



E-learning Difficulties and the Students in the COVID-19 Pandemic: An Introduction to The Economics of Higher Education

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Abstract:

The study aimed to identify the difficulties facing e-learning as an introduction to the economics of education in accordance with the (COVID-19) pandemic. For this purpose, an electronic questionnaire was designed and consisted of (20) items distributed equally in two fields: capabilities and infrastructure, the scientific and teaching content; distributed electronically by e-mail to students in Ajloun Faculty, responded to it (274) male and female students.

After organizing and analyzing data using (SPSS-V21) the results showed the existence of difficulties related to devices and the use of technology, communication with faculty members, and difficulties related to the teaching content and its relevance to e-learning, therefore, working to employ the results of the study for the purposes of developing e-learning and employing it through working to provide modern communication devices and advanced technology for use in e-learning in the event of any future emergency situations, preparing curricula to be compatible with e-learning and using them in circumstances similar to the COVID-19 disaster, and working to conduct studies on students' attitudes towards e-learning and its use in the economics of education.

Key words: E-Learning Difficulties, Education Economics, Higher Education.

صعوبات التعلم الإلكتروني والطلاب في ظل جائحة كوفيد-١٩: مقدمة في اقتصاديات التعليم العالي

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الملخص:

هدفت الدراسة إلى التعرف على الصعوبات التي تواجه التعلم الإلكتروني كمقدمة لاقتصاديات التعليم في ظل جائحة كورونا، ولهذا الغرض تم تصميم استبانة إلكترونية مكونة من (٢٠) فقرة موزعة بالتساوي في مجالين: القدرات والبنية التحتية، المحتوى العلمي والتدريسي؛ وزعت إلكترونيا عبر البريد الإلكتروني على طلبة كلية عجلون، واستجاب لها مائتان وأربعة وسبعون (٢٧٤) طالبا وطالبة.

وبعد تنظيم وتحليل البيانات باستخدام (SPSS-V21) أظهرت النتائج وجود صعوبات تتعلق بالأجهزة واستخدام التكنولوجيا، والتواصل مع أعضاء هيئة التدريس، وصعوبات تتعلق بالمحتوى التدريسي وارتباطه بالتعلم الإلكتروني. وبالتالي العمل على توظيف نتائج الدراسة لأغراض تطوير التعلم الإلكتروني وتوظيف ذلك من خلال العمل على توفير أجهزة الاتصال الحديثة والتكنولوجيا المتقدمة لاستخدامها في التعلم الإلكتروني في حالة حدوث أي حالات طارئة مستقبلية وإعداد المناهج لتكون متوافقة مع التعلم الإلكتروني واستخدامها في ظروف مشابهة لكارثة كوفيد-١٩. والعمل على إجراء دراسات حول اتجاهات الطلبة نحو التعلم الإلكتروني وتوظيفه في اقتصاديات التعليم.

الكلمات المفتاحية: صعوبات التعلم الإلكتروني، اقتصاديات التعليم، التعليم العالي.

Introduction:

In late 2019, the world witnessed a pandemic that upset the balance of the entire world, namely the Corona (COVID-19) pandemic, as this pandemic affected the health, economic, social, educational, and other aspects of life. The spread of epidemics and infectious diseases affected negatively the various health, economic, educational, social, and political aspects within societies, which imposes on these societies many challenges and difficulties, represented by increased infection rates, high death tolls, rising prices, and famines. Global efforts to confront the spread of the epidemic have proven that countries with societies that are aware of the seriousness of the epidemic and committed to the preventive measures approved by governments are the countries that have succeeded in being least affected by it through the commitment of their people to these proactive measures that prevent its spread (Adell, et.al. 2020, 2715).

Accordingly, the outbreak of epidemics and infectious diseases has many negative effects on educational systems. The (COVID-19) pandemic has recently caused an unprecedented disruption in various economies and life systems, disrupting education systems in most countries of the world, and leading more than a billion and a half students to abandon schools indefinitely, and it became clear that the countries of the world are facing a health battle and an educational battle alongside it in order to ensure the education of these students in any way, and it seemed clear that there is no way but to use technological tools to connect students to their curricula while they are in their homes, and to switch to distance education. Whatever the nature of education, many researchers volunteered their studies to study electronic platforms, and the perceptions of students and their teachers about this form of emergency learning (Al-Maamari, 2021, 15), so it is clear from the above that one of the prominent effects of epidemics and diseases in general is The widespread closure of schools, faculties and universities around the world. The Corona pandemic affected all educational systems around the world, (193) countries chose to close educational institutions in an attempt to slow the spread of (COVID-19), and these closures affected approximately (1.7) billion learners at the pre-primary, secondary and higher education levels (Organization of Islamic Cooperation, 2020, 28). It must be noted that the closure of institutes, schools and universities,



and the distance education (digital transformation), the difficulty of evaluation, the absence of an effective role for the teacher, and other difficulties and challenges requires following the educational process and communicating via phone or computer, and using various applications and platforms designated for this type of education. Such tasks and responsibilities require skills that many families may do not have it. In addition, the educational level of parents may or may not qualify them to do this, which affects the assistance that families provide to children in the context of digital transformation and reliance on distance education and may also shift workloads. Families can monitor this on an ongoing basis (Abu Aliwa, 2021, 35).

Whereas university education institutions are considered the renewed source of human thought at its highest levels, and an essential source in building and developing the mental and technological capabilities of their students, in addition to their primary role in meeting society's needs for creative, critical human cadres, and therefore university education institutions should move towards investing in development of modern technology by integrating it into the university education system and one of its most prominent forms is e-learning, which contributes to creating new educational opportunities in the face of the increasing demand for university education (Abu Nabhan, 2013, 95). Therefore, universities and faculties were instructed to convert the curricula and various courses into a system distance education have been uploaded to the websites of faculties and universities. Approximately 90% of the courses in the distance education system have been uploaded to the electronic portals of universities and to most of the social media on which students are present to study it and interact positively with it and use various skills for that. Therefore, it has become necessary evaluating the educational and social effects of the distance education system on the university student (Al-Khalifa, 2020, 310).

Therefore, the age of knowledge and the internet world have become an explicit call to rethink the educational process, it is clear that the added value in the cognitive future is the educational environment that works to support the ability to think and learn interactively and independently, and information technology represented by the Internet and multimedia is considered one of the most successful means to create this rich educational environment, as

this technology provides many opportunities for learning, growth, and self-development through e-learning systems (Shehata, 2012, 11).

Jordan, with all its health, civil and security institutions and its wise leadership since the beginning of the (COVID-19) crisis has managed to overcome many challenges and put a distinct imprint and plan a unique model in managing the crisis, and this has been through its reliance on specific strategies committed to its full and rapid application in the highest degrees and standards of transparency in dealing with the crisis and its data. One of the most prominent of these strategies was to activate the role of the crisis committee in the country and activate the defense law, which enabled Jordan to dominate and distinguish to a large extent in this pandemic ravaging the whole world, which was a model of success for the rest of the countries in this field.

E-learning based on the knowledge economy is the method of education using modern communication mechanisms from a computer and its networks and multiple mediums of pictures, graphics, and electronic libraries, as well as Internet portals, whether remotely or in the classroom. That is, using technology of all kinds to communicate information to the learner in the shortest time, with less effort and with more benefit (Al-Mousa, 2002).

Higher education is the education that takes place within faculties or university institutes after obtaining the secondary certificate, and the duration of study in these institutions varies from two to four years, and it is the last stage of formal education, as it is all kinds of studies, training or directed training that takes place after the secondary stage. At the level of a university institution or other educational institutions recognized as institutions of higher education by the official authorities of the state and the designations of these educational institutions differ, these names cause misunderstanding as they bear different meanings from country to country (Namour, 2012).

Ali (2020) indicates that (COVID-19) virus has revealed emerging weaknesses in education systems around the world, the study reveals that universities around the world are increasingly turning to online or e-learning, regardless of resources, employee preparedness, confidence, student access, and motivation play a significant role in integrated ICT learning.

It is now evident that society needs resilient and resilient educational systems where we face an unpredictable future.

Jordanian universities have begun to promote the process of integrating technology into the educational system, and urgently instructed to activate electronic platforms and distance education and instructed faculty members to apply this through the decisions of the deans' councils concerned in line with the decisions of the Higher Education Council based on Defense Order No. 7 in this regard.

The Jordanian government has made a unique effort for universities and faculty members in this regard through immediate dealing to get out of the problem caused by the pandemic (COVID-19) in order to preserve the safety of students and the smoothness of education in Jordan, and it succeeded to a large extent in that thanks to its efforts in cooperation with various institutions of the country and the security services in particular (Al-Tamimi, 2020).

Owusu-Fordjour, et al (2020) reveals some of the challenges students face in closing schools refer to the "COVID-19" pandemic. As students are unable to study effectively from home, this makes the online learning system very ineffective. Parents are also unable to help their children how to access the online learning platform, and they cannot fully supervise their children's learning at home.

The choice of systems that support distance education must be determined by two factors: the possibility of integrating it and linking it to learning management systems and its ability to withstand the intense pressure resulting from entering large numbers of students at the same time. Higher education institutions in Jordan have succeeded in providing all of the above talked and faced the new challenge of the inability of the students to provide large data packages at reasonable prices because the use of the distance education model consumes a lot of data, therefore, institutions of higher education must join hands to find solutions related to capabilities and infrastructure for using e-learning.

Almanthari, et al., (2020) study indicates that the obstacle of the student level had the greatest impact on the use of e-learning, the student level obstacle showed a strong positive relationship with the school level obstacle and the curriculum. Also, the teachers' backgrounds had no effect on the level of barriers, this study

stimulates more discussion on how to overcome the obstacles of e-learning while increasing the benefits of e-learning at the same time during the epidemic and beyond by highlighting the importance of student opinions.

The acceleration of current events and circumstances necessitates the decision-maker to think of a quick solution to overcome the obstacle of providing large data packages at reasonable prices as well as the possibility of obtaining them, but until this is done, immediate measures must be made to provide all educational domains, in an immediate and free manner for everyone inside Jordan in order to be available for browsing, uploading, and downloading, all applications used by higher education institutions to give lectures remotely and to access them via the Internet must be limited (Nassar, 2020).

The concept of E-learning:

E-learning is an integrated system based on the effective use of information and communication technology in the teaching and learning process by creating a rich environment in computer and internet applications that enables the learner to access learning resources at any time and any place in a way that achieves mutual interaction between the elements of the system. E-learning is the most used term, and we also use other terms such as (Electronic Education / Online Learning / Virtual Learning). E-learning refers to learning by means of Internet technology as it publishes content online and this method allows creating links with sources outside the quota. (Mahson, 2007) defines it as the kind of learning that relies on the use of electronic media to communicate between teachers and learners and between learners and the entire educational institution. E-learning is also defined as education using computers and its various programs, whether on closed networks or shared networks (Internet networks). E-learning has become the most common type of flexible education and is flexible open learning.

E-learning is defined as the delivery of educational content via all electronic media, which includes the Internet, satellites, video or cassette tapes, interactive television, as well as CDs, in order to deliver information to learners in the quickest time and at the lowest cost, and in a way that enables the educational process to be managed, controlled, measured and evaluated by the learners' performance.



(Abdel Raouf, 2015, 29), and it should be noted that e-learning is synchronous and is the type of education through which the communication process takes place between the teacher and the learners at the same moment through written communication, voice communication, or voice and image communication (Ibrahim, 2006, 76). The interaction and communication that takes place between the learner, the teacher, other learners, and the scientific material takes place at a time that suits the learner, as communication occurs with a difference in time and a difference in place (Al-Sayed, 2005, 69).

E-learning is characterized by a set of characteristics that distinguish each element of the educational process. The role of the teacher is changing to become a simplifier, designer, and facilitator of educational content and a guide to accessing it. This requires him to acquire a set of skills necessary to use modern technologies, acquire the necessary experience and skills to deal with the electronic environment, the ability to deal with the international information network, to master the exploitation and harnessing of technologies, to achieve learning objectives, and innovate teaching methods and techniques that are compatible with the needs and expectations of diverse learners (Shehata, 2012, 18).

One of the most prominent features that characterizes e-learning is interactivity, which means action and reaction. This may be between the learner and the educational situations and experiences presented to him, or between the learners and each other, or between the learners and the teacher, where through e-learning a kind of two-way communication is achieved. Or multiple, and some limit interactivity in e-learning to the dialogue between the two sides of the educational situation, the learner, and the educational content through the user interface, which must facilitate the interaction process, so the learner studies the content, receives feedback, and reaches himself the information he wants. E-learning is also characterized by its advantages. There are many aspects in the educational field, the most important of which is that it encourages group, individual, and cooperative learning, and helps the teacher present the scientific material in a distinct and motivating manner through visual, audio, and read methods, and the use of excitement mechanisms to motivate the learner, as well as providing a huge, renewable, and advanced stock of scientific knowledge and information in the hands of the learners. As

well as providing assessment tools, tests, and teaching content, developing them, increasing the effectiveness of teaching methods, and applying everything new and innovative in the educational framework (Al-Gamal, 2012, 50).

One of the advantages of e-learning is the availability of the information included in the course for all learners of all types, abilities, and numbers. It also allows teaching to large numbers of students unlike traditional education. It is also possible through it to reach a large number of students without facing the costs of establishing educational buildings or laboratories. It also provides more educational opportunities for non-traditional students with special needs or provides educational opportunities for new audiences of employees or members of the armed forces whose dates and locations of traditional education may conflict with the dates and locations of their work or the regulations governing it. It is also available that it enables students to take More than one course at a time (Abdel Raouf, 2015, 211).

E-learning aims to achieve many goals at the individual and societal levels, including supporting the educational process with interactive technology in the best ways that help in confronting many of the challenges facing the traditional system, such as crowded classrooms, lack of capabilities and places, the inability to provide an atmosphere conducive to creativity, and the inability to take into account individuality among learners (Al-Gamal, 2012, 36), as well as access to information sources, images, videos, and research papers via the Internet and using them to explain and clarify the educational process, and the possibility of providing lessons for distinguished professors, as the shortage of distinguished educational personnel. It makes them limited to specific schools and a limited portion of students benefit from them. The shortage of academic and training personnel in some educational sectors can be compensated for through virtual classes. It also helps the learner understand and delve deeper into the lesson so that he can return to the lesson at any time. It helps him to do his schoolwork by referring to various sources of information on the Internet or to the electronic material that the professor provides to his students, supported by multiple examples. Thus, the student retains the information for a longer period because it has become supported by sound, image, and understanding. In addition, introducing the Internet as an essential part of the educational process is of great benefit. By raising the scientific cultural level of



education For students and increasing awareness of using time in a way that develops their ability to be creative instead of wasting it on sites that only lead to the decline of the moral and cultural level, in addition to building a network for each school through which parents, teachers and administration communicate in order to be constantly informed about the level of their children and the school's activities. Through it, the school can communicate with educational and governmental institutions in an organized and easy manner (Al-Khazaleh, 2015, 91-92).

The objectives of e-learning in Arab universities can be defined in using e-learning media to link and interact with the educational system (faculty member, student, university institution, university curricula and courses), restructuring and transferring it from the local to the global phase, improving the quality of the educational process in universities, and achieving the satisfaction of the beneficiaries of educational service (learners or trainees), developing students' skills and abilities and building their personalities to prepare a generation capable of developing itself cognitively and professionally as well as its ability to interact with the changes of the times, providing multiple and disparate sources of information that provide opportunities for comparison, discussion, analysis and evaluation, and raising the level of competitiveness among educational institutions, and expanding the geographical area of educational institutions and its reach to remote areas (Al-Mallah, 2010, 24). Many goals can be achieved through e-learning, such as following developments in the level of technologies and communications and exploiting them to develop the teaching and learning processes, developing the infrastructure for information and communication technology and employing them in teaching and learning, Making the educational process more interesting and closer to comprehension, following up on the development of knowledge, both quantitatively and qualitatively, developing the skills of using technology among the teacher and learner to serve the teaching and learning processes, and increasing the scientific sources of academic subjects in quantity and quality, consolidating and enriching them (Kavi, 2009, 33).

The importance of e-learning is to achieve educational goals with high efficiency and economy of time and effort, to achieve learning in ways that suit the characteristics of the learner and in an

interesting and enjoyable manner, to provide rich sources of information that can be accessed in a short time, and to stimulate the learner in self-learning skills and to rely on himself in acquiring and acquiring experience and knowledge. E-learning gives the teacher and learner motivation to keep pace with the times and the continuous progress in technology and science and to communicate with developments in various fields. It is also compatible with the data of the times and is the ideal method for preparing the future generation for scientific and practical life. E-learning is also considered one of the modern methods in the field of learning. (Kavi, 2009, 18).

Education in Jordan considering the (COVID 19) pandemic:

Without notice, higher education institutions in Jordan found themselves in a race against time to move to a distance education model imposed by the current circumstances as a result of the (COVID 19) virus. These institutions responded in an uneven and satisfactory manner in principle to this challenge, but the need has become urgent to review the principles of integrated education by The Commission for Accreditation of Higher Education Institutions and ensuring their quality so that these foundations are able to face challenges and contribute to improving the quality of higher education in Jordan.

The foundations of the current combined education amount to being the key solution to the current crisis and the basis for improving the quality of higher education. Raising the percentage of concurrent virtual classroom encounters (combined education) may be one of the successful solutions if attached to a high possibility to replace the direct class meetings in full or in part under certain conditions. We hope that the decision-maker can soon, if the need arises, decide to disable one or all higher education institutions refer to weather conditions, for example, without worrying about the continuity of the lectures.

Owusu-Fordjour, et, al., (2020) show that the epidemic has already had a negative impact on their learning because many of them do not use learning effectively on their own. The e-learning platforms that have been introduced are also challenging for the majority of students refer to the limited internet access and lack of technical knowledge of these technological devices by most Ghanaian students.

Almaiah, et, al., (2020) study tries to exploring the critical challenges and factors influencing the E-learning system usage during



COVID-19 pandemic in Jordanian and Sudia Arabia universities, the study provides useful suggestions for policy makers, designers, developers and researchers, which will enable them to better understand the main aspects of successfully using the e-learning system during the COVID-19 pandemic.

The importance and advantages of e-learning:

E-learning helps to provide educational opportunities for diverse groups of society, women, workers and employees without regard to gender and color, and it is also possible for some groups that could not continue their education to join it for social, political or economic reasons. It provides education anytime, anywhere according to its ability to learn and understand.

E-learning contributes to developing thinking, enriching the learning process, amending information, and the topics presented therein and updating them. It is also characterized by the rapid transmission of this information to students by relying on the Internet. It increases the ability to communicate to exchange opinions, experiences and perspectives between students and their teachers and between students together, and in large numbers such as e-mail, discussion rooms and interactive video. In addition, it gives the student the freedom and the courage to express himself in comparison to the traditional education, so that the student can ask at any time without his fear, embarrassment, or shame, as if he were with the rest of his colleagues in one hall. E-learning overcomes the problem of the growing number of learners, with limited halls and limited capabilities, especially in faculties and theoretical specialties. The student gets continuous self-feeding during the learning process, he knows the extent of his superiority and provides him with the process of structural and final evaluation (Al-Nour, 2007).

Ali, (2020) study suggests online and remote learning as a necessity in times of closure and social discrimination refer to the COVID-19 pandemic.

There is no doubt that any educational system is not devoid of drawbacks, and one of the drawbacks of e-learning as an education technique is the difficulty facing the teacher in communicating his ideas in the electronic course, in addition to the fact that he will not be able to follow up on the active, sleepy, distracted, or annoyed student.

Consequently, e-learning causes the learner and the teacher to lose the social link between them, as well as the disappearance and weakening of the role of the teacher (the human being) as an important educational influencer. Also, e-learning cannot provide what the library contains because most of the materials found on the electronic network are modern materials that do not cover the ancient intellectual production of humanity. There are also many valuable materials available on the Internet, but they are not free and require a subscription to obtain them. The frequent use of technology at home and in life may lead to the learner becoming bored with these media and not taking them seriously, as well as not benefiting from feedback refer to the difficulty of retrieving lessons with students to determine the extent of their understanding of the educational material refer to the difficulty and scarcity of direct communication between the teacher and the learner (Awad, 2016, 245).

E-learning, in its attempts to achieve its goals and objectives, has also been exposed to some obstacles, including weak Internet flow and its lack of free access, such that a high flow speed must be available, with the absence of digital and technological equipment to access educational platforms, whether for teachers or learners. Electronic exams are also one of the biggest obstacles that arise, it stands considering the correct evaluation process (Al-Khazaleh, 2015, 179). However, integrating e-learning into university education with traditional teaching methods and means requires more effort and the combination of various elements to achieve both cognitive, emotional and behavioral goals, and not, as some think, simply transferring content or information from the paper medium to the electronic medium only, as it first includes the infrastructure. The electronic link network will connect the universities together, the structure on which the network will be based, the computer network within the universities, and the software and applications that will facilitate access to and study of content (Khalil, 2013, 164).

The subject of economics e-learning is one of the modern branches of education economics, which in turn is the newest branch of educational science. The aim of e-learning economics is to raise the level of economic efficiency in the field of education, through optimal employment of capabilities, rationalization of costs, increasing resources while ensuring quality, and diversifying funding sources for educational and learning projects through investment operations,



charitable contributions, etc., and conducting economic studies and economic evaluation with the aim of raising internal and external efficiency (Kavi, 2009, 113).

The tasks of e-learning economics are to prepare plans that include strategies, policies, and programs that achieve the goals of education economics within the framework of the plans of the responsible authorities and work to implement them after their approval, as well as preparing applied educational economic studies and research that ensure achieving economic and educational efficiency, developing the resources of the Ministry of Education, rationalizing its expenditures, and working to Activating partnership with the private sector to contribute to various possible areas of educational investment that achieve common interests and generate additional financial returns or funding for its projects, proposing ways and methods aimed at developing educational resources through grants and donations, reviving the work of the principle of the (Islamic endowment) on education among members of Muslim society, follow up on their implementation and evaluation, and develop programs, mechanisms and controls that help education departments in regions and governorates, education directors and school principals develop resources and reduce educational waste, spread the culture of educational economics in concept and practice in all agencies, and raise awareness of the importance of the economic dimension in educational decision-making (Fardan, 2007, 1).

The economics of education means optimizing the use of capabilities, rationalizing costs, increasing resources while ensuring quality, diversifying sources of funding for educational and learning projects through investment operations, charitable contributions, and conducting economic studies and economic evaluation with the aim of raising internal and external efficiency. The link between education and the economy is close, education contributes to development directly through what it provides to it in terms of educated human resources and scientific knowledge that is the result of scientific research that is related to education, and the attitudes it instills toward work, organization, and society, all of which favor development in one way or another. On the other hand, the economy provides education with its various resources (Ali, 2004, 150).

The study problem:

With the increase in the use of modern technologies, both faculties and students alike have increased acceptance of the changes that have occurred in the teaching and learning environment. Courses and degrees have become available on the Internet, and schools, universities and virtual libraries have been created, as the learner can apply, register, and enroll in the university, purchase references and books, attending lectures without recording any actual visit to the university buildings, as a number of specializations and educational programs have been developed, to interact between them and students, this type is called computer aided learning. Regardless of the method used for education, the transformation must take place from traditional classrooms to classrooms through information space, and this is the future of learning, which is called e-learning.

The university has appointed multiple faculties and linked them to the Internet, databases and the university has tried to encourage the teaching staff to introduce e-learning in the educational process; To keep pace with advanced universities in this field, but in contrast, e-learning at the university still faces a set of difficulties and obstacles limiting its application, whether it is technical and technical related to e-learning itself or related to administrative and material aspects or obstacles related to the teacher and the student, where e-learning still suffers from a lack Support and cooperation provided for the effective nature of learning. Hence, the problem of this study is determined by identifying the difficulties of e-learning as an introduction to the economics of higher education that students suffer considering the (COVID-19) pandemic.

The study questions:

- What are the difficulties of e-learning as an introduction to the economics of education that students suffer considering the (COVID-19) pandemic?
- Do e-learning difficulties differ as an introduction to the economics of education that students suffer considering the (COVID-19) pandemic, according to different variables (gender, faculty, academic level)?



The study significance:

The (COVID-19) pandemic prompted all countries to resort to using remote education means to achieve social exclusion. Jordan and Jordanians responded to the facts of reality in compliance with all their efforts to the wise royal approach, which emphasized the perpetuation of the pulse of the educational process for students, and the preservation of students' health at the same time. Where various educational institutions rushed to e-learning and its platforms or distance education in order not to neglect and maintain the educational process and to keep the wheel of education continuing in its rotation, where many successive decisions were issued in cooperation with all concerned parties by activating Defense Order No. (7) Defense that he did not overlook the educational process in order to ensure its continuity and enable it to rely on non-traditional educational methods, emerging platforms and modern electronic means, and as of its history; And the issuance of Cabinet Resolution dated 4/15/2020, which stipulated that: The educational institutions operating in the Kingdom in accordance with the provisions of the Education Law: Adoption of non-traditional methods and methods of education, and the various forms of evaluation of student achievement that are carried out by electronic means, or distance education as accepted methods and methods And approved in all governmental and private educational institutions, inside the Kingdom only and for the current academic year 2019/2020, thus the Jordanian state has taken the necessary legal measures to deal with the educational file during this pandemic by all parties involved in the educational process.

Therefore, the importance of this study is that it tries to identify the difficulties of e-learning as an introduction to the economics of higher education that students suffer considering the (COVID-19) pandemic, and that the cost required by preparing this system of providing the necessary financial resources and qualified human resources trained is worthy of conducting such a study. The importance of this study also increases in that it provides feedback to decision makers in education as it seeks to uncover obstacles and problems that limit the use of this system, by standing on the strengths and strengthening them, diagnosing weaknesses and working to get rid and treat them to raise the level required for the educational process.

The Study objectives:

- Identify the difficulties of e-learning as an introduction to the economics of education that students suffer considering the (COVID-19) pandemic.
- Learn about the different difficulties of e-learning as an introduction to the economics of education that students suffer considering the (COVID-19) pandemic, with different variables (gender, faculty, academic level).

Definition of terms:

E-learning: It is learning that is provided electronically through the Internet, the internal network, or via multimedia, such as CDs, DVDs, etc. (Hawamdeh, 2011).

(COVID-19) pandemic concept: COVID-19 viruses are a wide line of viruses that may cause disease in animals and humans. It is known that a number of COVID-19 viruses cause human respiratory diseases in severity ranging from common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS). The newly discovered COVID-virus causes COVID 19 disease and has spread worldwide (WHO, 2020).

The study limitations:

The study limitations are as follows: The study was applied on (274) students from Ajloun Faculty - Al-Balqa University - Jordan and was conducted during the spread of the COVID-19 disease in 2020. It was applied online by distributing the questionnaire electronically, and the study tool was limited to learning difficulties as an introduction to the economics of higher education that students experience considering the COVID-19 pandemic.

Methodology:

The study method: The descriptive method was used refer to its suitability to the nature of this study; the questionnaire was distributed electronically to students by e-mail.

The study population: The study population consisted of all students of Ajloun Faculty - Al-Balqa' University for the year 2020.



The study Sample:

The study sample consisted of (274) students, of whom (111) male and (163) female, and table (1) shows the distribution of the sample among the study variables.

Table (1): Distribution of the study sample:

Variable	Category	frequency	Percent
Gender	Male	111	40,5
	Female	163	59,5
	Total	274	100.0
Faculty	Scientific	103	37.6
	Humanity	171	62.4
	Total	274	100.0
Study year	First	73	26,6
	Second	67	24.5
	Third	76	27,7
	Fourth	58	21.2
	Total	274	100.0

Table (1) shows that female frequency is (163) by percent (59.5%) and male frequency is (111) by percent (40.5%). For faculty; Humanity frequency is (171) by percent (62.4%) and Scientific frequency is (103) by percent (37.6%). For study year: third year frequency is (76) by percentage (27.7%), and then first year frequency is (73) by percentage (26.6) and then second year frequency is (67) by percentage (24.5) and then Fourth year frequency is (58) by percentage (21.2).

The study tool (The questionnaire): The researchers designed the study tool based on their personal observations regarding the problems that students suffer in e-learning, and access to previous relevant studies. The questionnaire consisted of (20) items distributed in two areas, the first is potential and infrastructure, and the second is the scientific field and the content of teaching.

Validity: The questionnaire was distributed on (6) experts whom specialize in education and distance learning, and their observations were taken about correcting the wording of some paragraphs in terms of language and meaning.

Reliability: The Cronbach extracted the homogeneity index' Alpha method for the two domains and the tool as a whole, table (2) illustrates that.

Table (2) Cronbach' Alpha index for the tool:

No	Domain	Cronbach' Alpha
1	Capabilities and infrastructure	0.89
2	Scientific and teaching content	0.91
	The instrument as a whole	0.93

The results of the reliability of the Cronbach' Alpha showed that the homogeneity indexes were for the field of potential and infrastructure (0.89), the scientific field and the content of teaching (0.91). The tool as a whole (0.93) is a high coefficient and indicates an acceptable degree of stability for the purposes of applying the study tool.

Data collection and statistical processing: The data was collected by electronic questionnaire, as it was distributed by E-mail to most students of Al-Balqa' University - Ajloun Faculty. After a period of three weeks, the responses that reached (274) fully completed questionnaires, the data was organized on the (SPSS – V. 21) program and analyzed using means and standard deviations for all items and fields, and analysis of variance refer to the variables.

The results and discussion: This part includes the presentation of results that aim to identify the difficulties of e-learning as an introduction to the economics of higher education that students suffer considering the Corona pandemic, the results will be presented based on the study questions.

Results related to answering the first question: What are the difficulties of e-learning for the higher education economies that students suffer considering the COVID-19 pandemic?

To answer this question, means and standard deviations for the difficulties of e-learning items and fields were extracted as an introduction to the economics of higher education that students suffer considering the (COVID-19) pandemic; Table (3) shows that.



Table (3) Means and standard deviations for the difficulties of e-learning in Jordan considering the (COVID-19) pandemic (n=274):

No	Domain	Mean	St.Dev	Rank	Degree
1	Capabilities and infrastructure	3.56	0.88	1	medium
2	Scientific field and teaching content	3.09	0.44	2	medium
	Domain as a whole	3.33	0.59		medium

Shows from the table (3) mean and standard deviations in the E-Learning Difficulties Field as an Introduction to Higher Education Economics that Students Suffer considering Corona Pandemic, the mean of a Capabilities and infrastructure field was (3.56) by moderate degree, the mean of a scientific field and teaching content was (3.09) by moderate degree, means and standard deviations for the difficulties of e-learning for the economics of higher education as a whole reached (3.33) by moderate degree.

First: Capabilities and infrastructure domain:

Table (4): Means and standard deviation for difficulties of e-learning regard capabilities and infrastructure in Jordan considering the (COVID-19) pandemic (n=274):

No	Item	Mean	St.Dev	Rank	Degree
1	Sending a network in my network is weak	3.59	1.04	5	medium
2	We face many problems of poor network connection	3.21	1.14	10	medium
3	I don't have a recent device to optimize my connection	3.67	1.05	2	high
4	The broadcast is interrupted many times	3.56	1.07	6	medium
5	Communication with university search engines is not available	3.75	1.12	1	high
6	The electronic gate is broken on the university's website	3.64	1.05	3	medium

No	Item	Mean	St.Dev	Rank	Degree
7	My computer speed is not appropriate	3.46	1.08	9	medium
8	There is no room in my residence to devote himself to e-learning	3.55	1.03	7	medium
9	Telephone contact with the university or teachers is not available	3.55	0.91	7	medium
10	I am facing some problems related to my family	3.61	1.06	4	medium
	Capabilities and infrastructure	3.56	0.88		medium

Table (4) shows that the mean for the "capabilities and infrastructure" field ranged between (3.21-3.75), The highest was for item (5) which states " Communication with university search engines is not available " by mean (3.75) with a high degree, Then came item (3) which states " I don't have a recent device to optimize my connection " My mean score is (3.67) And with a high degree, Then came item (6) which states " The electronic gate is broken on the university's website " by means (3.64) with a medium degree, and the lowest mean for item (2) which states" We face many problems of poor network connection" And with a medium degree. The mean of the Capabilities and infrastructure as a whole found to be (3.57) with a medium degree.

This indicates that students suffer from difficulties related to the availability of communication with university search engines or the availability of effective communication devices in their homes. This agree with result Owusu-Fordjour, et al, (2020) study which shows that e-learning platforms that have been introduced challenging for most students refer to the limited internet access and lack of technical knowledge of these technological devices by most Ghanaian students. Therefore, the study recommends that students should be introduced to innovative and offline online e-learning platforms to supplement teaching and learning in the classroom, as it is useful for students who may not be able to access internet connections. Also, Almaiah, et al, (2020) study shows that challenges hindering the use of the e-learning system, technical problems with the e-learning system, and financial



support problems. Also, (2020) study discovered some Internet and financial problems through implementing online learning. And in the case of learners regarding the financial problem, they hope that lecturers will use facilities such as the free Messenger app in the online learning system. Also, the materials and instructions implemented by the lecturer in online learning were not easy to use.

Second: The Scientific field and teaching content:

Table (5): Means and standard deviation for difficulties of e-learning regard the Scientific and teaching content in Jordan considering the (COVID-19) pandemic (n=274):

No	Item	Mean	St.Dev	Rank	Agreement Degree
1	The teaching content is not intended to suit e-learning.	3.59	0.99	2	medium
2	The content of the available course material is choppy and unclear.	3.66	1.02	1	medium
3	There are not enough educational activities to strengthen understanding.	3.50	1.09	3	medium
4	No images and illustrations available for educational content.	3.11	1.16	4	medium
5	We cannot capture all the teachers' notes	3.06	1.14	5	medium
6	The questions asked about the lessons are formal and without substance.	2.76	1.15	8	medium
7	There is a problem coordinating with teachers regarding the answer to my questions	2.96	1.23	6	medium
8	The overlap between classmates' questions confuses the process of	2.69	1.22	10	medium

No	Item	Mean	St.Dev	Rank	Agreement Degree
	learning and understanding.				
9	I can't focus for long with the teachers while listening to the lessons.	2.71	1.19	9	medium
10	The study material available for viewing the network is not sufficient.	2.86	1.22	7	medium
	The scientific and teaching content	3.09	0.44		medium

Table (5) shows that the mean for the "capabilities and infrastructure" field ranged between (3.21-3.75), The highest was for item (2) which states " The content of the available course material is choppy and unclear " by mean (3.66) with medium degree, Then came item (1) which states " The teaching content is not intended to suit e-learning" by means (3.59) with a medium degree. Then came item (3) which states, "There are not enough educational activities to strengthen understanding " by mean score is (3.50) with medium degree, and the lowest mean for item (8) which states" The overlap between classmates' questions confuses the process of learning and understanding" with a medium degree. The mean of the scientific and teaching content as a whole was (3.09) with a medium degree.

This indicates that the sudden shift in the use of e-learning and the lack of preparation commensurate with the learning needs related to the content of the curriculum that distance learning will provide has created many challenges for students, in addition to the fact that the study plans are not intended for e-learning, and require modifications in some of the lecture contents.

This agrees with Almanthari, et al, (2020) study's results which show that the barrier at the student level had the greatest impact on the use of e-learning. And the student level barrier showed a strong positive relationship with the school level barrier and the curriculum barrier.

Results related to answering the second question: Are the difficulties of e-learning for the economics of higher education that



students suffer considering the COVID-19 pandemic, refer to variables (gender, faculty, and years of study)?

To answer the second question, means and standard deviations were extracted for all areas of difficulties. E-learning for the economics of higher education that students suffer considering the COVID-19 pandemic, according to the difference in gender variables, faculty, educational level, and multiple analysis of variance (MANOVA) was applied to detect differences in domains according to the gender variables, faculty, years of study, and analysis of variance (ANOVA) for the overall scale score.

Table (6) means and standard deviations for study fields according to variables study:

Variable	Category	Domain	Mean	St.Dev
Gender	Male	Potential and infrastructure	3.62	0.79
		Scientific field and teaching content	3.10	0.39
		Total	3.36	0.54
	Female	Potential and infrastructure	3.52	0.94
		Scientific field and teaching content	3.09	0.46
		Total	3.30	0.62
Faculty	Scientific	Potential and infrastructure	3.50	0.87
		Scientific field and teaching content	3.06	0.39
		Total	3.28	0.58
	Humanity	Potential and infrastructure	3.60	0.88
		Scientific field and teaching content	3.11	0.46
		Total	3.35	0.60
Academic years	First year	Potential and infrastructure	3.56	0.89
		Scientific field and teaching content	3.13	0.45
		Total	3.35	0.61

Variable	Category	Domain	Mean	St.Dev
Second Year		Potential and infrastructure	3.61	0.88
		Scientific field and teaching content	3.08	0.45
		Total	3.35	0.61
Third Year		Potential and infrastructure	3.57	0.96
		Scientific field and teaching content	3.12	0.45
		Total	3.35	0.63
Fourth year		Potential and infrastructure	3.48	0.75
		Scientific field and teaching content	3.01	0.37
		Total	3.24	0.50

Table (6) shows that there is variance in the fields of study, according to gender, faculty and academic years variables; to reveal the statistical significance differences (MANOVA) was applied for the fields and (ANOVA) for the overall score, Table (6) illustrates that.

Table (7) Results of Multiple Analysis of Variance (MANOVA) to detect differences in each area of difficulties for E-learning in higher education considering the (COVID-19) pandemic according to gender, faculty, and years of study variables:

Variable/ Source	Domain	Sum of Squares	DF	Mean Square	F	Sig
Gender Hotelling's Trace. F (.007) (sig.389) (.949)	Capabilities and infrastructure	1.262	1	1.262	1.633	.202
	Scientific field and teaching content	.015	1	.015	082.	.775
Faculty Hotelling's Trace. (.014) (sig.157) (1,864) F	Capabilities and infrastructure	2,802	1	2.802	3.627	.058
	Scientific field and teaching content	,346	1	.346	1.823	.178
Study year	Capabilities	2,389	3	.796	1.031	.379



Variable/ Source	Domain	Sum of Squares	DF	Mean Square	F	Sig
Wilks' Lambda. F (.978) sig. (414) (١,٠١٥)	and infrastructure Scientific field and teaching content	.690	3	.230	1.214	.305
Error	Capabilities and infrastructure Scientific field and teaching content	207.098	268	.773		
Corrected total	Capabilities and infrastructure Scientific field and teaching content	211.182	273			
	Capabilities and infrastructure Scientific field and teaching content	51.707	273	.190		

Table (7) shows the following:

There were no statistically significant differences according to the gender variable at the level of significance ($\alpha \leq 0.05$) in tow fields, where the value of (F) for the field of Capabilities and infrastructure reached (1.633) with statistical significance (.202), and the value of (F) for the scientific field and teaching content (.082) by statistically significant (.775), this was confirmed by the Hotelling's gender variable value, where it reached (.007) with statistical significance (.389).

There were no statistically significant differences according to the faculty variable at the level of significance ($\alpha \leq 0.05$) in tow fields, where the (F) value for the field of capabilities and infrastructure reached (3.627) with statistical significance (.058), and the (F) value for the scientific and teaching content was (1.823) by statistically significant (.178), this was confirmed by the hoteling faculty variable value, which was (.014) with a statistical significance (.157).

There were no statistically significant differences according to academic years variable at the level of significance ($\alpha \leq 0.05$) in tow

fields, where the value of (F) for the field of Capabilities and infrastructure reached (1.031) with statistical significance (.379), and the value of (F) for the scientific field and the content of teaching was (1,214) with a statistical significance (.305), this was confirmed by the value of Wilkes' Lambda academic years variable that (.978) with a statistical significance (.414).

Table (8) The results of the 3-Way-ANOVA to detect the differences on total of difficulties for e-learning that students suffer considering the (COVID-19) pandemic, according to gender, faculty, and academic years:

Source / variable	Sum of Squares	DF	Mean Square	F.	Sig.
Gender	389.	1	389.	1.119	291.
Faculty	1.279	1	1.279	3.676	056.
Academic year	1.203	3	401.	1.153	328.
Error	93.246	268	348.		
Corrected total	95.191	273			

It appears from table (8) that there were no statistically significant differences for gender, faculty, academic years variables, at the level of significance ($\alpha \leq 0.05$); where the values of F ((1.119), (3.676), (1.153)), at the level of statistical significance (.291) (.056) (.328), respectively.

The reason behind these results refer to the recent use of e-learning and facing the problem of all students regardless of their variables and the surrounding conditions in general, as the problems of most students are like the use of these technologies, and the educational conditions the university allowed.

Conclusion:

Through the study results, it was found that there are difficulties related to the capabilities available for the operations of modern devices in communicating with teachers at the university, the capabilities of the Internet and communication barriers. In addition, the content of the available course material is choppy and unclear, teaching content is not intended to suit e-learning, and there are not enough educational activities to strengthen understanding. Most of the students suffer from the same problems as there were no differences in



those difficulties because of the various student variables, because of the novelty of this experiment in the use of electronic learning. However, it should be noted that e-learning does not require university buildings or student services on campus, in addition to providing many facilities related to providing face-to-face lectures.

Recommendations:

- Placement the study results for the purposes of developing e-learning.
- Work to provide modern communication devices and advanced technology for use in electronic learning in the event of any future emergencies.
- Preparing curricula to be compatible with e-learning and use in conditions like COVID-19 disaster.
- Conducting studies on students' attitudes towards e-learning and employing it in the economics of education.

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