The Importance of E-Learning in the Teaching Processor Secondary Schools/Review Article

Karwan Jacksi¹, Maryam A. Sulaiman², Rezgar Hasan Saeed³
¹,²,³Computer Science Department, University of Zakho, Kurdistan Region, Iraq

ABSTRACT

This study explores the usefulness of e-learning in teaching in secondary institutions. The topic of using new information and communication technology for teaching and learning is very relevant in secondary education institutions. Henceforth, Students can manage the most recent Technologies better. In addition, the School must play an important role to give instructional classes to the teacher to build up their aptitudes on the utilization of present-day advancements and to encourage downloading E-educational module from the service's site. However, still there are deterrents with the application: First, right off the bat the substance of the educational programs is not perfect with E-learning. Second, shortcoming of the mechanical framework important for the foundation of the E-learning framework in general optional school. Third, low attention to understudies and educators about the significance of E-learning and absence of sufficient capability for chiefs and instructors where instructors experience issues in tolerating this kind of Education. This paper examines the concept and the description of e-learning as presented by different researchers, the role that e-learning plays in secondary education institutions in relation to teaching and learning processes, and the advantages and disadvantages of adopting and implementing it.

Keywords: E-government, high school, E-Learning, secondary education, e-learning systems.

1. Introduction

The Information and Communication Technology (ICT) made profound impacts in biography. Yet at the same time the correspondence style in most government parts is still toward the starting advances [1]. E-learning is a field which is used significantly in E-government. Along these lines, the pattern is to move towards the E-government framework to defeat the issues of customary style. From now on, electronic learning is an integral component of optional stage training [1][2]. This method handles the learning style and correspondence between educators on one side and under-studies on the opposite side in schools and continues to observe their exercises in the middle of the year" should not be seen as an end in itself, as is often the case today.

Modern research in educational processes shows that the highest educational goals cannot be achieved without the active participation of the student for example, by allocation of marks for participation can (but doesn’t always) increase participation[3]. E-learning is a suitable tool and the most desirable path to developing a society that is socially, financially, politically and deeply capable of conquering states of backward stagnation and dependency that are open to the development and prosperity of political and monetary independence and the reception of rational arrangements as a cause for improvement [4][5]. Secondary E-learn is of particular importance within the Saudi educational system. It is the middle stage of basic education and the stage of higher and university education. It plays a dual role preparing students for practical life and continuing to higher education [4] [6].

Despite the great attention paid by the state to the public secondary school and its efforts on the schools of previous years this stage still suffers from a set of complex problems that stem from within the educational system itself and others from the Saudi social context [7] [8] [9].

People find that the enforcement of schools for E-learning is flexible in the study where education can be at anytime and anywhere and the speed of the educational process is speeding up access to
information if anyone has computer skills. On the other side, the payment issue is important where it is possible to combat E-learning phenomenon of private lessons as it allows the student to repeat the lesson several times easily and to give the student the possibility of modification and modernization of the curriculum [10].

It is possible to create e-learning courses using ideas and suggestions in these types of courses to assist students with e-learning techniques [10]. Nowadays the world is living in the technological era of rapid advances and improvements arising from scientific developments.

The use of technology and the advent of computers and the World Wide Web, the Internet, have a significant influence on transmitting and stimulating positive energy to students. The classroom is a distinctive collaborative learning atmosphere that helps students improve critical thought, problemsolving, and teamwork in a team spirit,[11].

The value of secondary education institutions is required in order to benefit from rapid technological developments in the provision of education that prepares individuals and society for a dependent age. The mind of microelectronics and computer requires the person to be a permanent learner and teacher due to the renewed awareness of humanity and information so quickly traditional teaching models [14] [15].

The student is the focus of the process and it is no longer acceptable to have a negative role limited to receiving orders and implementing them in a manner mechanism without thought or effective participation [12].

The teacher has no longer the absolute authority, he only takes the decisions related to the teaching process [14]. Despite the fact that many educators call for the need to modernize and develop secondary education and the introduction of informatics and the provision of schools computers and the Internet while, the reader of the situation current world of secondary education dominated by phrases in most of them are not clearly linked to the pace of technological development and keeping abreast of contemporary global changes [13]. Hence, the researcher feels the need to adopt the E-learning model which is increasing its role with the increasing volume of information which should take place appropriate in the movement of development and renewal of education because the success in the use of Internet capabilities of E-learning in secondary education will move its institutions from the level of rigid imitation to the high technical level which is suitable for the rapid developments in this era with flexibility and efficiency to overcome deficiencies in the education system traditional current[14] [15].

To keep pace with this development and scientific and technological progress and to achieve the objectives of the process educational methods had to be improved and the development of teaching methods and finding appropriate new ways focusing on the needs and tendencies of students and suit the requirements of this age and these methods and E-learning methods which is a new method of education as it is considered an educational system to provide educational or teaching programs for learners or trainees at anytime and anywhere using interactive ICT to provide an educational environment interactive multi-source method synchronized in the classroom or asynchronous without commitment based on self-education and interaction between the learner and the teacher[3] [16].

2. Research Importance
The importance of using E-learning in general secondary education in order to achieve progress that
benefits students both inside and outside the school environment and in order to cope with the challenges and changes witnessed in the 21st century. Emphasize the importance of e-learning in the face of the problem of lessons students of general secondary education as the communication tools allow every student the opportunity to make a statement in any place and without embarrassment unlike traditional classrooms and help families to save a lot of expenses. The beneficiary groups of this study are expected to benefit from this study the following channels:
- Policy makers of secondary education.
- High school principals, teachers and students.
- Researchers are the field of irrigation in general.

3. Literature Review
A. Nassuora [7] E-learning is commonly well-defined as learning process through electronic machines such as personal computers, mobile devices, tablets and removable storages (USB, CD, DVD, etc.), which showed up in the Eighties as a competitor to traditional face-to-face. Recently the technology development and the growing education by technology in time Create a challenge for educators and this showing the educational process it is in developments progressively.

M. L. Cheok & et. al. [21] mentioned in these paper that the E-learning system is actualized and tried in the education framework in secondary school on the students of first and second year for the subject Informatics. We assess normal review on the students in 9 classes when utilizing on the E-learning system. The outcomes acquired from the general testing when utilizing the framework E-school are prepared with measurable information examination.

From this investigation, (S. Tosheva & et al.) [17] they presumed that the mean accomplishment in subject Informatics for understudies is better subsequent to utilizing of E-educational system, they carried out the E-learning system in Blended Learning Environment (BLE) and the E-learning system in Virtual Learning Environment (VLE).

(N. Songkram et al.) [18] they tried frameworks by 240 education understudies classified in three noteworthy orders including well-being science and innovation and sociologists and social science. The frameworks were endorsed by the professionals. The outcomes demonstrated that the frameworks have to comprise of four center components: input, processing, yield, and criticism, show the plan and assessment of a versatile wise and most critical an individualized smart coaching framework (ITS) in view of the psychological attributes of the individual student.

The TECH8 demonstrate introduced is structured separately in light of a framework for gathering a scope of data and factors which are indispensable for the educating procedure. Arranged similar framework underpins separation in light of it, there will be very well perhaps adjusted to every individually dimension that learning plus comprehension got that topics. TECH8 frameworks were assessed by genuine education condition. Assessment test that token by examination comprises of 117 understudies in five schoolings[3] .In [12] were set up in three unique routes in connection to Visual– Auditory– Kinesthetic (VAK) education way for one topic of likelihood unit. These were proper for auxiliary institute science educational module. At that point, they were exchanged into the advanced condition. Every understudy may pursue an alternate course, and the arrangement bolsters he will get may likewise contrast featuring the individual learning.

The example of the examination comprises of 81 tenth grade understudies from two secondary schools in Trabzon, Turkey [19].Recognize the effect of a diversion based learning (GBL) application utilizing PC innovations on understudy commitment in optional school science classrooms. The writing uncovers that regular Science showing methods (instructor focused address and instructing) which encourage repetition learning among understudies,
are one of the significant worries in Pakistan Education framework[13].

Al-Mabrik [20]：“E-Learning: Developing a Method Lecture in university education using E-learning with a proposed model” Objectives of the study: The researcher aimed at developing the lecture through modern educational methods focusing on the Internet and in a way that makes the learning process participatory and thus eliminate The disadvantages of individual learning that causes the student to isolate him from his colleagues. The researcher has reached Develop a proposed English language learning module for students with the following skills: writing, Reading, listening, and conversation.

Study (Utumporn Jamornmann)[21] entitled: “Techniques for Assessing Students’ eLearning Achievement”. He said that the objectives of the study are: the aim of this study was to define E-learning (virtual) and to identify the most important his terms such as electronically learner electronically teacher electronic school and library electronic and E-book and the study aims to identify this type of education as a challenge facing developing countries after becoming commonplace in developed countries and industrial.

Hind Al-Khalifa and etc. al [22] entitled: “The Evolution of Metadata from Standards to Semantics in E-Learning Applications”. The study aimed to identify the role that E-learning can play in distance education systems: computer or Internet training, performance support systems on the computer the Internet virtual asynchronous classes.

Study (Yousef Al Horr and etc. al)[23] entitled "E-learning a technique and a pioneering way". The study aimed to identify:
- What is E-learning?
- The characteristics of E-learning.
- The most important obstacles facing its application in the Arab region.

4. The Effects of E-learning on the Secondary Education

This study deals with the advantages and disadvantages of the traditional suffer by continually from being a slow processing, in which: Admins, Lecturers and Students. The research problem stems from understanding the problem of the E-learning stage in the world to become parallel to school education. In light of the traditional education and the society entering the age of information technology it was necessary to find a new type of education that contributes to the development of the educational system. It is good to eliminate the problem of secondary learning lessons.

The current study answers the following questions:
Q1: What is the concept of E-learning?
Q2: What intellectual and philosophical frameworks on which the E-learning system is based?
Q3: What are the underlying causes of the problem of secondary school education lessons?
Q4: What are the requirements of early E-learning to face the problem of secondary school education lessons?

5. Characteristics of E-learning

Electronic education involves the provision of digital multimedia content (texts) Written or spoken sound effects written drawings of all kinds of drawings Charts, illustrations, etc., animations, images Animation, still images, video clips and educational content is designed on the body of small learning units or sections of knowledge and skills can be learned in time Usually ranging from two to fifteen minutes and each section represents an existing idea the same. Each section is called the educational section and these sections together form content the E-lesson as the content of the lessons together is the content of the electronic course [12] [24].

This learning content is provided to the learner through multimedia on the computer and its networks in the sense that this content can be provided as a computer-based media is called E-learning Computer that employs these media to deliver content through
computer-based learning Based Learning and Network-based media is called E-learning Network Based on these learning methods. E-learning is flexible learning method which allows the learner to learn at the same time he wants it in the place he prefers and at the speed that suits his scholastic ability [6] [21] [30]. The learner represents a key element in E-learning considering that his needs abilities and style learning have something to consider when designing and implementing it [25].

This instruction is run electronically providing computer-based media and networks, a number of services or tasks related to the process of managing the teaching, learning process which benefit both the learner and the teacher also the educational institution [26].

The most prominent of these services are the admission and registration of students in the study systems that adopt E-learning as a pattern as well as the issuance of their graduation certificates. After that Follow-up students during learning and provide all information and data on their progress Study[15] [10]. Also it is important to Assign duties and send them to the learner and determine the date of delivery, correction and comment, and provide information about teachers such as E-mail addresses CV about them[27].

Another characteristic of E-Learning is the management of tests where these media are used in the construction of tests development application to learner's correction and monitoring of results and it’s Declaration, provide information on the school calendar and study schedules, and evaluation of electronic courses by learners teachers or educational institution [27] [28].

6. The importance of E-learning

There are many benefits of E-learning that will replace traditional methods of education.

- It reduces costs, as there is no need for a private establishment or new classrooms to do courses and seminars, and there is no need to go to an educational facility that reduces mobility costs[1].
- Is available to all individuals and different age groups, where people of all ages can take advantage of courses offered online and gain useful skills without the restrictions of traditional schools.
- It is flexible, especially since there are no time-related links, so people can learn at any time according to the right time.
- Increase learning and reduce time loss. The idea of interactions between students and the loss of time during chat and questions is eliminated. The amount of learning that the individual learns increases without any drawbacks [6] [12].
- Provides a neutral and structured education, where students have the same learning content, impartially evaluates tests, and accurately tracks each student's achievements and records her activities on the network.
- It is environmentally friendly, as there is no need to use papers, pens and other materials that may harm the environment when disposed of [29] [2].

7. Objectives E-learning

To talk about the goals of e-learning, we must address the reasons that led to the orientation towards it, and it can be said that there are many reasons that made the orientation towards e-learning an imperative and indispensable. Among these reasons or goals is to create an interactive learning environment through new electronic technologies and diversity of sources of information and experience. This produce an enhanced relationship between parents and school also between the school and the external environment [33].

Supporting interactions between students, teachers, and assistants comes through the exchange of educational experiences, opinions, and discussions aimed at exchanging views using various communication channels such as email, conversation.
and virtual classes. The student gives technical skills to use of knowledge modern educational techniques and provide the student with the necessary competencies to use information and communication technology also expanding student communication through global and local communication networks, not just the teacher as a source linking the educational site with other educational sites to increase the student [28] [8] [6]. This technology gives the teacher a role in developing the educational process to keep abreast of scientific and technological developments continuous and consecutive. At the end, developing the teacher’s role in the educational process to keep pace with continuous scientific and technological developments [15].

8. Types of E-learning
Fundamentally, there are two categories of eLearning:

8.1 Synchronous E-Learning
Webs depend on learning strategies and systems are used to impart and engage exercises and examine points to the student and the educator in the meantime.
First upsides of the examination, is understudy can get from the educator on nutrition direct review of his study at the same time [30].

8.2 Asynchronous E-learning
In this type of e-learning, learner as per an arranged lecture in that he picks the occasions and possessions that case their conditions by utilizing several showing techniques for example e-Mail videos and this tutorial depend on which time the learner expends on learning the abilities which the exercise goes for. The most important disadvantages are the inability of the student Get feedback from the teacher or teacher only late or when you finish subject and platform [30] [26].

9. The pros of E-learning
Benefits that E-learning processes took in education are: classroom independence, independence of display place and maximum objectivity. This can benefit thousands of educators around the world who only have connection to Internet on their computers [18].

9.1 Benefits for Learner
That e-learning emerged to facilitate and assist the learning process of the learner and the student by facilitating the possibility of correspondence between students and the school through the ease of communication between these parties in several directions such as discussion of the council, e-mail and chat rooms [13]. It has a role in Contribution to the statement of diverse perspectives of the understudies. Virtual gatherings for example, discourse sheets and discussion places offer chances aimed at an exchange of sights in the subjects raised which increases opportunities to benefit as of views plus proposals put forward then merge to perspectives from understudy that frames a strong establishment to the student and have learning and strong and strong views through what he gained [1] [31].

Apparatuses that correspondence permit each understudy chance to explain conclusion whenever with no shame makes the student feels of parity. In contrast, conventional classes which deny them of its benefit [27] [6]. Easily reach the teacher That is, the traditional learner because the trainee is able to send his inquiries to the teacher through E-mail and these features is useful and appropriate the teacher has more to remain confined to his office [9].

Another benefit, is likelihood of different educating strategy that conceivable getting logical apparatus such that cases the student it is appropriate for the method visual and some of them fit the way audio or read and some of them suit the way the process [1]. from here, significance of various techniques for training comes by enabling the E-learning empowers the student to concentrate on vital thoughts while writing and compiling them for a lecture or lesson as well as for understudies whom experience issues thinking and sorting out undertakings the advantage
since it is organized and composed in a simple and great and components the errand is explicit. Providing
the element of time is useful and very important for both the teacher and the learner [30].
Instant access data to predetermined possession and period to Making the most of time, then it will be no compelling reason to go to library educator, prompts spare time from misfortune and additionally the instructor can shield there period in front of losing on the grounds that he can transit which that understudy requirements through [32] [2].
Taking into account individual differences and transforming learning into learning.
Therefore focus on the learner and the process of self-learning. E-learning achieves direct link to students in the educational process where the study continues and progresses based on the extent to which the student is absorbed in person according to his / her own needs and taking into account his / her own circumstances and programs the speed at which information and mental and motor skills are acquired takes on major responsibility to education on the learner which prompts the student to further integration into the educational process [30] [2].

9.2 Benefits to the Teacher
Provide the opportunity for the teacher to help each student individually and work to satisfy his wishes special. The teacher does not have to repeat the explanation because the explanation is subject to deliberation as well as exercises and tests, and take them all according to his desire and ability and does not return to the teacher except in it is difficult to understand or need to be discussed and therefore the teacher has time to prepare more software [27] [33].
Course content is dynamic and therefore the teacher can update the material at any time [10]. Transforming the teacher into a guide helps to focus on the skills needed by the student it helps him to understand himself and assess his needs and identify his learning goals and then guide him to how to develop his skills and overcome his weaknesses [17].
E-learning provides the teacher with a greater opportunity to develop capacities other than teaching within the study hall and gives him new prospects in order to develop his dealing skills. Modern technology and interpersonal communication skills are further enhanced skills of program design and other skills [28] [27] [14].

9.3 Advantages of E-learning Institutions
Easy and quick access to materials, information and educational curricula through the network the internal school or the internet connects a group of schools and provide for the costs of books publications and papers and to use these financial resources in matters other supporting the educational process and enhancing and modernizing hardware, software and tools [1].
The possibility of amendment and immediate update of the curriculum and the dissemination of these amendments to all students and teachers. Immediate for students and direct discussions between teachers’ students’ students or colleagues or between teachers themselves with conduct tests across networks and evaluate their results electronically and automatically, access to a large amount of modern information and data through multiple networks especially the Internet [2] [4] [9].

10. Teachers and E-learning
There are situations where electronic guidance comprises of addresses posted on the web, yet these are bad instances of E-learning. The instructor’s job in E-learning is to be a facilitator, ensuring that understudies are occupied with moving in the direction of learning objectives. Instructors can construct compatibility with understudies by meeting with them face-to-face or dealing with an individual premise toward the begin and also can energize E-students by tending to criticism to them by name and guide them in finding their very own answers [32].
Ensure understudies are investing their energy adequately not investing an unbalanced measure of
time in assignments however working proficiently toward the course or undertaking destinations [8] [27]. Separation classes into talk gatherings. In excess of six individuals in a gathering will in general separate something like one part. Less will in general close down the gathering in the occasion two individual’s end up inaccessible [25].

Expect people to distinguish their exchange posts plainly. Additionally, expect gatherings to abridge their gathering discourses so understudies don't have to peruse each posting.

Most importantly instructors must have the capacity to advance effective association amid E-learning [24] [34].

11. Research results

The function and importance of e-learning, especially for secondary schools, was explained in this study by studying previous studies in the field of e-learning and developing electronic systems for the education system. The following points should be taken into account in order to improve the electronic learning system:

- Statement of the concept of E-learning and Apply it in the secondary stage.
- To shed light on the vision and philosophy of E-learning and elements of E-learning system and the factors that help the success of E-learning systems and a course in the development of secondary aspiration.
- Develop requirements to activate the role of E-learning in the face of the phenomenon of students’ secondary education lessons.

12. Conclusions

In view of the health conditions that the world is going through, it is important to find new ways of learning instead of in the classroom. With the advancement of technology and research, electronic learning has become a fundamental alternative to continuing education.

This paper systematically examined the literature on e-learning systems and described some of the most important variables used in the field of research on information systems. More precisely, this paper offered insight into the origins, features and shortcomings, drawbacks and strengths of web-based learning systems.

Student variables are important variables that affect student learning, particularly in a collaborative e-learning environment, such as behaviors and attitudes, cultural backgrounds and other demographic features. It is now helpful for teachers to consider these variables in order to plan meaningful instructional exercises to facilitate the construction of student awareness and make learning more efficient and attractive. This will allow the management to achieve the most successful implementation of this system and also allow them to strengthen their strategic decision-making on technology in the future. They will decide on the best solution for their students before introducing any new technology.

13. References

