



The Role of E-Learning, It's Advantages And Disadvantages of Adoption In Higher-Education

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ABSTRACT

This study looks into the efficiency of e-learning as a teaching tool in post-secondary settings. It involves connecting contemporary information and communication through technology for teaching and learning in higher education institutions. By analyzing significant contributions made by various academics and institutions on the notion of e-learning, particularly its use in teaching and learning in higher educational institutions, this study evaluates the literature and provides a scholarly backdrop to the study. Through surveys and other observations, it reveals some opinions that individuals and institutions around the world have shared regarding the adoption and integration of e-learning technology in education. It examines various researchers' views of what e-learning is, what role it plays in higher educational institutions with regard to teaching and learning processes, and the advantages and disadvantages of its adoption and implementation.

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1. The Ideas and Terms of E-Learning

For both teachers and students to share and gain information, the Internet has emerged as one of the most important sources of research and learning tools. Technology-based e-learning includes using the Internet and other significant technologies to create learning resources, instruct students, and manage courses inside an enterprise (Fry, 2001). A consensus meaning of the word “e-learning” has been the subject of heated discussion. According to Dublin (2003), current definitions frequently show the researchers' areas of expertise and passion. The concept of e-learning encompasses a variety of applications, instructional strategies, and procedures. As a result, it is challenging to come up with a definition that is widely accepted for the term “e-learning,” and according to Oblinger et. al. (2005) and Dublin (2003), there is even no common definition for the term-e-learning.

Dublin (2003) attempted to find a consistent definition of the term “e-learning,” however Holmes et. al. (2006) noted that there may be as many meanings of the term as there are academic articles on the issue. For better clarity and consistency and to identify a framework to define e-learning, he posed these questions: Is there online coursework available to students at an expense? Does that entail employing a virtual classroom to support the delivery of on-campus instruction? Does it make reference to a technology used online to extend, enrich, and improve collaboration? or is it all online or a combination of online and offline learning?

Several definitions of e-learning include elements other than the provision of entirely online courses. Oblinger et. al. (2005), for instance, pointed out that e-learning has evolved from a fully online course to leveraging technology to provide part or all of a course independent of a set time and place. Also, according to the European Commission (2001), e-learning is the use of new multimedia technologies and the Internet to improve learning quality by facilitating remote exchanges and collaboration. Another key benefit of e-learning is flexibility, which gives students the freedom to attend classes whenever and wherever they choose. Additionally, e-learning supports a wide range of learning strategies by utilising the interactive content that is readily available online (Songkram et al., 2015). The ease of access to technology and the extensive nature of the Internet have increased demand for web-based education. Distance learning is a rapidly developing environment that gives users the freedom to work outside of time and space constraints. Online learning is defined as learning that occurs entirely or in part online in higher education (Gilbert, 2015). Many students can benefit from online learning, which is becoming more popular in settings ranging from elementary schools to high schools to post-secondary education.

Online education involves using electronic devices that students could access, such as smartphones, laptops, and PCs, to carry out the pedagogical activities.

Singh and Thurman (2019) claim that virtual education delivered online creates a platform that makes

the educational process easier by making it more adaptable, imaginative, and student-centred. Making education available to anybody with an internet connection and more affordable for students in remote and rural locations can enhance equality.

E-learning is the process of accessing online learning and teaching resources via the use of information and communication technologies. E-learning is broadly defined by Abbad et al. (2009) as any learning that is enabled electronically. But they expanded the meaning of this phrase by defining it as learning that is supported by the use of digital technology. Other scholars have further defined this term to mean just learning that is web-based or internet-enabled (Keller et al. 2002; LaRose et al., 1998).

The word “e-learning” is used in a variety of contexts, including dispersed learning, online-distance learning, and hybrid learning, according to Maltz et al. (2005). E-learning, the use of information and communication technology, is described by OECD (2005) as various educational methods to promote and improve learning in higher education institutions. It incorporates the addition of information and communication technology to traditional classrooms, online education, or a combination of the two. According to Wentling et al. (2004), the phrase “e-learning” refers to the acquisition and application of information distributed and assisted by electronic tools.

For now, e-learning relies on computers and networks, but it may eventually advance to systems made up of a range of channels like wireless and satellite, as well as technology like cellular phones. According to Liu and Wang's (2009) review of the literature on definitions of e-learning, the internet, global sharing and learning resources, information broadcasts and knowledge flow through network courses, and flexibility of learning as a computer-generated environment for learning, created to overcome issues of distance and time are the main features of the e-learning process. According to Gotschall (2000), the idea of e-learning is founded on distance learning, which entails the transmission of lectures to far-off places by way of video presentations. Liu and Wang (2009), however claim that the progression of communications technologies, particularly the internet, did transform distance learning into e-learning.

Some studies described e-learning as a revolutionary strategy to equip the workforce with the information and skills necessary to transform the change into the benefit. Jennex (2005), Twigg (2002), for example, described the e-learning strategy as being focused on the learner as well as the system's design that is an interactive, repetitive, self-paced, and customizable. The phrase was also known as the utilization of computer networks, according to Welsh et al. (2007). Information and instructions are given to people using technology, mostly the internet.

E-learning was defined by Liaw et al (2003) using summaries of its attributes. They initially suggested a multimodal environment. Second, they included various types of information. Third, collaborative communication was supported by e-learning platforms, giving users complete control over their learning environments. Next, e-learning supported networks for information access. Last but not least, e-learning enabled systems to be freely implemented on a range of computer operating systems.

According to Tao et al. (2006), this new learning environment focused on electronic networks has enabled university students to obtain customized support and to have distinct schedules for learning that are more suited to them than those of other students. This allows for greater contact and cooperation between teachers and students than in a conventional setting for education. Academic e-learning is characterized by the usage of multimedia tools to improve learning by making it more engaging, entertaining, and fun (Liaw et al., 2007). The key elements that have made online learning the most promising educational technology are service, cost, both speed and quality, according to Liaw et al. (2007) and Hammer and Champy (2001). It is clear that e-learning can enable students at higher educational levels to further their education while pursuing personal goals and keeping their professions without having to adhere to a strict timetable (Borstorff (2007). According to Kartha (2006), who supported this idea, the number of online courses has sharply expanded as a result of the gains made by both students and universities.

Algahtani (2011) categorized the definitions of e-learning from three different perspectives in his assessment of the efficacy of the e-learning experience in Saudi Arabia. These perspectives were technological (Wentling et al. (2000); Nichols (2003)), distance learning (Perraton (2002); Alarifi (2003); Holmes et al. (2006), and e-learning as pedagogy (Khan, 2005; Schank, 2000).

So, it can be inferred from the foregoing description that it is challenging to come up with a universal definition of e-learning. Some authors define e-learning as merely offering fully online courses, whereas others define it as offering web-enhanced and web-dependent services for the delivery of educational and support procedures. 2. Types of E-learning

Many e-learning categories can be grouped in a variety of ways. Certain categories are based on the degree of their involvement in education, claims Algahtani (2011).

Moreover, some classifications take interaction timing into account. Computer-based and internet-based e-learning are the two main categories into which Algahtani (2011) splits e-learning.

Algahtani (2011) claims that computer-based learning entails using the full range of software and hardware that

are typically available for the use of information and communication technology. Additionally, each component can be used in one of two ways: computer-managed instruction or computer-assisted learning.

Yet, in computer-managed teaching, computers are used to store and retrieve data to support the management of education.

According to Almosa (2001), internet-based learning is an advancement over computer-based learning. It makes content available online and provides ready access to links to related knowledge sources, such as e-mail services and references, that students can use whenever and wherever they choose, regardless of the presence or absence of teachers or instructors (Almosa, 2001). Timeun (2008) divided this into these categories: helper mode, mixed or blended more frequently, and fully online mode. When necessary, the helper mode augments the conventional approach. A short-term degree for a somewhat conventional technique is offered in mixed or blended mode. The most complete enhancement is the fully online mode, which entails utilizing the network just for educational purposes.

According to Algahtani (2011), fully online mode can be either “synchronous” or “asynchronous” depending on how the time of interactions is applied. The asynchronous time allows all participants to post communications to any other participant over the internet while the synchronous timing alternates between teachers or instructors and learners or between learners and teachers. With the help of tools like video conferences and chat rooms, synchronous learning enables students to converse simultaneously online with their professors and with one another. According to Almosa and Almubarak (2005), this style has the benefit of immediate feedback.

Also, the asynchronous mode enables online discussions between students and lecturers or teachers at various times. As a result, interaction occurs later using tools like emails and thread discussions (Almosa and Almubarak, 2005; Algahtani, 2011), which has the advantage of allowing students to learn whenever it is convenient for them but the disadvantage of preventing them from getting immediate feedback from teachers and fellow students.

2. E-learning's Role in Education

The traditional teaching process has undergone significant modifications as a result of the development of multimedia and information technologies as well as the usage of the Internet as a new method of instruction, Wang et al. (2007). According to Yanget. al. (1999), the advancement of information technology has increased the options available for modern education. E-learning has been acknowledged as having the potential to improve people, knowledge, skills,

and performance in schools and educational institutions. In a rapidly expanding cyber education market, colleges, universities, and other institutions of higher learning compete to increase their online course competence, according to Loveet. al. (2006). E-learning is becoming more and more significant in higher education institutions. The introduction and expansion of a range of e-learning tools have been initiating several changes in higher education institutions, particularly when it comes to their educational delivery and support processes (Dublin, 2003).

There are numerous ways to use e-learning in the classroom, just as there are various forms of it. Algahtani (2011) identified three different models for utilizing e-learning in education, including “adjunct, blended e-learning, and online,” in his study of the effectiveness and experience of e-learning in Saudi Arabia. This is a description of the three uses for e-learning technologies that Algahtani (2011) identified.

The use of e-learning as an adjunct in a traditional classroom to help students or learners gain some degree of independence is known as adjunct e-learning.

Algahtani (2011) and Zeitoun (2008) described blended e-learning as a method of using e-learning in which traditional learning methods and e-learning methods are used in tandem in the classroom to offer course contents and explanations. The third option, which is online, excludes involvement in traditional classroom settings. As much independence for the students or learners as possible is achieved in this sort of use of e-learning Algahtani (2011); Zeitoun(2008). Further explaining how the online model is partitioned, Zeitoun (2008) divided it between solo and group learning, with group learning including both synchronous and asynchronous learning.

3. The Benefits and Drawbacks of Implementing E-learning in Higher Education

Given its many benefits and advantages, e-learning is regarded as one of the most effective methods of instruction, especially in higher education institutions. Greatest educational techniques, benefits and advantages have been offered by numerous studies and authors, as a result of e-learning technologies' use in classrooms (Klein and Ware, 2003; Algahtani (2011), Hameed (2008), Marc (2002), Wentling et al. (2000), and Nichols (2003)).

According to certain studies, e-learning's advantage is its capacity to concentrate on the requirements of specific learners. For instance, Marc (2000) noted in his book review on e-learning strategies for imparting knowledge in the digital age that one benefit of e-learning in education is that it places more emphasis on the needs of individual students as a crucial element in the educational process than on the

needs of teachers or educational institutions. According to a review of the literature, some benefits of e-learning adoption in education include the following:

- (A) When location and timing considerations are made, it is adaptable. Every student enjoys the flexibility of selecting the location and time that work best for them. Smedley (2010) claims that the adoption of e-learning gives institutions and their students or learners a great deal of freedom when it comes to the timing and location of information delivery or receipt for learning purposes.
- (B) E-learning increases the effectiveness of knowledge and credentials by making it simple to access a vast amount of material.
- (C) By utilizing discussion forums, it can give students the opportunity to develop stronger bonds amongst themselves. With this, e-learning aids in the removal of obstacles that may prevent participation, such as anxiety about interacting with other students. Students are inspired by e-learning to communicate with one another, exchange ideas, and respect opposing viewpoints. E-learning facilitates communication and enhances the bonds that support learning.

According to Wagner et al. (2008), e-learning offers more opportunities for interaction between students and teachers while delivering content.

- (D) The absence of travel expenses for students and learners makes e-learning more affordable. Also, it saves money by providing the greatest number of students with learning opportunities.
- (E) E-learning constantly takes into account the specific needs of each student. Some students, for instance, choose to focus on a particular course material, while others are ready to review the complete course.
- (F) E-learning compensates for shortage of academic staff, such as teachers, facilitators, lab technicians, and others.
- (G) Self-pacing is possible with e-learning. For instance, the asynchronous approach allows learners to study at their own pace, whether it is fast or slow. Hence, there is reduction in stress and a rise in contentment. (Codone, (2001); Amer (2007); Urdan et al. (2000); Marc (2002).

Holmes et al. (2006) summarized the aforementioned benefits of e-learning by saying that it can evaluate students or learners as they study while also enhancing their educational experiences through appropriate levels of involvement. Globalization, cultural variety, and the eradication of time and space borders are all related to community education. They view e-learning's focus on students or learners as its most important feature and key benefit in education.

According to Raba (2005), learning objectives can be achieved with e-learning in the least amount of time and

with the least amount of work. Both students and teachers are able to keep up the development.

E-learning also assists in preparing society for international communication and intercultural debate. Zeitoun (2008); Algahtani (2011), however, assert that the potential advantages of e-learning if used and implemented properly, will be greater than those of conventional learning. Several authors, including Zhang et al. (2006) and Judahil et al. (2007), discussed the benefits of e-learning from the viewpoint of the learners or students. According to Zhang et al. (2006), e-learning allows exploration of much flexible learning ways with a much reduced need for travel to go to classes. According to Hemsley (2002), both full-time and part-time students can participate in their degree programs of choice from any location by incorporating e-learning technologies for delivery of content. This helps in reducing relocation or travel. Also, the adoption and implementation of e-learning give disabled persons the opportunity to enhance their education from any location, according to Sadler-Smith (2000) and Brown et al. (2001).

3.1. Disadvantages of E-learning

Despite so many advantages, e-learning has certain disadvantages when adopted in education. Researchers Collins et al. (1997); Klein et al. (2003); Hameed et al. (2008); Almosa (2002); Akkoyuklu et al. (2006); Lewis (2000); Scott et al. (1999) support the claim that e-learning has some drawbacks. For instance, Dowling et al. (2003) contend that making learning materials available online only enhances learning outcomes for certain types of group assessments. Mayes (2002) also questioned if e-learning is more than just a supplement to traditional teaching techniques.

The most obvious criticism of e-learning is the total lack of crucial personal connections, not just between students and instructors but also between students of different classes. Notwithstanding all of e-learning's drawbacks, Almosa (2002) asserts that there are numerous advantages that encourage its implementation and also promotes the idea of looking for solutions to lessen its drawbacks. The following are some of the drawbacks of online learning that studies have identified:

E-learning as a teaching approach helps learners experience, reflect, and learn distantly, without personal interaction or relationship. Hence, a very powerful WIIFM is necessary, along with a commitment to complete the course within the timeline. Failure to comply may lead to fewer impacts.

The e-learning program offers clarifications, explanations, and interpretations. This method may not be as effective as conventional teaching methods, where face-to-face interactions with the instructors or tutors make the session more personal.

It will be difficult to control or regulate negative behaviours like cheating in exams and assessments through learning as they may get completed through a proxy.

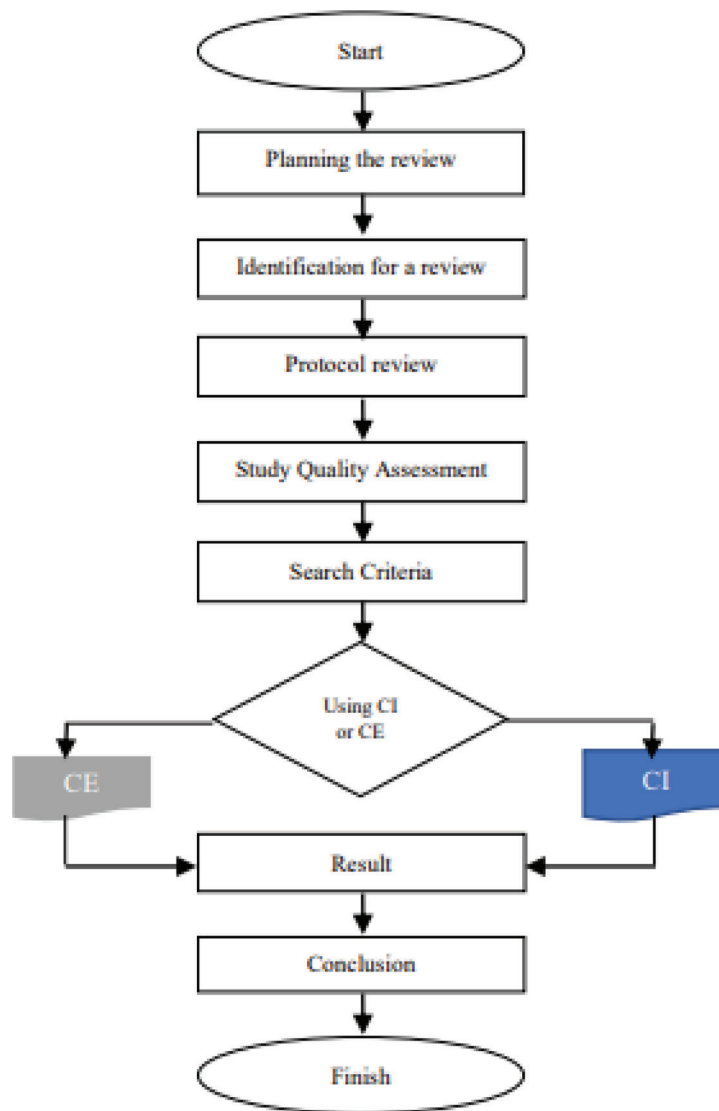
4. Research Methods

A systematic literature review, or SLR, is the research methodology used to study journals.

In order to generate a list of recommendations [40], this research consists of a literature review that focuses on related

research in the field of e-learning research. It examines peer-reviewed journal articles, books, research papers, general viewers, case studies, and conceptual papers by adhering to the guidelines for conducting a literature review[37][38][39].

The goal of the review process is to identify the need for review, conduct the review, develop a review protocol, evaluate the review protocol, conduct the review (identifying research, choosing primary research, assessing study quality, data extraction and monitoring, and data synthesis), and report reviews (determining deployment mechanisms, formatting master reports, and evaluating reports.)



Flow Procedure of Research Methods.

5. Results

Table 1 displays demographic information. According to the data, there are an equal number of students—50%

male and 50% female. The age range of 20 to 22 years comprised the majority of the study sample (43%), followed by 23 to 25 years (24%), 17 to 19 years (15%), and 26 to 28 years (8%).

Table 1: Demographics

Variables	Frequency	Percentage
Gender		
Male	50	50%
Female	50	50%
Age		
17-19 years	15	15%
20-22 years	43	43%
23-25 years	24	24%
26-28 years	8	8%
Greater than 28	10	10%
Department		
Science (Engineering, Medicine, Pharmacy, IT)	69	69%
Humanity (Law, Administration, Humanities and Science, Media)	31	31%
Program		
Bachelor	93	93%
Post-graduate	7	7%
Overall Ranking of School in Learning and Development		
Acceptable	6	6%
Good	33	33%
Very Good	43	43%
Excellent	18	18%
Place of Residence		
Dubai	8	8%
Sharjah	29	29%
Ras Al Khaimah	7	7%
Ajman	56	56%

Table 2: Advantages of E-learning

Rank	Items	Agree %	Somewhat agree %	Not agree %
4	The use of computers raises the level of students' culture and skills	77	16	7
1	Provides scientific material in an interesting way	81	15	4
8	Help students in retaining information for long periods. Provides immediate and continuous feedback to the learner	71	21	8
6	Increases the learner's motivation to learn	75	20	5
7	Encourage students to participate rather than listen	72	21	7
10	Raise the level of students' achievement of the scientific subject	68	19	13
7	Helps increase student-teacher interaction	72	20	8
10	Helps in increasing student-teacher interaction	68	20	12
11	Increases students' capacity of learning	66	22	12
9	Enriches the curriculum	69	17	14
5	Students can self-learn through digital vessels such as CDs or the internet	76	16	8

Table 3: Disadvantages of E-learning

Rank	Items	Agree %	Somewhat agree %	Not agree %
2	The presence of electronic illiteracy among parents reduces their ability to follow their children electronically	70	18	21
4	Effectively affects students (radiation, electromagnetic field, obesity, etc).	66	25	9
4	Hinder technical failures in educational scientific devices	66	25	9
1	Increases students' social isolation (spends longer time in front of technology at the expense of social interaction face to face with others)	73	17	10
8	Difficulty in providing extracurricular classroom activity classes	59	24	17
9	Difficulty applying calendar methods and tools.	58	22	20

6. Conclusions General to the Review

Digital tools are used in e-learning for both teaching and learning. These modern tools help the students study wherever they are and whenever they choose. It entails instruction and delivery of teaching content and encourages students to communicate with one another, exchange ideas, and show respect from distinct perspectives. It facilitates communication and strengthens the bonds that support relationships. Despite the difficulties mentioned, the literature has attempted to clarify the role of e-learning and the significant impact it has on teaching and learning. Its adoption has improved staff and student access to information in some universities and fostered a productive environment for student collaboration, which has boosted academic standards. E-learning is the key to future learning. Teachers, administrators and students will benefit from the advantages such as reach, flexibility, cost, availability of content and overall advantages.

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