

E-Learning in Higher Education and Covid-19 Outbreak: Challenges and Opportunities

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ABSTRACT

Driven by the current circumstances of the COVID-19 outbreak, this study investigates the rise of online teaching in higher education (HE). It collects feedback from the teaching professionals regarding their opinion on E-learning experience to answer the following question: in the distinctive rise of e-learning during the covid-19 outbreak, what are the main challenges and opportunities in conducting your online teaching? This study has numerous implications related to E-learning in higher education. It provides recommendations to governments and university policy-makers in designing the policies and programs on E-learning. Furthermore, the university's top management (i.e. president, VP, dean of college and HOD) need to concentrate on the importance of enhancing education quality in their institutions during this exceptional time.

Keywords: E-Learning, Higher Education, COVID 19, Education Quality

Introduction

The global spread of COVID-19 has resulted in schools and HE institutions closure worldwide; over 1.2 billion students are out of the classroom (UNESCO report 2020). As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms. Research suggests that online learning has been shown to increase retention of information, and take less time, meaning the changes coronavirus have caused might be here to stay. Higher education is the last stage of formal education, and it is the sensitive sector in the existing society [1], [2]. To support it with qualified human resources capable of developing, making change, and achieving development therefore, the education sector must benefit from technological development.

In this critical time, research progressions must focus on inventing new approaches to accommodate the present-day changes in online learning, simplifying the process of digital transformation customizing online learning models. Also, develop an online learning model that will reduce the workload on the instructors. Online learning took a variance shape such as online education, extended learning, digital education, internet-based education, online learning, distance education, technology-based training, web-based training and computer-based training [3]. This effort supports curricula, improves conditions, and expands opportunities to benefit the largest possible group of people.

Students are also confronting and facing the various negatives that education in general and education suffer especially higher. It is among the essential modern policies and programs that have been adopted to move forward with higher education, addressing various obstacles and negatives, and supporting its programs and plans: E-learning [4].

This new type of education is based primarily on the latest findings. Information and communication technology have provided many education levels, significantly higher education among the capabilities and features drive to take significant reforms and development steps. E-learning is of utmost importance, especially nowadays during the coronavirus, as a new type of modern education based on its support with modern technologies, which coincides with the attempts Ongoing in universities to study the possibility of implementing e-learning programs. Specialists in information technology and education in the Arab world, as it is a feature of society information, which today is an indication of the level of sophistication and progress of countries.

Unlimited specialized scholars agree that the information revolution that has been translated into what is called the internet is the most important technological achievement that has been achieved. Technology eliminates distances and shortens time and makes the world more like a small electronic screen in mixing technology, media, information, culture and technology. Also, communication became

electronic and exchanged news and information between computer networks. Tangible facts allowed quick access to science and knowledge centers and libraries and to see what moment by moment [5] is new. However, any educational system's success depends mainly on its adherence to internationally agreed quality standards.

E-learning is a non-traditional educational system that enables the learner to gain scientific achievement and benefit from the educational process in all its aspects without moving to the site of study. He has an education without the need to drop out of work or abandon social attachments. E-learning is a method of education using modern communication mechanisms such as computers, networks, multimedia, and Internet portals to deliver information to learners in the fastest time and at the lowest cost in a manner that enables the educational process to be managed, controlled, and measured and evaluated by the learners' tool. With the tremendous developments taking place today, many of the concepts that govern human beings have changed. Perhaps the idea of education is the most influenced concept by the development of information and communication technology, as a large group of terms for e-learning emerged including Web CT system, Blackboard e-learning management system, Academic Suite, MOODLE e-learning management system, DOKEOS electronic learning management system and ATUTOR electronic learning management system. Therefore, this study aims to investigate the rise of online teaching and collect feedback from the professionals of education regarding their opinion from their experience of learning to answer the following question: in the distinctive rise of e-learning in the during covid-19 outbreak, what are the challenges and opportunities?

Literature Review

E-Learning is well-known just as the soonest application [6]. In today the E-learning is getting mainstream around the world. E-learning is depicted as the conveyance of learning through innovation and the web [7], [8], [9]. Practically all the colleges and universities have built up the E-learning entrance of their understudies and resources [10]. While surveying the presumptions encompassing the advanced change of, HE foundations, [3] gave five normal suppositions that are viewed as a greater number of obstructions to computerized change of HE foundations as against commitments to its acknowledgment and these suspicions are identified with (a) change, (b) pace, (c) innovation, (d) skills and (e) financing. Digitalization in HE foundations ought not to be alluded to as e-learning since internet learning is just one of the few highlights of computerized change of HE establishments. Web based learning is the instructive use of innovative gadgets, apparatuses and the web, [11] added that the diligent expansion in mechanical advancement and web openness has expanded the inspiration for internet learning since the start of the thousand years, however [12] presumed that the instructional accomplishment of web based learning is easily

proven wrong since it makes nonattendance of face relationship among students, students and teachers. [13] separated enough arranged web based taking in encounters from courses introduced online as reaction to emergency. These specialists went further to allude to online instruction during this pandemic as "crisis far off educating" in light of the fact that the last is conversely with quality or successful web based learning.

Effective online education comprises of web based educating and getting the hang of, boosting of a few exploration works, standards, models, hypotheses, morals and examination of benchmark fixations on quality online course configuration, instructing and learning [13], [14], since it has been affirmed that viable web based learning is a result of mindful plan and arranging of guidance with the utilization of coordinated model for planning and improvement of guidance [15]. The nonappearance of the careful plan and improvement measure [15], in the relocation cycle brought forth the dismissal of the contemporary online instruction experience during this pandemic as powerful online training yet rather as crisis far off educating [14], [13], [16].

Methodology

Guided by the study's unique purpose, a qualitative methodology was found to be more appropriate and the intention was to undertake a series of semi-structured interviews with several experts to ascertain the overall impact of the covid-19 outbreak on online teaching [17]. Then, collect their feedback regarding the opportunities and challenges of e-learning. It was considered necessary that scholars should meet specific requirements of having comprehensive knowledge. One question formulated by the current research was directed to allow the specialists to answer freely based on their practical experience in e-learning. Using social media, the research question has been passed to professors and their feedback collected, respectively. Data collection process implemented within one week from 15-20 December 2020.

Discussions and Results

Through the feedback gathered from specialists and professionals of higher education, the study results indicated that there are a set of benefits that represent the positive side and opportunities provided by e-learning for the educational environment. The results also indicated a set of challenges that limit the provision of the ideal form of education in order to achieve the desired goals. Below we will list the positive opportunities received from specialists and the challenges that must be faced to improve the performance of e-learning.

Opportunities

Comparing e-learning methods with traditional education methods, the fundamental advantage was overcoming space and time restrictions in the educational process. Also, expanding opportunities for admission to higher education and overcoming the obstacles of limited places and enabling higher education institutions to achieve the optimal distribution of their limited resources. Considering the individual differences between the learners and allowing them to complete the education processes in appropriate environments for them and provide according to their own abilities. They are providing the opportunity for learners to interact instantly electronically with each other on the one hand and between them and the teacher on the other side, from e-mail means, discussion groups, dialogue rooms and the like. They are spreading a culture of self-learning and training in a society, which enables the improvement and development of learners and trainees' capabilities at the lowest cost and with the least effort. Raising students' sense of equality in the distribution of opportunities in the educational process, breaking the barrier of fear and anxiety they have, and enabling students to express their ideas and search for facts and information in more effective means than what is used in traditional classrooms. Ease of access to the teacher electronically even outside the official working hours.

Reducing the administrative burdens of academic curricula through electronic means and tools to deliver information, duties and assignments to learners and evaluate their performance. Using a variety of different methods is more accurate and fair in assessing learners' performance. Enabling the student to receive the scientific material that suits his capabilities through the visual, audio, read, and so on. Providing a huge and renewable balance of scientific content, tests and teaching history for each course that can be developed, improved and increased the effectiveness of its teaching methods. Not relying on actual attendance, the student must adhere to a specific, restricted and binding schedule in group work concerning traditional education. Still, now this is no longer necessary because modern technology has provided ways of communication without the need to be present in a specific place and time, so coordination has become not that important and causes inconvenience. Reducing the administrative burden for the teacher.

In some cases and universities, the vast majority of students in e-learning are older and have jobs to start and sponsor families. The diversity of the reasons for students' enrolment in e-learning programs; some may be interested in obtaining certificates, and others are practical to acquire new knowledge or advanced skills. Students are considered isolated in the e-learning system, and some basic factors in education are absent from them, such as motivation stemming from communication and interaction with others. Students in e-learning programs, especially beginners, face some difficulties in determining the most appropriate

programs available to them, and how to obtain the support of their fellow students.

Depending on the internet and technology in teaching, it enables the provision of appropriate written, audio, or visual communication channels, such as the regular e-mail to report problems or provide information about lessons and records. It is advisable to form discussion groups so that the learner and trainee can communicate with each other and exchange information on need. They ask the learner to do homework and send it electronically and provide short solutions to guide and assist in the resolution. The material can also be viewed and covered as a web page or downloadable file in various formats. Establishing an electronic list of possible and complete references and sources for the lesson and providing a link with other pages covering information on the topic and similar seminars that are also available on the scientific web, with www or with university libraries. Scholastic. The use of the Internet in education has led to a unique and rapid development in educational science and affects the way the teacher and the learner perform and accomplishes them in the classroom. Various terms have arisen at the international level to deal with the Internet and information networks, including a world without papers, Universities without walls, Education institutions for the future, Electronic schools and universities, Virtual Learning Environments, Virtual universities, Virtual classes are classes similar to traditional courses in terms of existence and Digital Curriculum [18].

The teacher and students, but it is on the global network, where it is not restricted by time or place, and through which virtual learning environments are used to gather by networks to participate in collaborative learning situations. Direct participation of systems, programs and applications (between the teacher and students or between students) Application Sharing, File transfer and direct exchange between the teacher and his students. Following up with the teacher and communicating with each student separately or in a group of students simultaneously. The electronic data is in line with the nature of the era and the technological and informational development. The electronic learning environment: an educational system consisting of a set of interrelated and complementary elements which are sub-environments made up of various modern technologies such as computers and communication networks. And different software based on managing educational content and delivering it to learners. Educational content: It is the basis of the educational process represented in the academic program or the scientific material that is transferred to the learner through the electronic environment for education. This content is presented according to stages and standards. It takes into account the learner's ability to comprehend and understand through a set of tests [19].

In the field of e-learning, this matter takes special importance to distance the learner from the teacher. In order to achieve quality in e-learning, three basic conditions must be met: Ensuring real growth in the personality and behaviour of the learner. Adaptation with the needs of society in the existing circumstances. In order to achieve

these conditions or standards in the quality of e-learning, a set of methods must be followed, and the most important of which are: Providing basic requirements for students enrolled in this type of education to ensure appropriate educational inputs that possess psychological, mental and physical capabilities. Providing the conditions for the quality of education in the educational material, the educational media, the teacher, and all software used in these two systems. They are implementing educational programs in the e-learning system according to careful monitoring, enabling us to implement programs according to their goals and monitor them from cases of decline or deviation from their real goals. Evaluating educational programs used in the e-learning system in light of cultural and social developments, and extracting feedback in order to introduce reforms or development in an up-to-date and continuous manner. Developing the performance of faculty members, as well as the conditions for student admission, in order to ensure continued strong input from students and teachers. Continuously reviewing the administrative and technical system in the e-learning system. Subjecting the e-learning system to evaluation procedures in order to diagnose strengths and weaknesses.

Challenges

One of the most challenging challenges facing e-learning in educational institutions' limited capacity to establish large networks and provide large numbers of devices and equipment. Add a select update and that information and communication technologies are witnessing multiple developments and transformations, rapidly and continuously this makes the various technologies challenging to acquire. As for software, it was a lack of E-learning applications in the Arabic language provide a significant challenge in addition to their multiplicity and the need for similarity among them is an obstacle to choosing the appropriate software, hence the concerned ministries, especially ministries education and the Ministry of Communication and Information Technology to coordinate with each other to produce local software taking into account the various peculiarities of education and the learner [20].

To ensure a smooth transition to an e-learning system, laws must be adapted and the instructions in a way that ensures the dynamism of the educational system, in line with the fast-paced modern developments. Laws must provide the necessary cover to protect freedom of thought and the collection of knowledge, and most importantly, generating them, which requires amending some laws that stand in the way of electronic dealing [21]. E-learning is a broad and complex concept that affects many aspects of life and it requires the collaboration of different elements to achieve the cognitive goals and not, as some think, it is just the process of transferring content or information from the paper medium to the electron medium.

This structure includes the Network Educational National (that link) the universities together, and the structure on which the network will be based, which determines the electronic linkage devices (DTE & DCE), the computers to be used for communication and browsing, and then the software that it will provide educational applications that will facilitate the handling of educational content Broadband Network, Interactive Learning. The difficulties to develop an educational suitable e-learning curriculum in universities. Virtual classes need special curriculum as a system consists of: content, method, objectives, activities, and educational aids. In order for the selection to be successful, the teaching method must meet and match the curriculum content. And its activities and teaching method, and the achievement of educational goals, in order to help achieve easy learning. This type of computer program depends on the learner's practice of an educational game until it. The goal for which this game is designed, through which the learner acquires skills and concepts. With or without verbal communication in the delivery of a message, idea or elements of the subject matter to the student and help to Communicating information to their minds in a structured, engaging, and in a way that helps the effectiveness of a process. Some students' economic capacity will impose restrictions on the ability to provide the necessary equipment to attend the virtual lectures, in addition to the cost of Internet connection and the requirements of ancillary devices such as audio and camera devices.

The quick and sudden digital transformation process of universities increase. The workload has accumulated greatly on students and teachers due to the nature of the educational material that needs to keep pace with the educational platforms and the soft material suitable for distance education. Therefore, raising the educational material and dumping it on students and asking the student to do study assignments and uploading them to the website, is an added burden for all and takes a long time due to the complexity of technology. The compatibility of online learning with social and human sciences in general is compatible with remote study, but this does not correspond to scientific specializations such as engineering, chemistry, physics and the like, as there is a close correlation between teaching these sciences and the need for laboratories to conduct the necessary scientific experiments [22].

This type of educational computer program is based on the principle of providing students with an opportunity to learn through situations that are similar to the real concerns that confront them, and he practices them in real life as much. The simulation software provides the learner with models, activities, and practical exercises close to reality. Examples are these educational programs: Training in piloting aircraft and aviation and conducting laboratory experiments on chemicals and nuclear fission, which helps the student with the trainee to become familiar with the difference [23]. It is that software that aims to design smart systems using computer technologies to mimic the way humans think in processing information and give the same characteristics that we know with intelligence in human behaviour;

artificial intelligence software works on the principle of emulation configurations with which it is possible to describe objects, events and processes using their qualitative properties and their relationship. The artificial intelligence software is represented in the following areas: expert systems, machine programming. Computers for speech, robots ... etc. It was one of the major problems facing construction. This software has a high storage capacity in addition to its high complexity. Among the requirements that motivate and encourage students to e-learning, education continues the electronic system suffers from a lack of clarity in the systems, methods and methods in which education is conducted in a manner it is also clear that the failure to decide on the issue of incentives for the educational environment is one of the obstacles that hinder the effectiveness of e-learning.

Conclusion and Implications

This study focuses on. E-learning portal services and the aim was to investigate the rise of online teaching and collect feedback from the teaching professionals regarding their opinion from their experience of E-learning systems. The study has numerous implications related to E-learning in higher education. It provides recommendations to government and university policy-makers in designing the policies and programs on E-learning. At the same time, the university top management/dean of faculty and HOD of the department need to concentrate on the importance of enhancing university quality education.

In the future, most of the universities will be offering online courses to the students. If the pandemic remains longer, it might change education from physical attendance to online. Based on that, the quality of the E-learning system and quality of information will impact user satisfaction and system use that will lead toward the E-learning portals. Obviously, education will be borderless within a few years and it will decrease the education cost. This study recommends some of the suggestion to higher education institution such as accessibility of the E-learning portal 24/7, error-free information, quality of information, content quality, the robustness of the server, training module materials related to E-learning portal use for new users, updated information, well-organized data, user-friendly design of the portal, and time to time feedback from the user will increase the durability and acceptability of the E-learning portal.

Establishing rules for university education e-learning practices in the institution that intends to offer study programs through distance education by developing and managing these programs in line with the recognized foundations of university education, taking into account the specifics and requirements of this unconventional pattern. • The programs and degrees offered should be about the distance education system is one of the strategic components to achieve the educational institution's goals. The distance learning systems should also be designed and developed to

contribute to activating this strategy. Before embarking on offering distance education programs, the educational institution must prepare and experiment with teaching and management systems for the programs it intends to offer and provide all its requirements to maintain the required level of quality and adherence to standards. The educational institution considers the laws in force in the country in which distance education programs are offered. The institution provides the required budget for the distance education programs it intends to offer and for the entire period that students will spend in studying these programs to maintain the quality standards set by the institution. The institution is keen to ensure that distance education programs and their components are characterized by an explicit agreement between the objectives of education on the one hand and the strategies of distance teaching and the content of the scientific material and the patterns and standards of evaluation on the other hand. Institutions give clear attention to developing and supporting self-education and enabling learners to control their educational growth. Therefore, institutions must set realistic goals and practical ways to achieve them and verify that the goals are achieved. The institution provides complete and clear information to students studying remotely in the following areas: the nature of the distance education program and its requirements, the relationship between achievement, brevity and evaluation, academic progress and the collection of accredited hours, characteristics of the distance education system and how to deal with it. It should also provide this information to help students make decisions about their studies and evaluate their academic path according to performance standards.

The institution demonstrates evidence that the final evaluation methods used for distance education programs are appropriate for the type of study, the study conditions in this style, the nature of evaluation, correction, and the announcement of grades are conducted in a reliable and orderly manner, and that these procedures adhere to academic standards. Institutions prove that the final evaluation of the programs or their components appropriately measures students' achievement of the program's competencies. The institution uses the formative assessment as part of the distance education program design process.

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