

# The Impact of Covid-19: A Literature Review on the Challenges in E-Learning

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## Abstract

The pandemic of Covid-19 has compelled numerous companies worldwide to use several growing online communication platform technologies fully. Educational institutions are among the organizations that have urged students and educators to communicate through a variety of online communication platforms in order to maintain an ongoing educational process. However, the Covid-19 pandemic has created challenges for the worldwide education sector when using these expanding technologies. The challenges were highlighted in many recent studies. However, compared with other developing countries, fewer studies were conducted in Malaysia. This study aimed to identify the challenges faced by educators and learners in online learning impacted by Covid-19 through a literature review. The challenges mentioned are lack of facilities, lack of social interaction among students and educators, poor internet connection, motivation issues, assessment and evaluation process. This literature review implies that they could facilitate relevant authorities such as educational institution administrators, officers serving the Ministry of Higher Education and policymakers in designing effective measures to tackle the challenges.

## Keywords

Impact of Covid-19, Online Learning, Language Learning, Challenges in E-Learning

## 1. Introduction

Covid-19 pandemic declared by the World Health Organization (WHO) in 2019 has impacted people's lives. The infectious new coronavirus named SARS-CoV-2 was discovered in late 2019 causing the deadly Coronavirus disease (Covid-19).

Due to its contagious nature and fast spread, WHO and governments across the globe put an effort to subdue it. Despite widespread public education on avoiding and halting its spread, the disease has spread internationally to 210 nations and territories, with 342,821,624 confirmed cases of Covid-19 and a death toll of 5,592,617 (Worldometer, 2022). These fast-growing numbers alarmed scientists and governments about the degree to which the disease might devastate the global economy and education (Owusu-Fordjour et al., 2020), alerting them to act promptly to take preventive measures. To contain the spread of the deadly sickness, most governments temporarily closed all educational institutions and prohibited outdoor activities. In Malaysia, the number of Covid-19 cases reported daily increased fast, prompting the government to issue Movement Control Orders (MCOs) requiring residents of Malaysia to remain at home in order to mitigate the spread of the virus. As the sector is seeing today, the Covid-19 pandemic is compelling instructional establishments and universities to rework and adapt to far-flung and online gaining knowledge rapidly. As all public and private establishments in Malaysia will carry out coaching and gain knowledge online (Chung et al., 2020), this surfaced the norm of gaining knowledge entirely virtually, embracing digital learning which began to replace traditional classrooms at the elementary to tertiary level. Most of the tertiary institutions have automated a new pattern of teaching and learning as they provide online courses in their digital classrooms facilitated by educators.

The academic community was resilient, adaptable, and proactive in addressing the obstacles faced during MCO. Chung et al. (2020), an associate professor in UITM, conducted research and reported that lessons, projects, group work, presentations, and evaluations were created in two weeks and implemented using technology. They added that while it is undeniable that online learning is the best solution for ensuring learning continuity in the era of the new norm, there are some drawbacks such as a lack of interactions, observing students' incomprehension through facial expressions, cracking jokes, students' participation, and interaction. These can be accomplished more effectively through face-to-face learning. It is also noted that learners demonstrate a lack of human engagement and difficulty in learning in online study groups, and they prefer face-to-face study groups in comparison to online. Educators had to stay resilient in the face of these rapid changes and prepare classes with urgent notices, but many college learners found it struggling to learn online. Despite the Ministry of Education, the government, educational institutions, policies and preparations, the question of whether educators and learners in Malaysia are prepared for online learning continues. As online learning should be implemented by educators during the Covid-19 outbreak (to restrict student movement), and because it is being implemented for the first time by educators, researchers have identified opportunities to investigate the challenges faced by educators and learners in online teaching and learning (Bibi Noraini & Jihan, 2020).

E-learning has become a norm in higher learning nowadays. Although the

common is observed, it had brought several challenges to educators and learners, especially English educators and learners. Among the challenges faced is a lack of technological skills (Erlangga, 2022) students' participation (Igai & Yunus, 2022), internet connections (Razkane et al., 2021) and conducting online assessments (Hijazi & AlNatour, 2021). Added to the point, Bernama (2022) highlighted that limited to no online teaching experience leads to trials frustrations and endless flaws, mentally draining for both English educators and learners, lack of motivation, difficulty dealing with communication in teaching grammar and lack of technical support.

As a result, this literature review documents the challenges in E-learning as part of Covid-19 impact on the education field. This literature review implies that they could facilitate relevant authorities such as educational institution administrators, officers serving the Ministry of Higher Education, and policymakers in designing effective measures to tackle the challenges.

## **2. Literature Review**

### **2.1. The Impact of Covid-19 on the Education System**

Thanks to various online platforms, the way educators provide high-quality education is changing dramatically (Tadesse & Muluve, 2020). The use of these platforms has become a necessity in the past couple of years due to the restriction on physical gatherings imposed owing to the Covid-19 pandemic. Most countries have had to close schools, training institutes, and higher education institutions due to lockdown and social separation measures enforced in reaction to the Covid-19 outbreak (Preeti, 2020). According to Tadesse and Muluve (2020), the instructional machine and educators have embraced "Education in Emergency" through unique online systems. However, the troubles that educators and newcomers encounter, consisting of online learning, faraway training, and persevering with training, have grown to be a technique for this tremendous international pandemic (Adams et al., 2018). In the dearth of choices, switching from conventional face-to-face training to online training is unique for newcomers and educators. They are being pressured to evolve into a machine they are unprepared for. Hence, this section will be enlightened through two (2) sub-sections which are the impact on the education environment and the impact on the educators and learners.

#### **2.1.1. The Impact on the Education Environment**

Learners, parents, and educators worldwide have felt the unanticipated rippling impact of the Covid-19 pandemic as schools have been shuttered to deal with this global medical emergency. While governments, frontline workers, and health authorities fight to contain the spread, educational institutions work to maintain a high standard of education for everyone during these challenging times (Krishnan et al., 2020). They added that numerous students have experienced psychological and emotional anguish and have been unable to interact successfully at home or in a living space. Concerned authorities and many fami-

lies opted for different strategies to give their children a better experience during this challenging time. Due to school closures and strict containment measures, more families have relied on technology and digital solutions to keep children engaged in learning, entertained, and connected to the outside world. However, not all children possess the necessary knowledge, skills, and resources to stay safe online (Siti Nurshahidah et al., 2020).

Nevertheless, the use of technology for educational purposes became the new norm and projected several modifications in academic provision. The closing of educational institutions has resulted in several changes to their system, most notably in teaching and learning. As stated by Preeti (2020) it affected the learning and schooling structures and teaching and evaluation practices. She also cited that the closure of institutions had affected learners' learning. One urgent action is necessary to maintain continuation in institutions and universities. The use of digital learning tools and platforms became one such action and many educational institutes started using them. Colleges and universities started continuing to provide education by means of learning management software and using open-source as a digital learning solution to operate online classrooms. It was an important step as higher education is vital in determining the country's economic destiny, and the epidemic has heavily impacted the industry (Mohamed et al., 2022).

### **2.1.2. The Impact on Educators and Learners**

Movement restrictions not only impacted the learning of learners, but also affected the measurement of their learning. The lockdown brought changes to the lesson delivery mechanism as well as assessment and evaluation. Numerous examinations and evaluations have been canceled or postponed due to educational institution closures (Mohammad Izzamil et al., 2021). Many colleges and universities have transitioned from conventional classrooms to online classrooms and from offline to online examinations by utilising online assessment tools (Chung et al., 2020). However, online evaluation tools can have drawbacks. There are various measuring inaccuracies associated with online evaluation tools compared to conventional measurement (Bibi Noraini & Jihan, 2020). However, assessment and evaluation are important as they are an integral part of education that measures learning outcomes. Moreover, it gives valid records for employees to compare candidates while recruiting graduates. Burgess and Sievertsen (2020) showed that companies utilise educational credentials such as grade point averages and degree categories to evaluate candidates. Thus, the lockdown affected how fresh graduates are placed in the job market.

New graduates' matching efficiency (the matching between the fresh graduates with the target market of job specifications) is declining as disturbances in candidates' outcomes increase, resulting in increased employment separation rates and slower earning growth. According to Preeti (2020), this is both personally and societally expensive. Additionally, it is difficult to supervise how learners take online courses and to guarantee that they are not cheating on online

tests (Basilaia & Kvavadze, 2020). Adding to the point, online laboratory examinations, practical exams, and performance testing are not feasible. Learners who do not have access to the internet may have difficulties with tests and evaluations (Sahu, 2020). According to Osman (2020), assessing and evaluating learners' performance in online learning is challenging for both educators and learners, mainly when teaching practicum and technical competence, and assessing practical skills is challenging. Learners' assessments are conducted online, with educators, learners, and parents experiencing trial and error, ambiguity, and misunderstanding. Conducting online assessments takes a variety of forms, depending on the educator's convenience and skill and the learners' compatibility. According to Tadesse and Muluve (2020), many schools and institutions have yet to develop effective methods to prevent plagiarism, owing to the enormous student population.

## 2.2. E-Learning

According to Shahzad et al. (2021), technology such as artificial intelligence has transformed conventional education into contemporary learning. Thus, E-learning is a broader word that encompasses technology-based learning through websites, learning portals, video conferencing, YouTube, mobile applications, and a plethora of other free blended learning websites. However, the effectiveness of any information system is contingent upon the system's users (Almaiah et al., 2020). Currently, via the internet, E-learning is boosting students' knowledge and the academic staff's, as well as professional and industry people's abilities (Adams et al., 2018). Thus, in the context of an E-learning system, learners' acceptance of E-learning is seen as a critical factor in determining success. This section will be expanded to a wider view through two (2) sub-sections which are E-learning in higher education and the pros and cons of E-learning to educators and learners.

### 2.2.1. E-Learning in Higher Education

Most institutions of higher education offer online courses to students on and off campus. This is true for education providers in Malaysia where the government invests heavily in higher education. According to a news source, Malaysian institutions, colleges, and polytechnics are using Massive Open Online Courses (MOOCS) to facilitate online teaching and learning. Radha et al. (2020) stated that the online education industry is predicted to increase at a 16.4 percent annual rate between 2016 and 2023. They stated that with the exponential rise of the internet, university teaching and learning paradigms would shift in the next decade to fifteen years. Though virtual education is a common topic of discussion, users' use and acceptance of E-learning is a challenge for every educational institution, established or developing, in any country. According to Almaiah et al. (2020), developed nations are likely to have less anxiety about their learners' desire to embrace and utilise the E-learning system since necessary progressive steps have already been achieved as stated by Almaiah et al. (2020). The prob-

lems associated with implementing E-learning systems in underdeveloped nations remain a reality owing to the developing countries' digital divide (Almaiah et al., 2020).

### 2.2.2. The Benefits and Challenges of E-Learning to Educators and Learners

E-learning enables educators to achieve a greater degree of coverage to properly transmit their message to their target listeners (Ab Wahab & Mohamad, 2022). This guarantees that all learners get the same kind of instruction while using this form of instruction. However, E-learning has not yet gained equal status in different regions, mainly due to challenges in its practical usage. Despite the popularity of online education, many population segments deliberately avoid it, mainly because of a misleading image (Doucet et al., 2020). According to Krishnan et al. (2020), despite the growing popularity of online courses, most students choose conventional classroom instruction. In comparison to online education, physical classroom instruction is more natural, and students have the chance to argue, think, and discuss with their classmates and professors. They concluded in their results that face-to-face instruction is critical for practical learning since E-learning may encounter unanticipated technological difficulties at any moment. In addition to that, E-learning is always reliant on a stable internet connection with a high-bandwidth connection. It is not always successful, owing to a lack of connection and severe energy scarcity. E-learning is poorer in rural regions than in metropolitan ones, due to a lack of infrastructure required for online courses, which results in students being unable to attend virtual classrooms (Mohammad Izzamil et al., 2021). However, E-learning is more pronounced these days due to the pandemic and many countries are trying out to adopt it to ensure continuity of learning.

E-learning platforms were critical throughout this pandemic, assisting schools and colleges in facilitating student learning when universities and schools were closed (Subedi et al., 2020). While adjusting to new changes, assessing and assisting staff and student preparedness is necessary. Learners with a fixed mentality have difficulty adapting and adjusting, but learners who have a growth mindset readily adapt to a new learning environment. There is no one-size-fits-all methodology for online learning due to the diversity of disciplines and their associated demands. Diverse disciplines and age groups need distinct methods for online education (Doucet et al., 2020). Additionally, online education enables physically challenged students to study more freely in a virtual setting that requires less mobility (Basilaia & Kvavadze, 2020).

### 2.3. Challenges in E-Learning

#### 1) Lack of ICT Infrastructure and Support

The current literature research highlighted several barriers to implementing an E-learning system. According to Almaiah et al. (2020), the difficulties may be categorised into four categories: a) technology difficulties, b) individual difficul-

ties, c) cultural difficulties, and d) course difficulties. It is discovered that these problems vary significantly throughout countries owing to diverse cultures, settings, and preparedness. For example, the primary barriers to E-learning system adoption in underdeveloped nations were a lack of ICT competence, inadequate network infrastructure, and a lack of content creation (Aung & Khaing, 2015). Another research discovered that system features, internet experience, and computer self-efficacy are the primary impediments to effective E-learning system adoption in Pakistan (Kanwal and Rehman, 2017). In similar research done in Kenya, three significant barriers to E-learning were identified: insufficient ICT infrastructure, a lack of technical skills, and budgetary restrictions (Tadesse & Muluye, 2020). According to research conducted by Rahim & Chandran (2021), the key challenges impeding the effective implementation of current E-learning programs include poor interface design, insufficient technical assistance, and a lack of IT skills.

A study conducted by Aboagye et al. (2020) as cited in Heng and Sol (2021) identified that key challenges faced in implementing E-learning are related to technological infrastructure and digital competence, socio-economic factors, assessment and supervision, and heavy workload and compatibility (as cited in Heng and Sol, 2021). Thus, the common problems in practicing E-learning are related to technological competence, technological infrastructure, lack of content creation, individual and cultural differences. Moreover, Heng & Sol (2021) stated that the lack of accessibility to the internet was a great challenge for learners of Southeast Asia. However, issues with the internet are not the only problem highlighted in the region. A study conducted in the Philippines identified the learning environment at home to be the greatest challenge (Barrot et al., 2021). Similarly, a study conducted in Malaysia by Bibi Noraini and Jihan (2020), revealed six significant challenges for universities, educators, and students when implementing E-learning methodologies: ICT infrastructure, required online skills, platform security, motivation for lecturers and students while using the online method, and context-specific.

## **2) Lack of Budget and Funding in some Higher Institutions**

Furthermore, accessibility cost, flexibility, pedagogy, lifelong learning and educational policy are often the highlighted issues in E-learning (Alkhezzi & Ahmed, 2020). Numerous nations have significant challenges in internet connectivity and the availability of digital gadgets. While economically disadvantaged students in many developing nations cannot afford online learning gadgets, online education exposes the learner to increasing screen time (Hove & Dube, 2021). As a result, offline activities and self-exploratory learning have become critical for pupils. They added that lack of parental direction, particularly for young learners, is another issue, primarily when both parents work. There are practical concerns with physical workplaces favorable to various learning modes as they may have difficulties integrating online learning tools (Bibi Noraini & Jihan, 2020). Institutions will need to budget for both per-learner and overall expenditures associated with online learning versus more conventional

modes of instruction. Cost may become more bearable if courses can be leveraged over a larger learner (Ab Wahab & Mohamad, 2022). Additionally, a school might shift some expenses to learners and parents by pushing them to purchase any essential multimedia equipment for online education, such as PCs, laptops, printers, or scanners (Bozkurt et al., 2020). However, there are also restrictions on internet access in some places, creating further complications.

### 2.3.1. Challenges among Educators

Several of the challenges that educators and learners may face include familiarity with online tools, the capacity to optimize the benefits of the medium, teachers' availability during times of need, and the ability to provide feedback and prompt responses from learners due to a limited number of computers, internet access, mobile network access, and a shortage of ICT-trained teachers in developing countries (Morgan, 2022).

As educators, they face a variety of challenges in E-learning, including limited exposure to platform setup (zoom meetings, Google Hangout Meet, Telegram, and Google Classroom, among others), concerns about student participation, and a lack of assessment methods for determining course learning outcomes (Zhu et al., 2018) and a lack of expertise developing e-content (Bozkurt et al., 2020). Additionally, educators are concerned about students' devices and Internet access to participate in online classes. Technical difficulties encountered by learners participating in activities such as not having an email to create a new account, being unable to explore how to use tools on the platform, and not knowing how to search for uploaded assessments create another panic among educators (Bozkurt et al., 2020). Moreover, in their study conducted during the Movement Control Orders in Malaysia, Abdul Rahman et al. (2021) noted that the inability of instructors to boost and sustain student participation also is a problem related to E-learning. They also highlighted that attracting and engaging students in the online learning process was the most challenging. This is also previously stated by Ab Wahab & Mohamad (2022) who discussed the absence of engagement from the teacher's standpoint. They claimed that when educators are unable to see their learners' faces, they cannot detect symptoms of attentiveness or inattention and hence are unable to intervene swiftly.

According to a study conducted by Bibi Noraini and Jihan (2020), educators face six (6) significant challenges in online learning, including the following: 1) learners were less focused on online learning; 2) the platform/medium of instruction was unsatisfactory; 3) learners abandoned learning tools such as books and laptops in residential colleges, and 4) learners' internet access was unsatisfactory to the point that lectures had to be extended from the scheduled time. There were four (4) strategies for overcoming these obstacles. 1) Institutions should provide more comprehensive and e-learning platforms for online learning; 2) educators and learners should have adequate internet access to ensure smooth and uninterrupted online classes; 3) educators should receive workshops or training on managing online classes; and 4) courses requiring mathematical

computation, in addition to a more suitable teaching platform, the student population per group should be small enough to accommodate ten.

### 2.3.2. Challenges among Learners

Many previous researches have examined a variety of difficulties encountered by both learners and educators. Learners encountered numerous obstacles, including administrative concerns, social interaction, academic and technical abilities, motivation, time constraints, restricted access to resources, and technological difficulties (Barrot et al., 2021). Learners encountered online education difficulties, including a lack of online student discipline, faculty resistance, and the high expenses connected with online production and delivery (Shahzad et al., 2021). These difficulties are comparable to those identified in previous research, including unclear duties and responsibilities, a delay in receiving feedback from educators, a lack of technical support, a heavy reliance on technology, and poor learners performance and satisfaction (Chung et al., 2020). Additionally, difficulties might occur due to a lack of desire and a feeling of alienation and isolation, as learners see themselves as an online component (Sahu, 2020). Learners perceived it to be less appealing than other modes of instruction, unfriendly to learners, and insufficiently participatory to foster a sense of connection with educators and peers through social media platforms such as Facebook, WhatsApp, WeChat, and email (Haleem et al., 2020). Meanwhile, various issues have been identified, including learners' attitudes, personnel resources, time limits, lecturer self-efficacy, and technological difficulties (Zhu et al., 2018).

The coronavirus lockdown may lead individuals to experience tension, dread, and anxiety, such as a fear of death or their families dying (Sahu, 2020). This stress might hurt the learners' mental and physical health. The pandemic may have had a significant impact on learners' careers or may have prevented them from graduating this year's higher education undergraduate students (Niranjan, 2020). All learners may not have positive interactions with online learning apps and platforms (Haleem et al., 2020), as some learners may be more active while others may take longer to get acquainted with the system. The loss of social connection and the difficulty of learners to create study groups, which they formerly enjoyed, are among some of the difficulties they now face. According to Tümen (2020), who conducted a study titled "College Students' Views on Pandemic Distance Education: A Focus Group Discussion", while distance education can be beneficial during a pandemic, certain forms of distance education lack interaction between learners and educators, which has been a significant issue. The data indicate that most viewpoints expressed concerns about the adverse effects of virtual education on learners' learning, including a lack of connection, communication difficulties with educators, tests, assignments, time management, and conventional educational traditions. Participants in the study mostly complained about not having enough opportunities to challenge lecturers. Parallel to this conclusion, the researchers discovered that learners could not raise questions as they arose, forcing them to wait for a further encounter with

the lecturers (Ab Wahab & Mohamad, 2022).

Abdul Rahman et al. (2021) who conducted an exploratory sequential sentimental analysis during MCO in Malaysia revealed that learners in rural areas had trouble joining their online classes and sometimes could not join at all due to a lack of access to the internet. They also pointed out that existence of a gap in free-flowing interaction, a lack of engagement among students, and a lack of understanding of self-directed learning, and some learners were uncertain about coping with their assignments and projects. Another study that studied the impact of Covid-19 on university students learning life during the first peak of the pandemic in Malaysia discovered that work and information overload received from instructors, inadaptability and unfamiliarity with the new online learning environment, and personal health challenges related to stress and anxiety as obstacles learners faced during E-learning phase amid the pandemic (Al-Kumaim et al., 2021).

It is necessary to evaluate the learner's anxiety about ODL activities. Before organizing ODL activities, educators must examine learners' Internet access and computer skills, which might induce concern (Bozkurt et al., 2020), especially in sub-rural and rural areas. Will students complete the tasks outlined in ODL activities independently, without physical connection with peers or lecturers, and how motivated will students be to complete their studies when faced with interruptions and problems at home? The factors mentioned earlier seem to significantly influence students' preparedness for online learning and academic achievement (Shahzad et al., 2021).

### 3. Implication and Conclusion

The Covid-19 pandemic has impacted the education arena globally, and many educational institutions face challenges due to this sudden outbreak which led to the new norm of nearly fully integrating technology into daily lives, especially in educational institutions. On the positive side, this pandemic has allowed all parties to explore and push the boundaries of educational institutions worldwide to upgrade their teaching approaches and facilities. In this paper, the researchers highlighted the impact of Covid-19 on the educational system which was seen from the angles of the educational environment and among educators and learners. Added to that is E-learning which was viewed on the pros and cons, a few challenges educators and learners face in online teaching and learning, such as lack of facilities, lack of technical skills, lack of social interaction among students and educators, poor internet connection, motivation issues by both parties, difficulties in assessing and evaluating students. Hence, the authorities need to address these issues to improve the affected education system.

The sudden strike of the virus had left a massive impact on the educational system and environment as a whole. To sum up the findings of the paper, it is found that many past studies highlighted the impact of Covid-19 on the education system which opened the doors to the problems which resulted in the chal-

allenges in E-learning. Movement restrictions not only impacted the learning of learners but also affected the measurement of their learning. The result of the restrictions forced educators and learners to switch from traditional learning to online learning as a new norm. One of the spotlights was more families have relied on technology and digital solutions to keep children engaged in learning, entertained, and connected to the outside world. However, not all children possess the necessary knowledge, skills, and resources to stay safe online. E-learning does not seem to always be fond of the winning side. Even though E-learning enables educators to achieve their objectives in teaching and assist schools and colleges in facilitating students' learning, it has always been reliant on a stable internet connection with a high-bandwidth connection, and the rural lack of infrastructure required for online courses resulted in learners being unable to attend virtual classrooms. Online laboratory examinations, practical exams, and performance testing are not feasible as the focus goes down to the assessment. Learners who do not have access to the internet may have difficulties with tests and evaluations. The challenges in E-learning are a lack of ICT infrastructure and support among educators and learners and insufficient funding among educational institutions. The challenges between the educators and learners are interconnected to each other such as a limited number of computers, internet access, mobile network access, and a shortage of ICT-trained teachers.

It is vital that the findings of this paper could alert relevant authorities such as educational institution administrators, officers serving the Ministry of Higher Education and policymakers. They need to develop a good plan and carry out measures to overcome the challenges to ensure the effectiveness of online teaching and learning. Universities and educators need to create programs to make learners aware of the challenges and to inform them of how to overcome them, motivating them to embrace online learning. University administrators should include in their plans to upgrade their online platforms to better ones and provide training opportunities for lecturers to familiarize themselves with the E-learning systems, enhancing knowledge on creating content and delivering them digitally. These measures are crucial in preparing the stakeholders of the education field for E-learning and to be prepared for any plans of education in an emergency in the future.

### **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

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