

On e-Learning Difficulties Worldwide Faced Throughout the COVID-19

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Abstract

Since half of March 2020, the entire world is already being fighting the coronavirus virus 2019 (COVID-19), which is being marked a globe as a pandemic. The pandemic has an inevitable effect upon the whole world's socio-economic activities, particularly those in the educational system. Learning activities are being pushed to migrate on digital education as authorities have demanded that colleges close their campuses. Several university authorities, professors, and students might feel it challenging to adjust to the so-called "new reality" methods of studying in this hard environment. As a result of the unusual nature of the scenario, this research examines the issues that institutions as educational institutions, professors, and students are experiencing. This research begins with an analysis of relevant research on the problems of e-learning in the context of a deadly virus. The information is then systematically examined by using an empirical concept analytical method, revealing a taxonomy of e-learning difficulties throughout a Covid-19 period. Students are affected by connectivity, e-learning technology assistance, and technical and self-regulation concerns, according to our findings. Teachers, on the other end, have challenges related to expertise, professionalism, self-regulation, and loneliness. Institutions, on the other end, perceive financial help and organizational change as major challenges. This report emphasizes the demand for more research to reveal the difficulties in e-Learning.

Keywords: E-learning, challenges, pandemic, COVID-19, Difficulties.

Introduction :

The COVID-19 coronavirus illness was first identified in December 2019 and designated an epidemic in mid-March 2020 when the disease expanded swiftly throughout the globe. The consequences of this fast expansion require organizations of all sorts to switch to an electronic style of functioning. Universities, like other institutions of higher education, are not spared from this unprecedented situation. Some authorities have developed it mandatory for learning to take place entirely online rather than on-campus. Furthermore, such a shutdown will have a severe influence on students' education that might be mitigated through providing education via the Online via an e-learning platform. E-learning platforms, including learning management systems (LMS), providing an educational interface that enables collaborative education at any time and from any location as well as participants have internet access. A very well e-learning technology generally facilitates various tasks including quizzes, and written exams, in addition to providing teaching data. It's frequent to discover that well-developed e-learning resources can be a more effective and efficient option than offline resources. As e-learning grows more important as the epidemic continues, the strong reliance on technology creates a problem, not only for institutions of higher education but especially for students and teachers. Solving the problems that participants experience is critical to the effective adoption of e-learning technologies. Assessing e-learning problems may help different stakeholders, including institutions of higher learning and authorities, meet the demands of e-learning platform participants including students and teachers so that e-learning can be implemented efficiently. While numerous researchers have sought to identify obstacles to e-learning deployment overall, there are very few studies that have focused on the problems of providing e-learning from the perspective of the epidemic. Given the significance of continual learning at this trying time, this research

aims to look into the problems that students, lecturers, and institutions of higher learning experience throughout the COVID-19 epidemic.

Literature review :

This section examines the research on e-learning and the problems that come with adopting it. The adoption of any data system by its users determines its effectiveness. There have been several research on user acceptability of e-learning in research. E-learning difficulties may arise as a result of a shortage of attention for factors that affect user acceptability. Key successful variables for e-learning within institutions of higher education are identified in the research. Teachers, learners, information systems, and institutional supports are the four types of Success factors. Success factors contain IT proficiency and willingness for academics, whereas Success factors involve the dependable architecture of digital technologies. Success factors include time managing and supervision of students, as well as technical assistance for institutions of higher education. Another set of studies that examines e-learning problems within the perspective of individual situations is the study on its application [1]. For example, the research looks into the difficulties of introducing e-learning in Kenyan public institutions. The Kenyan research found eight difficulties, namely insufficient ICT and e-learning infrastructures, financial restrictions, a shortage of technical expertise in e-learning production and the significant time necessary to produce materials, and a shortage of desire and willingness to adopt e-learning [2].

These issues need to, be resolved according to the finding, to effectively adopt an e-learning system. Most of these issues are consistent with an analysis of works on e-learning implementation problems in underdeveloped countries. ICT infrastructure, lecturer competencies, technical expertise, Literacy skills, and knowledge of e-learning advantages are among the obstacles identified in this assessment of e-learning adoption in institutions. Define five types of issues from the viewpoint of high institution teachers [3]. Teaching strategies and cultures, philosophical e-learning, technological training infrastructure, and time management issues are some of the issues that need to be addressed. Overall, the previous studies on e-learning adoption problems or variables reduce down to 3 views of e-learning stakeholders: students, teachers, and educational institutions. It influences the strategy to examine the eLearning problems from the perspective of an epidemic from such three viewpoints, which we outline in the next sections [4].

Advantages of E-learning :

E-learning satisfies the demands of tomorrow's students while allowing them to work at their speed. As a result, it is beneficial for a myriad of purposes. It may be accessed at any time by paying memberships to various platforms or signing in to study the programs at the learner's comfort. It can distribute and provide teaching-learning resources in a variety of forms, including presentations, audios, videos, PDFs, e-mails, and word docs. In the E-learning procedure, webinars and direct connection with professors through numerous chat platforms or texting are other options. Some e-manuals, such as PDFs, are available for free. It provides useful simple, and progressive guidance to help students learn them

effectively. It is frequently considered the greatest method for self-study. It empowers students with a diverse set of content that covers nearly all themes and concerns [5].

Methodologies :

The research is motivated by the following review question: "What are the problems in e-learning throughout the COVID-19 epidemic?" We used the existing relevant papers as a data source to address the issue and explore the difficulties (see Figure 1). The Scopus database is selected because it covers a large range of articles in a variety of fields, as well as other famous academic journals. For the search, the key phrase is "e-learning" AND "epidemic" AND "challenging." The mentioned review question guides the design of this query. To find papers for study, the keyword is input into Scopus manuscript searching. The searching findings are further narrowed by restricting the publication date to 2020, the year of the COVID-19 pandemic's start, finding 60 items. Furthermore, research that is in the last stages of publication, resulted in 50 publications, limited the outcomes. Publications must explore e-learning in the light of a pandemic as just an inclusion criterion. Publications that are not published in English and are of the remark or reviewing type are not considered exclusion criteria. The findings reduce to 18 publications using such criteria. Additionally, the complete contents of these publications are examined to eliminate any that are only focused on e-learning, problems, or epidemics. As a consequence, the final list includes 10 articles. The complete content of the publications acquired is handled using Mendeley reference management software before being re-read to determine e-learning problems. The emergent topics are then additionally classified into 3 e-learning aspects, namely students, professors, and institutions, using a similar classification [6].

Results & Discussion

This section covers the review's findings, particularly the problems of e-learning especially in face of a pandemic. Students, professors, and institutions of higher learning are the 3 main aspects within the usage of e-learning, and the analysis of all these problems are divided into distinct sub-sections. Table 1, Table 2, and Table 3 outline these issues for students, professors, and educational institutions, respectively. Furthermore, as shown in Figure 2, the discovered difficulties are displayed graphically as a classification.

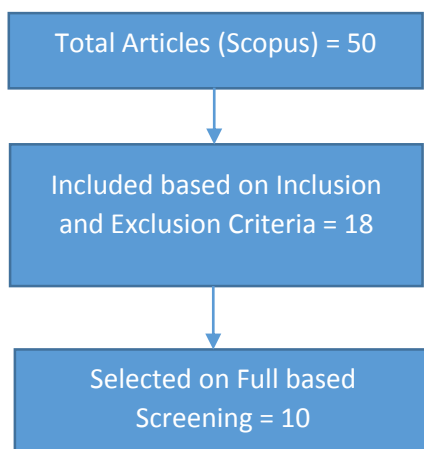


Figure 1 shows a summary of the literature search findings.

Student's challenges :

Since e-learning requires students to learn individually, they frequently face self-regulation difficulties including low willingness to study and inadequate interaction with their classmates. When the students do not have appropriate internet and communication technologies expertise, this self-regulation difficulty may be increased. Students find it hard to perceive intellectual, social, and teaching involvements in e-learning platforms, making virtual learning a struggle for them. This has to do with how effectively an e-learning system supports such presences by using the right skill set. There are also additional problems in respect of e-learning technical support in respect of the entire user's experiences with the platform. These factors include not just the e-learning system's simplicity of use and usability, as well as the perceived accessibility of technological help and how effectively the technology assists students.

Students will find themselves self-accessing multiple education portals for various courses within institutions of higher education when there is no common mechanism for providing online learning. It might be a difficulty for students as well. Finally, because e-learning technologies are typically conducted via the Internet, inadequate internet availability or restricted Internet data bundles are common barriers faced by e-learning learners, particularly students from underdeveloped countries with low Internet access and speed as mentioned in Table.1 [8].

The difficulties that Teachers Faced :

Teachers who seek their teaching methods or overall activities disturbed by the revolutionary way of teaching are taken by big shock by the epidemic. It might be a big issue for teachers who are not used to or educated in producing and presenting instructional materials for an online portal. For instructors providing e-learning, professional training in designing and presenting information may be required, as the educational materials must integrate both instructional and graphical design to be efficient. In terms of operations, teachers spend longer time planning to e-learning than for offline teaching, resulting in a larger burden with rising quantities of teaching materials. Because the course is delivered entirely online, professors might find it challenging to monitor and sustain students' involvement in both asynchronous and synchronous situations. This circumstance may have an impact on the evaluation elements of the e-learning platform as presented in Table.2 [9].

Problems affecting the institutions :

Institutions of higher education should assure that they adequately promote e-learning adoption within all these difficult circumstances not just technologically as demand from students as stated earlier, however also financially. Financial assistance might take the form of financial provisions and assuring that the e-learning development is not prolonged. These supports could be necessary for a successful e-learning deployment. Institutions of higher education will suffer a shortage of acceptance issue when e-

learning is adopted, that might be caused by changing management problems including as inadequate knowledge and motivation within users. The problem with change resistance remains a challenge for institutions of higher education throughout this era, as the present situation requires the teaching and learning process to change modes. As a result, higher education institutions are urged to use their expertise of student and teacher requirements and problems to create a trustworthy e-learning platform. Although numerous studies focused on the problems experienced by students and teachers, our analysis reveals that works describing difficulties experienced by higher educational institutes are so few [10]. While addressing the problems facing institutions of higher education, professors, and students as separate groupings, it may appear that every group has unique challenges. However, we've discovered that all these problems are interlinked and can have an impact on one another, including the self-regulation problems that both students and teachers experience, as discussed in the previous section, or how teachers' shortage of training can affect their capabilities to keep students engaged online. To effectively deploy e-learning in the scenario of an epidemic, it may be important to investigate how these issues are connected and impact one another [11].

Challenges of E-learning :

There is now a massive, disrupting move from the traditional academic infrastructure to a digital educational network as a result of the epidemic issue. To create effective study material for an online class, need comprehensive teaching materials. Lacking digital academic abilities in teachers, time-consuming virtual teaching planning, limitations of adequate technological assistance, and congestion overloading within online learning portals are some of the problems of digital learning. Students, too, have difficulties as a result of their shortage of a correct learning approach, a shortage of appropriate learning resources, greater engagement in classroom learning, inability to self-discipline, and insufficient teaching methods at some of their homes throughout self-isolation as mentioned in the Table.3 [12].

Table 1 Existing research on students' e-learning problems throughout pandemics is shown.

Descriptive issues	Categories of inductive issues	issues	Literature
Students	Technology and communication issues are a major concern.	Online connectivity issues	1
		Online data bundles are limited, and Internet access and capacity are limited.	2
	Issues are supported by the eLearning platform.	Insufficient devices/technical equipment.	3
		Technologies for learning are different.	4
		User-friendliness	5

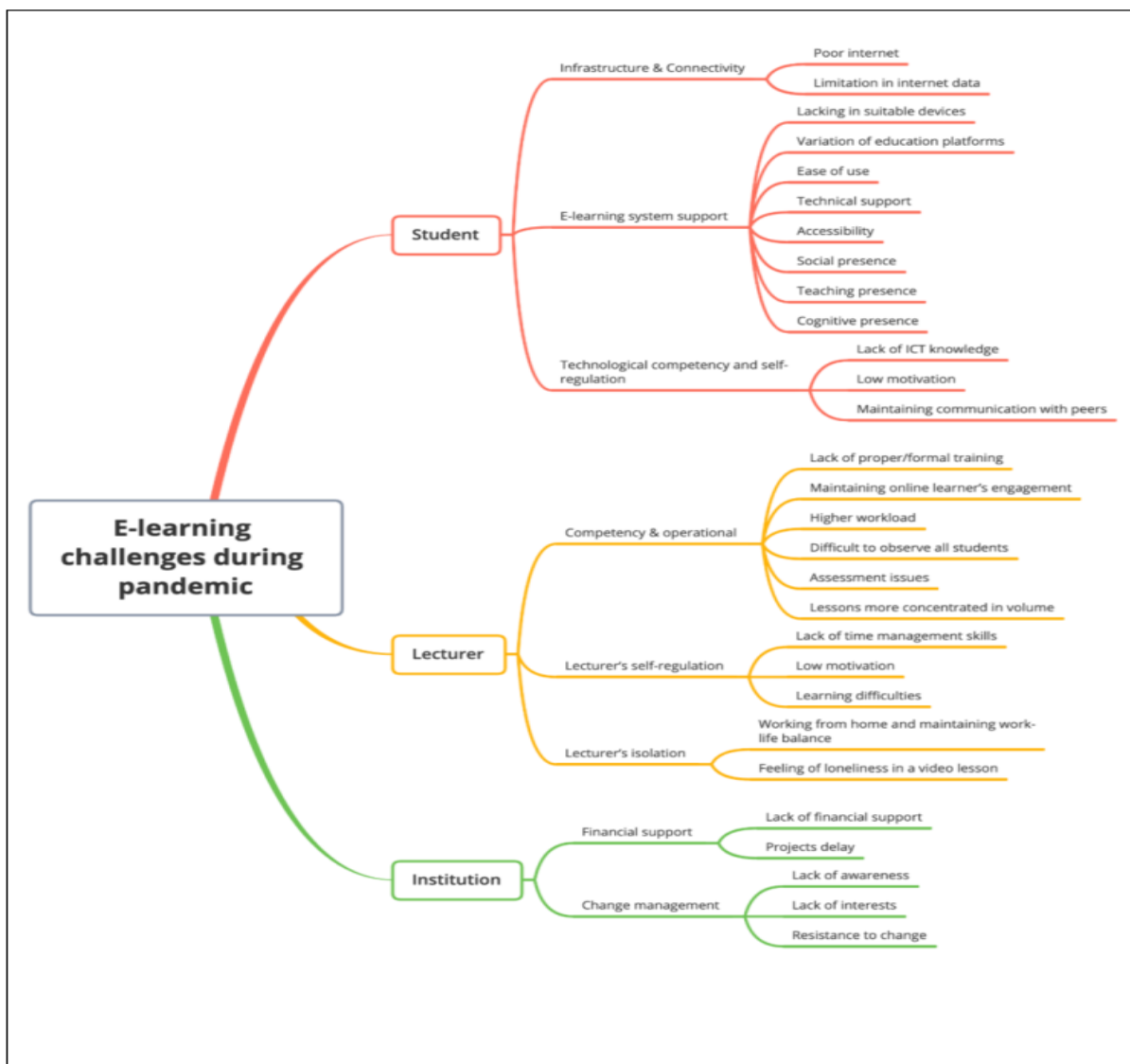
		Accessibility of technical assistance	6
		Accessibility	7
		Presence in social situations	8
		Awareness is a skill that is taught.	9
		Intellectual presence	10
	Technical Proficiency and self-regulation problems	Motivation is weak.	11
		Lacking ICT expertise	12
		Maintaining strong peer interaction	13

Table 2 Recent research on Teacher e-learning problems during pandemics has found that.

Descriptive issues	Categories of inductive issues	issues	Literature
Lecturers	Competencies and technical problems	an absence of formal/proper training	4
		It's difficult to keep online learners engaged/involve students.	5
		Increased workload	6
		It's challenging to keep track of students	7
		Problems with evaluation	8
		Lessons with a higher volume of content	9
		Self-regulation is a difficulty for teachers.	Learning problems
		Absence of time managing abilities	11
		Lower motivation	12
	Isolation is a problem for teachers	Managing a work-life balance while working at home	13
		In a video class, a student expresses his or her loneliness.	15

Table 3 shows existing research on e-learning issues faced by institutions during epidemics.

Descriptive issues	Categories of inductive issues	issues	Literature
Institution	Problems with financial assistance	Lacking financial assistance	14
		Works are delayed.	16
	Difficulties in Organizational Change	Lacking knowledge	17
		Interests are lacking.	18
		Change apprehension	19



Throughout the Epidemic, E-learning technologies played a significant impact. Instead of so many difficulties the eLearning also has some benefits that we are explaining in this section. During the COVID-19 crisis, e-learning has shown to be quite useful. Throughout this continuous epidemic, many students have turned to Ed-tech as well as other online portals for their education [15]. Online portals have been providing free access to online classrooms to enable students to study from the convenience of their own homes and there has been a substantial increase in the number of students leveraging such education applications. Digital platforms educators are also started to attend additional live classes. Additionally, is already providing students with free access to online courses. Another online platform, Coursera, has announced that several institutions across the world would have free accessibility to its programs [16].

Conclusion :

From the perspectives of teachers, students, and educational institutions, this research offers an overview of the problems in e-learning throughout the worldwide COVID-19 epidemic. We select and categorize issues inductively into motifs and classified them into the stated points of interest after reviewing 50 research, such as the current study that resulted from the Scopus database during 2020. We recognized that students face challenges not just in terms of traditional technical and self-regulation concerns such as a shortage of ICT expertise and lack of motivation, however also in terms of Internet access and e-learning assistance. We also realize that some of the problems which students experience, particularly those related to self-regulation, are experienced throughout teachers. Teachers are also impeded in providing e-learning resources through competency and operational difficulties including a shortage of training ensuring student interest, and a greater teaching burden. Teachers are also concerned about isolating problems including loneliness in video lessons and managing a work-life balance throughout a working from home environment. Finally, the worldwide pandemic poses several institutional obstacles, including gaining financial assistance and dealing with change management concerns, including resistance to innovation and a shortage of enthusiasm in implementing e-learning. The study's scope is constrained by the selection criteria is used and the scholarly database is used.

References :

1. Aboagye, E., Yawson, J. A., & Appiah, K. N. (2021). COVID-19 and E-learning: The challenges of students in tertiary institutions. *Social Education Research*, 1-8.
2. Adeoye, I. A., Adanikin, A. F., & Adanikin, A. (2020). COVID-19 and E-learning: Nigeria tertiary education system experience.
3. Ananga, P. (2020). Pedagogical Considerations of E-Learning in Education for Development in the Face of COVID-19. *International Journal of Technology in Education and Science*, 4(4), 310-321.
4. Mseleku, Z. (2020). A literature review of E-learning and E-teaching in the era of Covid-19 pandemic. *SAGE*, 57(52), 588-597.
5. Aini, Q., Budiarto, M., Putra, P. O. H., & Rahardja, U. (2020). Exploring E-learning Challenges During the Global COVID-19 Pandemic: A Review. *Jurnal Sistem Informasi*, 16(2), 57-65.
6. Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic. *Education and Information Technologies*, 25, 5261-5280.
7. Maatuk, A. M., Elberkawi, E. K., Aljawarneh, S., Rashaideh, H., & Alharbi, H. (2021). The COVID-19 Pandemic and E-learning: Challenges and Opportunities from the Perspective of Students and Instructors. *Journal of Computing in Higher Education*, 1-18.
8. Maatuk, A. M., Elberkawi, E. K., Aljawarneh, S., Rashaideh, H., & Alharbi, H. (2021). The COVID-19 Pandemic and E-learning: Challenges and Opportunities from the Perspective of Students and Instructors. *Journal of Computing in Higher Education*, 1-18.
9. Mahyoob, M. (2020). Challenges of e-Learning during the COVID-19 Pandemic Experienced by EFL Learners. *Arab World English Journal (AWEJ)*, 11(4).

10. Ebner, M., Schön, S., Braun, C., Ebner, M., Grigoriadis, Y., Haas, M., ... & Taraghi, B. (2020). COVID-19 epidemic as E-learning boost? Chronological development and effects at an Austrian university against the background of the concept of "E-Learning Readiness". *Future Internet, 12(6)*, 94.
11. Alipio, M. (2020). Education during COVID-19 era: Are learners in a less-economically developed country ready for e-learning?.
12. Hoq, M. Z. (2020). E-Learning during the period of pandemic (COVID-19) in the kingdom of Saudi Arabia: an empirical study. *American Journal of Educational Research, 8(7)*, 457-464.
13. Shahzad, A., Hassan, R., Aremu, A. Y., Hussain, A., & Lodhi, R. N. (2021). Effects of COVID-19 in E-learning on higher education institution students: the group comparison between male and female. *Quality & quantity, 55(3)*, 805-826.
14. Singh, H. K., Joshi, A., Malepati, R. N., Najeeb, S., Balakrishna, P., Pannerselvam, N. K., ... & Ganne, P. (2021). A survey of E-learning methods in nursing and medical education during COVID-19 pandemic in India. *Nurse education today, 99*, 104796.
15. Azlan, C. A., Wong, J. H. D., Tan, L. K., Huri, M. S. N. A., Ung, N. M., Pallath, V., ... & Ng, K. H. (2020). Teaching and learning of postgraduate medical physics using Internet-based e-learning during the COVID-19 pandemic—A case study from Malaysia. *Physica Medica, 80*, 10-16.
16. Sheth, S., Ganesh, A., Nagendra, S., Kumar, K., Tejdeepika, R., Likhitha, C., ... & Chand, P. (2020). Development of a mobile responsive online learning module on psychosocial and mental health issues related to COVID 19. *Asian Journal of Psychiatry, 54*, 102248.
17. Gomez, I. N. B. (2020). Reflections on the role of occupational therapy programmes on the mental health of stakeholders' transition to e-learning during the COVID-19 pandemic. *World Federation of Occupational Therapists Bulletin*.
18. Soni, V. D. (2020). Global Impact of E-learning during COVID 19. *Available at SSRN 3630073*.
19. Alqahtani, N., Innab, A., & Bahari, G. (2021). Virtual Education During COVID-19: Exploring Factors Associated With E-Learning Satisfaction Among Saudi Nursing Students. *Nurse educator, 46(2)*, E18-E22.