

The Impact of Standard and Quality in e-Learning System

¹Ahmad Abdullah Mohammed Al-Mafriji, ²Ahmed Burhan Mohammed and
¹Yousif Mohammed Wahab
¹College of Education for Pure Sciences,
²College of Arts, University of Kirkuk, Kirkuk, Iraq

Abstract: Education has evolved in different ways as a result of the impact of modern technology evident in more than one educational system. Quality and standards are critical to education. Quality cannot be expressed by definition because quality itself is abstract. Attention should be given to the specific objectives of the education system used and the opinion of learners and teachers in determining quality in e-Learning. It is also, necessary to classify the appropriate quality management standard. The most important problems that prevented the implementation of quality in educational systems in most developing countries limited classrooms and laboratories, limited financial resources, lack of adequate training for faculty members in the electronic field. And graduates due to poor budgets for education. The research focuses on creating a virtual e-Learning site, distributing a questionnaire to students participating in this site. For the purpose of providing excellent e-Learning based on the appropriate standards and quality in educational institutions.

Key words: Virtual website, a questionnaire, e-Learning, standards, quality, educational institutions

INTRODUCTION

Information is now a commodity, accessible with a click of the mouse. Today information is no longer the primary goal of education. The basics have changed. In the global market, companies workers must be able to work in teams, write and speak. The challenge facing universities is to adjust to changing market needs in this technology economy. Academics must teach more than include subject. One method to do this is to place away the chalk and pick active learning, the internet and educational technique (Hogan and Kedrayate, 2010). As recently as 200 years ago, the devise of the telegraph was changed to the radio which in its turn, gave path to television. With the coming of the computer, the Internet and mobile communication, the volume of information in the universal domain has increased. As a result, most of the information we acquire comes from these sources. Access to necessary information is easier and takes less time to solve problems. Technological development rapidly expands the mind of the normal person (Yanuschik *et al.*, 2015) when student enters the learning in higher education institutions, it is important to accelerate development and to build on the basic policy of the committee that concentration on the students developing their ingenuity.

e-Learning system in the virtual educating environment, means the environment in teaching activities via. the web, focusing on teaching the students to participate in a virtual reality classroom to help enhance learning anywhere and anytime and to encourage formal learning. Learning with e-Learning system on a virtual learning environment to promote creative thinking to students by supporting communications between students and instructors, students and students, reflecting of tacit and explicit knowledge both learners and instructors, collaborating and acquiring knowledge which there are online tools to support instruction (Songkram, 2015).

Literature review: There is a number of countries as well pilots in the application of different e-Learning systems started using means of offering help to clarify some concepts and experiments, ended by applying sophisticated systems for education shift from traditional systems. An area of digital life is one of the most important features of civilized society. This idea is of interest to developing countries for the purpose of developing education and spread the digital world in all areas of life including e-Learning.

Russian experience: The Russian Federation has a federal education development program based on

education development for the period from 2016-2020. The provision of educational resources intensively and the goals and priority are the implementation of e-Learning technology in Russian educational institutions and institutions of higher education. About 162 thousand people use the Internet technology in the education process which helps to provide quality education to many residents of the Russian Federation and the various regions and the possibility of resolving many of the educational, aggressive and cultural issues through simulation, chat and video conferences. There is a problem of hindering the development of e-Learning in the Russian Federation which is the lack of programs to engage participants in the development of e-Learning. For this reason, the scientific institutions in Russia put forward the idea of establishing the Federal program for the purpose of speedily solving this problem and using high standards and quality in the development of the educational process in Russia (Filippova, 2015).

Malaysian experience: The Malaysian government has been interested in e-Learning because of the development of technology and the promotion of higher education. The purpose of the study is to gain an understanding of the position of Malaysian University students on the use of any kind of e-Learning. In order to reach the desired goal, the relationship between the intentions of university students in the use of e-Learning, the study is of three points and according to the priorities. First, the position of the student from the use of e-Learning. Second, the usefulness of the use of e-Learning. Third, the awareness of ease of use. A total of 151 students were randomized to use samples in the questionnaire. The results considered the situation to be an important indicator of the student's intention to use e-Learning. As a result, it is believed that students' attitude plays an important role in contributing to the intention of using e-Learning system. These results are expected to improve and develop the e-Learning system to meet the needs and vision of students in developing their scientific capabilities (Hussein, 2017).

Egyptian experience: Egypt is one of the Arab countries with a population density of 90 million, according to the population ratio of 90 universities but there are a few public universities in Egypt with 22 government universities and 10 private universities. High school students who get middle grades in Egypt have a problem with admission to universities and private universities. High tuition fees and solutions to the problems of these students are accepted in e-Learning programs (El-Seoud *et al.*, 2014). The higher learning in Egypt is mainly government nursed and regulated. There is a noted increase in the number of student in higher education

academy who immediately enrolls after finishing from basic education. Currently, tested science courses are offered at fourteen Egyptian government universities, of which Cairo University, three non-profit private universities and the American University in Egypt (AUC). Surveying education, both at the undergraduate and graduate levels, varies among Egyptian Universities and Institutes of Higher Education in terms of emphasis on the surveying and mapping content and respective applications (Moustafa, 2005).

The concept of e-Learning: e-Learning refers to the use of information and communication technologies to enable the access to online learning/teaching resources. In its wide sense, defined e-Learning to attend any learning that is enabled electronically. They however limit this definition down for mean learning that is empowered through the use of digital techniques. This definition is then narrowed by several researchers as any learning that is internet-can or web-based. Latest researchers also, defined e-Learning as a revolutionary path for ability a workforce to the learning and skills needed to turn change to benefit. For example described the e-Learning process as centered at the learner as well as its design as cover a system that is reactive, repetitious and self-paced, customizable. Also, point out to the term as the use of computer network technique, principally through the internet, to provide information and order to persons (Arkorf and Abaidoo, 2014).

The importance of e-Learning: The advantage of these technologies has been found in the classroom and in the corridors of universities but the most exciting thing is the establishment of an integrated education based on these techniques. The so-called e-Learning and experiments have proven using e-Learning in universities that

e-Learning is important for education for it can improve the quality of the learning experience, expand the reach of all lecturers and tutor. e-Learning ability help remove block to achievement by providing modern and creative ways of interesting and pleasant pupils, learners of all abilities, can and inspiring each to get their educational possibility. e-Learning can help learning through display differentiated learning, particularly to those who need help in literacy and numeracy, ICT. The e-Learning can teachers and students ability easily customize learning resources to suit velocity and level, suitable to any learning type.

MATERIALS AND METHODS

Types of e-Learning

Direct e-Learning: Direct e-Learning is a method and

techniques of internet-based learning to connect and exchange lessons and research topics between the learner and the teacher, using a lot of techniques and methods.

e-Learning based on the computer: Computer Based Training (CBT) is still a synonym for traditional basic education and can be adopted in many ways as a part of a comprehensive education and training plan.

The types of e-Learning in terms of time division are two types; synchronous and asynchronous, the means of e-Learning according to needs, the most important means used will be mentioned.

Synchronous electronic learning: A kind of e-Learning through which the trainer is linked to the trainees in a real learning environment, so that, the trainee communicates with his instructor directly despite the distance and geographical separation. With this type of education, the instructor is supervising the classroom with the possibility of direct conversation with the trainees. In addition to the possibility of students to see the electronic in-room in the room explained.

Asynchronous e-Learning: Asynchronous learning process. The educational process between the trainer and the trainee is indirect and not controlled by a specific time but at different periods. Examples include self-education via the internet, CD-ROMs forums and e-mail (Jethro *et al.*, 2012).

Benefits of e-Learning: There are many advantages of e-Learning but it can be said that the most important benefits and advantages of e-Learning are the following: it is flexible when cases of time and place are taken into seeing. Each student has right of choosing the space and time that case him/her. e-Learning improves the efficiency of knowledge and qualifications by ease of access to a large amount of information. It is ability to provide chance for relations between students by the use of discussions. e-Learning motivates learners to interact for other as well as interchange and regard different point of opinions. e-Learning is cost active in the meaning that there is no want for the learners to travel. e-Learning always takes into consideration the individual students differences. e-Learning helps compensate to reduction of teachers staff. The utilize of e-Learning lets the self-pacing.

e-Learning barriers: e-Learning if applied in education makes the students undergo thinking, remoteness, as well as lack of interactive or link. The e-Learning process may

be less efficient than that of the traditional process of learning for respect to explanation. When we think about improve in communication skills of students, e-Learning a style may have a negative effect. Since, tests with estimate in e-learning are maybe with the use of proxy, it will be hard, if not impossible to monitoring or regulate bad activities such as cheating. e-Learning might also probably be misled to privateering and plagiarism, predisposed through unsuitable selection skills as well as the facility of copy and paste. e-Learning might also sour institution's role socialization role and also, the role of teachers as the directors of the method of education. It is not potential for all fields or disciplines for use the e-Learning technique in education. e-Learning may also lead up to crowding or heavy employ of some websites. This may get about unanticipated expenses both in time and money disadvantages (Pande *et al.*, 2016).

e-Learning Management Systems (LMS) standards: LMS is software that registers and monitors every activities of learner. In other view, these systems are kindly structure and foundation for employers of e-Learning, handle study and training operation automatically. The strong and overall learning management system supply highly performance management of learning approach. LMS provide the following functions (Manal and Nashwa, 2017):

- Structure
- Assessment
- Tracking
- Security
- Registration
- Delivery
- Interaction
- Reporting
- Record keeping
- Reuse
- Personalization
- Integration
- Administration

The most e-Learning standards can be organized into some general categories

Metadata: Many supplier argue that metadata contain is the heart in e-Learning.

Content packaging: The target of meaning packaging specification and standard is to enable organizations to transport path and content from one learning system to another.

Learner profiles: These standards allow different system compositions to share information on learners across multiple system compositions. Learner profile enable include personal information, learning plan, learning registry, accessibility requirements and skills of knowledge (competencies) (Auta, 2007).

The following most common standards developed

SCORM standard: SCORM is a technique standard that is formed and developed through ADL.

Metadata and interoperability standards: For economic and effective benefits, education organization should be linked and supported via. metadata interoperability standards.

T-SCORM standard: for increasing SCORM standard advantages, T-SCORM is extending from SCORM to enhancement it in searching, navigation making LOs available by DTV (Digital Television) platform.

IEEE (Learning Technology Standard Committee) LTSC standard: This standard is one of the most IEEE publications. It is characterized by developing LOM (Learning Object Metadata). It is recommended guidelines for educational and training systems, especially software components, tools, technology solutions that enable development and maintenance.

Learning Object Management (LOM): The standard is modal standardization licensed through the ISO/IEC SC36 for one option being into “fast-track” the standard by a high-level JTC1 Committee.

IMS standard: IMS project is nationalist infrastructure of higher teaching in the United States (Manal and Nashwa, 2017).

e-Learning quality attributes: When we talk about quality in e-Learning, we assume an implicit consensus about the term quality. However, quality means much different things to e-Learning providers. Harvey and green have proposed the following set from categories:

- Exceptionality
- Perfection or consistency
- Fitness for purpose
- Adequate return
- Transformation

e-Learning quality model: The quality is a valuation of excellence and quality ability be sight and looked through

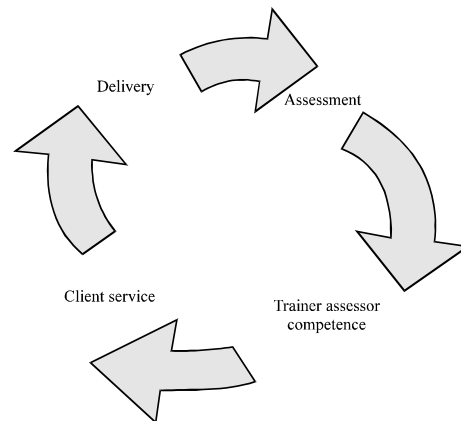


Fig. 1: Shows the four quality aspects (Reema and Dinesh, 2014)

different aspects. the important to place standards for e-Learning quality, this is a hard and complex case for there is no formal definition of data quality, for quality is dependence on the criteria application to it. Further, it is dependent on the aims, the environment, form which viewpoint. And contain of four quality sides which we consider crucial while assessing quality in e-Learning which are cohesive in other factors.

Delivery: it enable be observed that contain is the most critical component of education by the internet. The most important side of delivering the contain is the quality of the content to the client.

Assessment: This is a very important part from overall path curriculum in which the learner is assessed to his understanding in the total period of the course.

Trainer/assessor competence: Selection of a trainer or assessor plays an animated role in the successful operation of each training or course.

Client service: These days education is not limited to the border of library or schoolrooms. It has been totally converted by the interference of internet or electronic media. Figure 1 shows the four quality aspects (Reema and Dinesh, 2014).

Implementation

Research importance: The research focuses on the creation of a virtual e-Learning site and created a questionnaire for a number of second-stage students from the Mathematics Department, College of Education for Pure Sciences, Kirkuk University. To define the e-Learning system and the importance of its application to the development of education in educational institutions for developing countries.

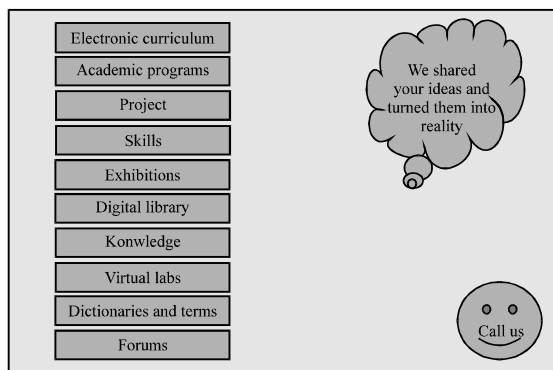


Fig. 2: An educational institution on an electronic site that has a center to teach students

Application part: The application section includes a study to demonstrate the importance of e-Learning in the development of learning and the development of creative thinking and raising the efficiency of students. In order to achieve this goal, a training program was implemented in which the method of e-Learning was implemented asynchronously through the establishment of a virtual e-Learning site. A questionnaire was prepared for the students participating in the e-Learning site. This questionnaire includes two parts of the first question about the extent to which students use the second technology on their opinion of the effectiveness of e-Learning and its applicability to universities.

Improving the educational reality by creating an alternative electronic educational medium in the case of traditional education contains in its content solutions to the problems referred to through multiple electronic links. Figure 2 shows an educational institution on an electronic site that has a center to teach students.

The modern educational process uses teaching methods that deviate from the concepts of the traditional educational process centered on the student rather than the teacher. Figure 3 shows includes information on one of the academic programs on the website.

The method of learning used is the student-centered learning method. Through this method, a learning process consisting of several levels that develops the student's educational and personal level is established. Figure 4 shows skills provided by the institution and related links to each program on the website.

The definition of all the concepts of the educational institution and its facilities and programs and the contents of the message and objectives and the message of each content program and the areas of work needed by each student program through links can be easily tracked.

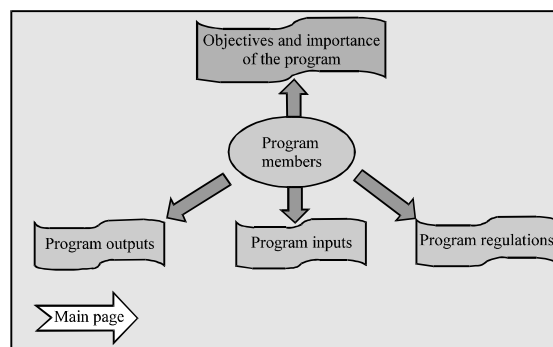


Fig. 3: Includes information on one of the academic programs on the website

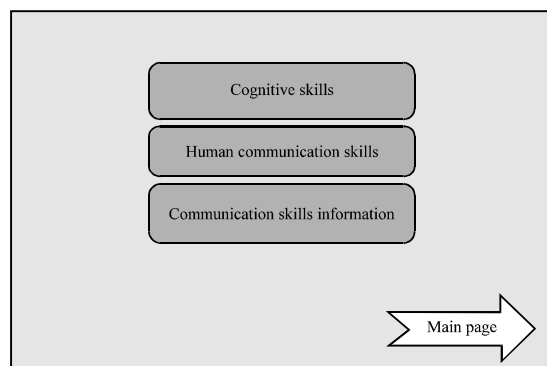


Fig. 4: Skills provided by the institution and related links to each program on the website

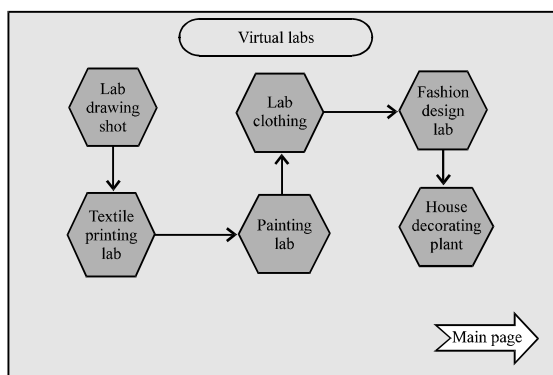


Fig. 5: The virtual labs with links to videos explaining and training, are included in each program as an alternative to halls and laboratories.

Figure 5 shows The virtual labs with links to videos explaining and training are included in each program as an alternative to halls and laboratories.

Definition of learning outcomes from knowledge and skills objectives. For each program within the educational

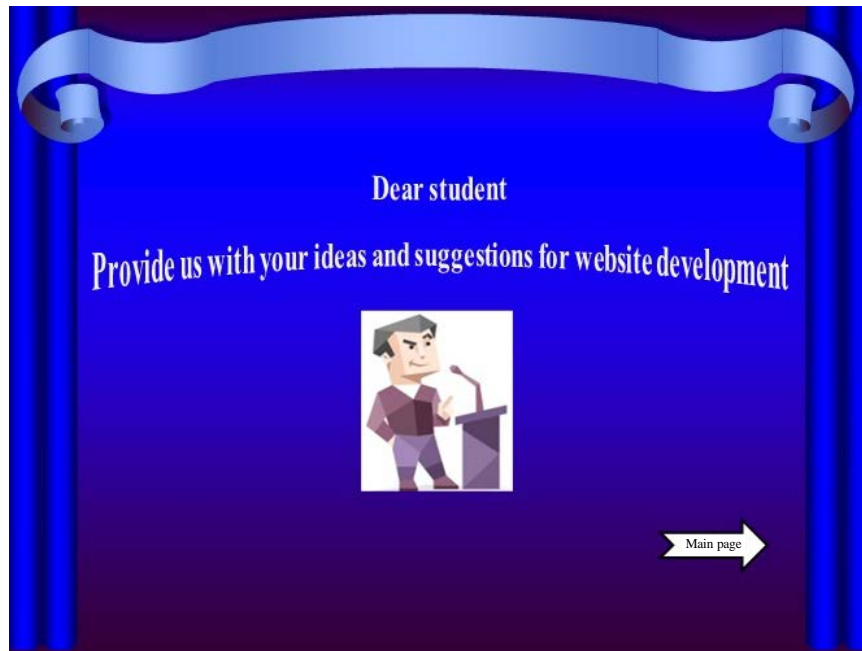


Fig. 6: Link ideas and proposals for students to develop the educational institution

institution, so that, the student can identify himself on the aspects of mental and innovative obtained during the study of the program. Reduce the number of lecture halls by replacing them or part of them with virtual halls or laboratories available on site.

Providing virtual labs with all the training techniques and means for each program, as well as each video and audio application. The establishment of all curricula in electronic form supported by all means of illustration from pictures and videos within the institution.

View the blogs of faculty members in all websites for ease of communication with teachers, whether through the educational or guidance. Links to digital libraries by specialization enable students to obtain the largest amount of knowledge from multiple sources. Providing different scientific links that serve students in their different fields and fields with the latest knowledge and technology.

Providing the site with dictionaries, glossaries and terms of specialization within the institution. Providing public dialogue forums for students who communicate and exchange ideas and dialogues with each other. Providing the site with the latest computer programs that support students to upload their files and transfer their high quality pictures and video clips. To update the site, a link is placed on which students place their innovative ideas, development work and opinions. Figure 6 shows link ideas and proposals for students to develop the educational institution.

RESULTS AND DISCUSSION

After the virtual e-learning site was created, used and interacted with by the students concerned. Questionnaire was distributed to students to express their views and ideas about e-Learning which includes two types of questions about student's use of modern technology.

Results obtained through the questionnaire: A questionnaire on the importance of using the e-Learning system in the educational process. The idea of this site in the virtual learning environment is to spread the importance and culture of e-Learning and the possibility of transition from the traditional education system. More, so, to develop creative thinking for learners and the ability to support and achieve the level and quality in the educational process and the need to take measures to increase the efficiency of students because this is the goal of the educational process. Participants classify the websites they visit as the most important to them at least. Social networking sites such as Facebook ranked first, educational sites ranked second, search engines ranked third, entertainment sites ranked fourth and news sites in the end (Table 1 and 2).

From the obtained results it is concluded that: it is clear that most students use computers as an important part of their daily lives but within a variety of frameworks that are not administratively oriented towards

Table 1: How students use technology

Do you have a computer (%)	Do you have internet (%)	The type of user connection	Time to use the internet in a day (%)	Level of internet usage (%)	Use of the internet to get (%)
Yes 53	Yes 89	Dial up 62(%)	12 h 16	Advanced 20	Learning through the internet 25
No. 47	No 113	DSL 31(%)	8 h 13	Medium 71	Informed 53
		DSL+1 Mbps %7	5 h 36	Weaks 9	Learning without a teacher 20
		DSL+2 Mbps	2 h 33	Read e-Books 2	No. 2

Table 2: Student’s view of the effectiveness of e-Learning and its applicability to universities

Form of questionnaire question	Agree (%)	Disagree (%)	Agree to some extent (%)
You want to register with e-learning	56	6	38
e-Learning is better than traditional education	33	36	31
e-Learning is more flexible than traditional education	58	6	36
e-Learning helps to raise the efficiency of students	69	6	25
e-Learning develops the components of creative thinking among students	67	11	22
e-Learning aims to improve the quality of education to students	74	4	22
Does e-Learning help to accomplish student’s educational tasks?	69	6	25
e-Learning achieves educational communication between students	78	9	13
e-Learning should be mainstreamed at all levels of education	40	18	42

the educational aspect. They use the internet at a rate of 5 and 2 h a day at close rates but are not directly related to topics. A high percentage of inefficient phone calls are used in e-Learning because we need a strong network. The questionnaire process achieved its goal through the majority of students through the approval rate. The 74% of the e-Learning process improves the quality of education among the students and 69% helps e-Learning in accomplishing the tasks and educational duties easily and flexibly among the students and 78% e-Learning provides educational and cultural communication between the students on the one hand and with the educational authority on the other. There is an optimistic view of the use of e-Learning and its application to universities. But in the case of current universities, we cannot apply this education.

CONCLUSION

In conclusion with respect to the rapid development of information technology, the growth of knowledge at a large rate in the world is living a great scientific and technological revolution has had an impact on various aspects of life and education. However, there exist the lacks of adequate educational institutions as well as the need to take advantage of technological developments in education.

This e-Learning process is based on a relatively small sample of students who are in the e-Learning database and are already interested in e-Learning activity. This sample is characterized by their knowledge of various e-Learning applications in all countries of e-Learning. Relatively few rely on comprehensive learning management systems, most of which rely primarily on the use of the web to access information and on e-mail to communicate with colleagues and students. This confirms that e-Learning is in its infancy but the evidence obtained from participants in this virtual e-Learning experience is a questionnaire. There was great enthusiasm to take advantage of the provision and support of the educational process through the application of the e-Learning system quality and quality specific universities.

RECOMMENDATIONS

The most important challenge that needs to be addressed is to determine the optimal e-Learning for different groups of disciplines in universities. With different levels of infrastructure and training levels. Finally, developing the appropriate levels of experience in e-Learning design are the most important factors requiring attention. As well as holding meetings and conferences to introduce the importance of e-Learning and support for the educational process. If we want to succeed, we must focus together on a wide use of the potential of communication and information technology. To take advantage of these experiences to reach e-Learning and the possibility of applying it in the future.

REFERENCES

Arkorful, V. and N. Abaidoo, 2014. The role of e-learning, the advantages and disadvantages of its adoption in higher education. *Int. J. Educ. Res.*, 2: 397-410.

Auta, I., 2007. E-learning standards. *Inf. Economica*, 41: 88-91.

El-Seoud, S., I. Taj-Eddin, N. Seddiek, P. Ghenghesh and M. El-Khouly, 2014. The impact of E-learning on egyptian higher education and its effect on learners Motivation: A case study. *Comput. Sci. Inf. Technol.*, 2: 179-187.

Filippova, T., 2015. Priority fields of E-learning development in Russia. *Procedia Soc. Behav. Sci.*, 206: 348-353.

- Hogan, R. and A. Kedrayate, 2010. e-Learning: A survival strategy for developing countries. Proceednigs of the 11th Annual International Conference on Sir Arthur Lewis Institute of Social and Economic Studies, March 24-26, 2010, University of the West Indies, Trinidad and Tobago, pp: 1-17.
- Hussein, Z., 2017. Leading to intention: The role of attitude in relation to technology acceptance model in E-learning. *Procedia Comput. Sci.*, 105: 159-164.
- Jethro, O.O., A.M. Grace and A.K. Thomas, 2012. E-learning and its effects on teaching and learning in a global age. *Intl. J. Acad. Res. Bus. Soc. Sci.*, 2: 203-210.
- Manal, A. and A.A. Nashwa, 2017. E-learning Standards. In: *Communication, Management and Information Technology*, Alencar, M.S. (Ed.). CRC Press, Boca Raton, F lorida, USA., ISBN:9781498779456, pp: 639-648.
- Moustafa, B., 2005. Geoinformatics e-Learning in Egypt. *Virtual Acad. Cairo, Egypt*, 1: 16-21.
- Pande, D., V.M. Wadhai and V.M. Thakare, 2016. E-learning system and higher education. *Intl. J. Comput. Sci. Mob. Comput.*, 5: 274-280.
- Reema, A. and K.D. Dinesh, 2014. E-learning quality criteria and aspects. *Intl. J. Comput. Trends Technol.*, 12: 90-93.
- Songkram, N., 2015. e-Learning system in virtual learning environment to develop creative thinking for learners in higher education. *Procedia Soc. Behav. Sci.*, 174: 674-679.
- Yanuschik, O.V., E.G. Pakhomova and K. Batbold, 2015. E-learning as a way to improve the quality of educational for international students. *Procedia Soc. Behav. Sci.*, 215: 147-155.