows: It aids to resolve the speed of knowledge flows and the increasing request for education, in addition, solving the problem of crowded lecture halls and classrooms. Training and educating remotely without having to quit their jobs. Reducing training time and reducing its cost. In addition, it provides an interactive learning environment, while allowing the learner to study at the time and from any place they prefer, provide an opportunity for each learner to proceed in the study according to his abilities and capabilities. Allowing an opportunity for the instructor to develop his abilities, as his role is limited to guidance and advice. It allows students to learn in a private atmosphere, the speed of execution of administrative operations within the educational institution. E-learning contributes linking between the educational institutions with various community institutions to settle society requirements with the qualifications of graduates.

E-Learning Disadvantages

There are many disadvantages or faults within the e-learning system, including: (Dowling, 2003; Klein & Ware, 2003; Al-Hila, 2005; Zahir, 2009; Basak, Wotto, & Paul, 2018; Tahrishi 2018)

1. E-learning needs an intensive effort to qualify and train teachers and students on the use and employment of this type of learning.
2. E-learning is associated to certain technical factors such as the efficiency of the communication network, the availability of a set of devices and programs, and the ability to produce educational content professionally.
3. The cost factor in production and maintenance of hardware devices and communication networks.
4. Weakness of human interaction that leads to boredom from the use of technology.
5. Weakening the role of the educational institution as a social system that plays an important role in socialization.
6. Weakness in self-discipline and time management.
7. The emergence of many educational companies that aim at profit only and are at the same time training and qualification of teachers, and in fact they are not eligible for that educationally or academically.

E-Learning Obstacles

By reviewing what were mentioned by Rodny (2002), Salem(2004), Al-Amri (2006), Tolba(2010), Ali(2011), Basak, Wotto, and Paul(2018). The most important obstacles that prevent the e-learning to Achieve its goals can be identified as follows: First: weak infrastructure in hardware, servers and networks in many regions. Second, high fees for using the internet. Third, some faculty members are not convinced to employ e-learning for fear of diminishing their role. Fourth, the high cost in preparing the infrastructure, media production and educational software. Fifth, lack of competent specialists often to train the learning community to use and employ e-learning effectively.

E-Learning Evaluation

Al-Khawaldi (2007) stated that in order to give this type of learning and education its status as one of the successful educational systems in Arab societies, e-learning must be characterized by basic requirements or conditions for providing quality and monitoring it. The American Teachers Union also set standards for e-learning applications that represent the basic requirements for its success (Abdulhamid, 2005). Bhuasiri, Xaymoungkhoun, Zo, JeungRho, and Andrew (2012) also referred to a set of factors and conditions for the success of the e-learning system in developing countries.

The totality of these conditions and requirements can be summarized as follows:

1. Provide basic conditions for students enrolled in this type of education to ensure appropriate learning inputs and encouraging them to progress and continue studying.
2. Designing the contents of educational curricula and programs is based on the best types of contemporary knowledge and communication technology related to societal needs, and it works to attract the interest of learners and stimulate their motivation to learn.
3. Effective use of communication and information technology, that helps the learner to possess knowledge, skills, techniques, and methodology that enable him to be creative.
4. Technology awareness for faculty members, students, and the administrators, and encouraging them to carry out tasks and interact through technological communication tools.
5. Implementing educational programs in the e-learning system according to a strict monitoring by the educational institution, to ensure that the programs are implemented according to their goals and monitor them according the real goals.

6. Subjecting the e-learning system to specific evaluation procedures in the light of cultural and social developments to diagnose the strengths and weaknesses in e-learning system, and thus improve the strengths factors and treatment the weaknesses factors in a comprehensive and objective.

It is clear from the above that the evaluation of e-learning in order to diagnose the strengths and weaknesses is one of the most important requirements and conditions for the continuity of the success of this type of learning considering societal variables. Maudsley (2001) also stated that the main purpose to evaluate e-learning is to stimulate and preserve e-learning systems regeneration. In this regard, there are many studies that targeted the evaluation of e-learning from the students' point of view, given that the student is the customer and the ultimate beneficiary of the e-learning system and the most able to evaluate the service provided to him as follow:

Al-Zamel study (2004) aimed to evaluate the e-learning in both the Arab Open University in Riyadh and the General Association for Technical Education and Vocational Training in Saudi Arabia from the students' viewpoint themselves and the obstacles that face them. The results revealed that the most important obstacles faced the students are increasing the costs of Internet connection and the absence of a teacher at the time of need, as well as the lack of e-learning method clarity for a large number of students. Gupta and Walmsley (2004) aimed at revealing the attitudes of faculty and students towards e-learning and has found that e-learning is a good way to support traditional teaching from the point view of students, while faculty members indicated their fear of the negative effects of e-learning such as the absence of students from lectures, and the absence of feedback.

Yang and Cornelius (2004) study concluded that the most prominent challenges facing the e-learning system from the point of view of the higher education students are delayed teacher feedback, lack of self-motivation and poor design of materials and activities. Lowe & Berstroff (2006)" aimed to identify student attitudes toward e- learning, the study revealed that there are deficiencies in the need for more communication with teachers and other students. On the other hand, Aisan and Al-Ani (2007) aimed to explore position of e-learning from the viewpoints of students in the college of Education at Sultan Qaboos University, They measured the ability of e-learning to activate cooperative learning and to reduce the gap between the student and the instructor. The greatest amount of freedom to display ideas and demonstrate abilities and the capabilities of the student through discussion. Moreover, contributing to the development of computer skills among students, and its disadvantages are the difficulty of reaching the university site, especially in remote areas and poor infrastructure. The HO (2007) study, which aimed to identify students 'perceptions about using e-learning in higher education institutions in Hong Kong and has found that students' motivation towards using e-learning depends on several factors, including the importance of their content and that it is meaningful to them, and the lecturer method, and integrating technologies that are related to their needs. Hussamo & Al-Abdullah's (2011) aimed at identifying the reality of e-learning at Tishreen University from the viewpoint of both faculty members and students, and it has reached the importance of the role of e-learning in developing self-learning and increasing computer skills, but one of its major drawbacks is sitting for long periods at front of the computer Causing many diseases. and Al-Awawdeh (2012) Study aimed at identifying the difficulties of employing e-learning in Palestinian universities in Gaza as perceived by professors and students, and it has reached a set of difficulties represented in

the weakness of the infrastructure, technical support and experience in e-learning for both the professor and students. Salloum, kasasbeh, and Al-Sukkar (2015) aimed to discover the reality of e-Learning at the Mutah University from the Viewpoint of Students. The results reached the effectiveness of using e-learning with a high rate of students 'use of e-learning, but one of its most important obstacles is the lack of human communication between the student and the instructor. Al-Dalae's (2017) aimed to investigate the attitudes of students and faculty members towards electronic education at the University of Najran. The study reached the importance of electronic learning in increasing achievement and experiences with a preference in comparison to traditional learning and one of its disadvantages is neglecting educational aspects and the lack of credibility and its need for an effort that exceeds the capabilities of the student and underestimating the role of Professors. In addition to the above, and by reviewing what were mentioned by Al-Habes & Al-Kandari (2000); Powel(2001); Liu(2001); Mclachlan(2002); Al-Hila(2005); Khalil (2008); Zhu and Edwards (2007). The criteria that should be considered in the evaluation of e-learning programs can be summarized as follow.

1. The program contains a good amount and quality of information in terms of accuracy, reliability, modernity, organization and simplicity.
2. Ease of accessing, browsing, and downloading the content.
3. Learner interactivity with content, teacher, and peers with synchronous and asynchronous communication tools.
4. Clarity of the program's itinerary to achieve the appropriate goals.
5. The program contains educational materials that raise the motivation of learners, such as games and graphics.

6. The effective employment in the program for each of the multimedia elements, including text, graphics and images.
7. The program contains various forms of activities and evaluation methods to ensure that the goals are achieved.
8. Availability of technical guidance and support throughout the day.
9. The availability of immediate feedback along the program's itinerary.
10. The performance of students after the program improved compared to their performance before the program.

By reviewing many of evaluation models for e-learning systems that were presented by Van Dam (2004), Voigt and Swatman (2004), Lanzilotti, Ardito, Costabile and Angeli (2006), Beal (2007), Mallinson and Nyawo (2008), Hadullo, Oboko, and Omwenga (2017). What mentioned by Palloff & Pratt (2007) about student satisfaction which be considered one of the significant factor in e- learning evaluation where the students' satisfaction contains: Students' satisfaction about himself (what are the benefits and how he changed as a learner), Student's satisfaction about the course (content, activities, design,etc), and Student satisfaction about the total system (accessibility, technical support,...etc)

The authors prepared the research tool, which is a questionnaire to identify the level of satisfaction of students of the information department registered in the summer semester about the e-learning system at Umm Al-Qura University.

Methodology

Research Design:

This research is based on the descriptive and analytical approach to evaluate Students' satisfaction with the e-learning system in information science department at Umm Al-Qura University. As well as in describing and analyzing the literature related to the research problem, describing, and building research tools, manipulating and analyzing data statistically.

Research Sample:

The research sample is composed of 60 students from the Department of Information Science at Umm Al-Qura University in the summer semester. Academic year (2019/2020).

Research Instruments

The research instrument is based on constructing a questionnaire to identify the students' satisfaction with e-learning in Information Science Department at Umm Al-Qura University. The questionnaire consists of 28 sentences which indicate the student's satisfaction about practical e-learning system in information technology department at Umm Al-Qura University. At the anterior of each sentence, there is a set of options, ranging between (strongly satisfied - satisfied - neutral - dissatisfied - strongly dissatisfied). The student responds to each statement of the questionnaire by selecting one of these options.

Research Procedures

The research procedures included the following:

1. Reviewing studies and literature related to the research topic.
2. Preparing the search tool and calculating its validity and reliability

A. Validity: The questionnaire contained 30 sentences in its initial form according to the studies and literature that were mentioned previously. Then it was presented to a group of specialists in the field of information technology and educational technology to express an opinion about the suitability of the questionnaire phrases for its purpose, the linguistic accuracy of the questionnaire items, the suitability of the questionnaire design method to achieve its goal and delete or add any item to the questionnaire list. Experts and specialists

removed two sentences and agreed on all the items of the questionnaire, with the amendment of the linguistic wording of some of the items of the questionnaire. (The questionnaire became in its final form)

B. Reliability: The stability of the questionnaire was calculated through the Cronbach's Alpha Formula. The reliability coefficient value $\alpha = 0.91$ and this indicates a good reliability coefficient and meaning that it gives the same results if it is reapplied to the same individuals under the same conditions (Abdulrahman,1998).

3. Questionnaire Application after calculating its validity and reliability on the research sample.
4. Statistical processing of data obtained from the application of questionnaire
5. Discussing the research results.
6. Providing recommendations and suggestions

Results and Discussion

To answer the first question, which stated: What is the level of Students' satisfaction with the e-learning system in information science department at Umm Al-Qura University?

The questionnaire was applied within the period between 15/07/2020 to 25/07/2020 via the research sample after calculating and guaranteeing its validity and reliability.

Since the variable expressing the options (strongly dissatisfied - dissatisfied - neutral - satisfied - strongly satisfied) is an ordinal scale, and the numbers are (strongly dissatisfied =1, dissatisfied =2, neutral =3, satisfied =4, strongly satisfied =5.) expresses the weights.

Then we calculated the weighted average. This was done by first calculating the length of Period, which was a product of divided 4 by 5. Where 4 represented the number of distances (1 to 2 is the first distance, 2 to 3 are the second distance, 3 to 4 is the third distance, and 4 to 5 is the fourth distance), and 5 represented the number of choices. When

dividing 4 by 5, the length of the period is equal to 0.80 and the distribution of weighted average explained as Table1:

Table 1. The weighted average

The result	Start point	End Point
Strongly dissatisfied	From 1	To 1.79
Dissatisfied	From 1.80	To 2.59
Neutral	From 2.60	To 3.39
Satisfied	From 3.40	To 4.19
Strongly satisfied	From 4.20	To 5

The following table no. 2 illustrated the students' satisfaction within e- learning system.

Table 2. The result for student's satisfaction in e- learning system.

Student's satisfaction	Scale	Strongly satisfied.	Satisfied	Neutral	Not satisfied	Strongly dissatisfied.	Mean	Standard deviation	χ^2	df	The result
	F	890	540	182	61	9	4.33	0.75	264.53	4	Strongly satisfied.
	%	52.91	32.10	10.82	3.63	0.54					

As illustrated in table 2. The value of standard deviation is 0.75 (between 0.5, and 1). Which indicates the homogeneity of the research sample responses (Al- Kanany, 2002) additionally, the calculated Chi square value is 264.53 and this value is greater than the tabular value at the significance level 0.05 which is equal 9.49. This indicated that the responses of the sample were biased to specific options, and the options were not of equal preference.

The total level of students' satisfaction in information science department at Umm Al-Qura University with e-learning system is strongly satisfied. This may be due to students' previous experience in dealing with learning management systems and their conviction of its importance and the role which it plays in developing their knowledge and

skills due to the many advantages that characterize it in terms of enabling learning from anywhere and at any time. Permitting each student to progress in the study according to his abilities and capabilities, availability of a huge amount of information and its sources in various forms. In addition to availability of ease accessibility and usability from any place and by using different devices, The accuracy and timeliness of the content, design quality for the content, activities, feedback, teaching strategies, evaluation methods, interactivity and instructional control by students, availability of technical support.

These results are consistent with the findings of many studies that referred to the advantages of e learning systems and its effect on learners' satisfaction such as: Lowe and Berstroff (2006), HO (2007), Hussamo and Al-Abdullah's (2011), and Salloum, kasasbeh, and Al-Sukkar (2015).

To answer the second question, which state: What are the strength indicators of e-learning system from the students' points of view in information science department at Umm Al-Qura University?

The authors calculated the mean value for each sentence in the questionnaire and compared it with the values of weighted average that illustrated in table 1. As follow in table 3.

Table 3. The student's satisfaction towards the questionnaire items

Questionnaire items	scale	Strongly satisfied.	Satisfied	Neutral	Not satisfied	Strongly dissatisfied.	Mean	Standard deviation	The result
1. E-learning helps in acquire new knowledge and skills	F	24	29	7	0	0	4.28	.666	Strongly satisfied
	%	40	48.3	11.7	0	0			
2. E-learning simplifies study information and makes it clearer	F	23	19	17	1	0	4.07	.861	Satisfied
	%	38.3	31.7	28.3	1.7	0			
3. E-learning facilitates individual and collaborative learning with peers.	F	23	29	2	6	0	4.15	.899	Satisfied
	%	38.3	48.3	3.3	10	0			

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4. E-learning allows the availability to learn from anywhere, anytime.	F	51	8	1	0	0	4.83	.418	Strongly satisfied
	%	85	13.3	1.7	0	0			
5. E-learning enables synchronous and asynchronous communication between the learning community members 24 hours a day.	F	37	11	11	1	0	4.40	.848	Strongly satisfied
	%	61.7	18.3	18.3	1.7	0			
6. E-learning develops the technical skills of learners.	F	38	20	2	0	0	4.60	.558	Strongly satisfied
	%	63.3	33.3	3.3	0	0			
7. E-learning supports independence in learning and self-confidence.	F	36	20	5	1	0	4.52	.676	Strongly satisfied
	%	60	33.3	3	1.7	0			
8. E-learning contributes to the development of thinking processes and problem-solving skills	F	35	20	5	0	0	4.50	.651	Strongly satisfied
	%	58.3	33.3	8.3	0	0			
9. E-learning provides an educational environment that keeps pace with the requirements of the technical age	F	43	11	5	1	0	4.60	.718	Strongly satisfied
	%	71.7	18.3	8.3	1.7	0			
10. E-learning raises motivation towards learning and makes it more exciting.	F	32	17	5	6	0	4.25	.985	Strongly satisfied
	%	53.3	28.3	8.3	10	0			
11. E-learning provides the principle of neutrality and equality between different students.	F	25	23	9	2	1	4.15	.917	Satisfied
	%	41.7	38.3	15	3.3	1.7			
12. E-learning provides easy access to resources and information.	F	35	21	4	0	0	4.52	.624	Strongly satisfied
	%	58.3	35	6.7	0	0			
13. E-learning provides the instant feedback which students need.	F	25	26	9	0	0	4.27	.710	Strongly satisfied
	%	41.7	43.3	15	0	0			
14. E-learning helps to strengthen the role of the faculty member in explaining content to different students.	F	27	24	7	2	0	4.27	.800	Strongly satisfied
	%	45	40	11.7	3.3	0			
15. E-learning suits the	F	35	16	9	0	0	4.43	.745	Strongly

individual needs of students	%	58.3	26.7	15	0	0				satisfied
16. E-learning supports interactions between members of the learning community.	F	31	25	3	1	0	4.43	.673	Strongly satisfied	
	%	51.7	41.7	5	1.7	0				
17. E-learning provides educational content that is modern, accurate, and reliable	F	33	21	5	1	0	4.43	.722	Strongly satisfied	
	%	55	35	8.3	1.7	0				
18. E-learning provides a variety of educational activities suitable for different learning styles	F	28	23	5	3	1	4.23	.927	Strongly satisfied	
	%	46.7	38.3	8.3	5	1.7				
19. E-learning provides to faculty member a good monitoring tools for students learning activities.	F	30	16	10	4	0	4.20	.953	Strongly satisfied	
	%	50	26.7	16.7	6.7	0				
20. E-learning provides an appropriate amount of privacy for each student	F	38	20	2	0	0	4.60	.558	Strongly satisfied	
	%	63.3	33.3	3.3	0	0				
21. E-learning reduces the time required for the learning process compared to traditional learning	F	33	15	5	7	0	4.23	1.00	Strongly satisfied	
	%	55	25	8.3	11.7	0				
22. E-learning provides a great attractiveness in presenting integrated multimedia academic content from texts, images, sounds and graphics	F	37	17	2	3	1	4.43	.909	Strongly satisfied	
	%	61.7	28.3	3.3	5	1.7				
23. E-learning offers different evaluation tools that are compatible with the nature of the educational goals.	F	31	20	9	0	0	4.37	.736	Strongly satisfied	
	%	51.7	33.3	15	0	0				
24. E-learning enhances the principle of students' learning continuity	F	40	14	0	6	0	4.47	.929	Strongly satisfied	
	%	66.7	23.3	0	10	0				
25. E-learning provides technical support services throughout the day	F	29	17	11	0	3	4.15	1.05	Satisfied	
	%	48.3	28.3	18.3	0	5				
26. E-learning provides a	F	31	20	6	3	0	4.32	.854	Strongly	

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continuous service to spread news and instructions	informative	%	51.7	33.3	10	5	0			satisfied
27. E-learning provides a training system to develop the required skills that students need.	F		26	23	6	2	0	4.32	.792	Strongly satisfied
		%	48.3	38.3	10	3.3	0			
28 E-learning provides an interactive learning environment equivalent to a classroom environment where face-to-face interaction with the teacher and peers	F		11	15	20	11	3	333	1.09	Neutral
		%	18.3	25	33.3	18.3	5			

As illustrated in table 3. The strength indicators in e-learning included: E-learning help in acquiring new knowledge and skills. Simplify study information and makes it clearer. Facilitate individual and collaborative learning with peers. Allow the availability to learn from anywhere, anytime. Enable synchronous and asynchronous communication between the learning community and members 24 hours a day, in addition to develop the technical skills of learners and support independence in learning and self-confidence. The development of thinking processes and problem-solving skills was considered as well, and an educational environment that keep space with the requirements of the technical age was provided. Learning raised motivation towards learning and made it more exciting, it provided the principle of neutrality and equality between different students, and it delivered easy access to resources and information as well.

The results revealed that providing the instant feedback, which students need and helped to strengthen the role of the faculty member in explaining content to different students. The individual needs of students and supporting interactions between members of the learning community were considered. Providing educational content that is modern, accurate, and reliable was investigated. Delivering a

variety of educational activities suitable for different learning styles and offering to faculty member good monitoring tools for students learning activities are vital strength factors. Promoting the principle of students' learning continuity and providing with the technical support services were discussed, and These results are consistent with the findings of many studies that referred to the strength factors in e learning systems, including: Gupta and Walmsley (2004); Aisan and Al-Ani (2007); and Al-Dalae's (2017).

To answer the Third question, which articulated: What are the weakness indicators of e- learning system from students' point of views in information science department at Umm Al-Qura University?

The authors calculated the mean value for each sentence in the questionnaire and compared it with the values of weighted average that illustrated in table 1. In addition, table 3 illustrated these values as shown before.

The authors noticed that the main weakness in e- learning represented is the absence of human interaction between teacher and students and between student and his peers as illustrated in sentence number 28 "E-learning provides an interactive learning environment equivalent to a classroom environment where face-to-face interaction with the Instructors and peers". Wherever the mean students' responses are neutral and not satisfied. This result is consistent with the findings of many studies that referred to the weakness factors in e learning systems, including: Rodny (2002), Al-Zamel (2004), Al- Ali(2011), and Awawdeh (2012).

In general, the results of this research are consistent with the study of Dziuban, et al(2015) stated that studying within online environment are important for both students and faculty members to achieve student satisfaction. The current research results agreed with the previous studies results such as Al-Amri (2006), Tolba (2010), Ali (2011), Basak, Wotto, and Paul (2018). they identified the obstacles that hitch students'

satisfaction within e-learning to achieve their goals as: networks problems, lack of training opportunities the learning community to use and employ e-learning effectively, in addition to lack of face-to-face human interaction between student, faculty member and between the student and his peers.

Recommendations:

According to the research results, a set of recommendations can be proposed as follows:

1. The research results would be supportive to decision making and stakeholders at higher education institutions to implement and improve the students' satisfaction in e-learning environments effectively.
2. Adopting the strategic planning for e-learning implementation in higher education institutions were investigated.
3. Providing the necessary funds for e-learning application in education institutions, distribution the awareness of e-learning importance among students and faculty members in higher education also considered within this research.
4. preparing training courses to enhance e-learning skills required for students and faculty members in higher education institutes.
5. providing financial and positive rewards for creative individuals in submitting proposals to develop e-learning system.
6. Preparing a plan to evaluate e-learning systems periodically at Saudi institutes and universities should be considered as well.
7. Providing the best approaches and models for designing e-learning to create an educational environment that suits interests and needs of diverse students within higher education institutes.

8. including quality standards for e-learning to achieve maximum effectiveness for electronic learning environments.
9. preparing more research to scope the most effective solutions to overcome the obstacles that prevent the effective application of e-learning within educational institutions.

Suggested Researches:

In light of the results of the current research, the researchers suggest conducting the following researches and studies:

1. Evaluating faculty members' satisfaction with e learning systems at Umm Al-Qura University.
2. Evaluating students' trends with e learning services at Umm Al-Qura University.
3. Evaluating the Attitudes of students with special needs about e learning systems at Umm Al-Qura University.
4. Development e learning systems in the light of students' Opinions at Umm Al-Qura University. .
5. Development e learning systems in the light of faculty members' Opinions at Umm Al-Qura University.
6. Evaluating students' satisfaction with e learning systems at Umm Al-Qura University and its relation with some variables(gender- academic specification) .
7. Development of e learning systems at Umm Al-Qura University in the light of e learning Quality standards.
8. Evaluating e learning systems in the light beneficiaries' Opinions: A Comparison study among Saudi Universities.
9. Conducting similar studies on other types of special groups, such as deaf, dumb, and underachieved, and other special groups.

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