

E-Learning Challenges in Private Higher Education Institutions During Covid 19: The Case Study of MCBS

Hesham Magd*, Ph.D.

Associate Dean – Quality Assurance & Accreditation and Faculty of Business & Economics
Head, Modern College of Business & Science (MCBS), Muscat, Oman,
Hesham.Magd@mcbs.edu.om

Muthla Al Busaidi

Lecturer, Management and Law Department, Faculty of Business and Economics, Modern
College of Business & Science (MCBS), Muscat, Oman

Ahmed Nzomkunda

Lecturer, Transportation, Logistics, and Safety Management Department, Faculty of Business
and Economics, Modern College of Business & Science (MCBS), Muscat, Oman

** Corresponding Author*

Abstract

Purpose: In Oman, as any other parts of the world during the pandemic, a lot of industries were affected by it where education is one of them. The main aim of the article is to identify the challenges that the Private Higher Education Institutions focusing on MCBS have been affected during COVID-19 taking into consideration students and faculty perspective.

Methodology: To get better results of the research paper, primary research represents a vital method in offering insights into the challenges of e-learning during CoVID 19. However, the authors decided to offer a literature review to reach a conceptional framework and then it will be investigated at a later stage through primary data collection.

Findings: There were challenges faced from the lecturer perspective and student perspectives which were common. The issues discovered after converting to online learning including technical issues, online illiteracy, self-motivation, social status, difficulties in assignment or examination submissions, attendance, and participation. There were a few differences in terms of the challenges between the student and learner however most common factor was the technical issues where both domains face.

Research implications: Due to the limited time constraint, the maximum number of respondents which was intended, could not be achieved to give the paper better insights to data.

Practical implications: The survey formulated in this study would assist the country in formulating a better understanding of policies in regarding to e-learning and enhancing them as well, however this research is limited to private sectors and not public.

Originality: We hereby declare that this research paper was not copied from anyone. The work contained in this research paper has not been submitted to any journal for publication.

Keywords: E-Learning, COVID-19, Higher Education Institutions, Challenges, Opportunities.

Category: Literature Review Paper

1. Introduction

With the recent outbreak of COVID-19 pandemic, a lot of businesses were forced to let their employees work from home. Most of these businesses didn't have the proper resources to adapt. Higher Educational Institutions are a good example of the businesses that were affected by the rapid change. In higher education institutions, the adaptation of blended learning has increased during the 21st Century (Mozelius and Hettiarachchi, 2017). Blended learning is the combination of both traditional teaching and learning style and online learning where students are exposed to. Once the spread of the virus was eminent, these institutions had no choice but to move from a traditional face to face teaching and learning style to a fully online style. Online learning is a concept that has been introduced in the educational system a while now but not all were practicing it until recently. Some Higher Education Institutes in Oman adapted fast and moved on with their operational processes in fully teaching online, but some institutes had to close as they didn't have the proper resources for the change.

2. Literature Review

2.1 COVID-19 in General

There were a lot of speculations that COVID-19 wouldn't spread beyond China but in due time, people all around the world were infected with the virus due to the movement of people from one place to another (Ozili et al., 2020). Since the symptoms aren't visible as soon as one is infected, it was easy for people to spread it to others unknowingly. Since January 2020 where the pandemic became a worldwide problem, about 7 million people were infected worldwide forcing countries to implement quarantine and lockdown procedures so as to avoid further spread of the virus (Shen et al., 2020).

Covid-19 hit Oman hard as most countries around the world. In the beginning of 2020, the government implemented some policies and procedures that citizens and residents to follow. These included the government being on lockdown and forcing most companies to temporarily shut down and some working from home. Surveillance and control measures were activated by the ministry of health with regard to entry and exits of the individuals in different ports of Oman (Al Ghafri et al., 2020). The author further explained that by September 2020, Oman registered a total of 86,380 cases and 705 deaths.

Once the pandemic became a health emergency in Oman, a lot of businesses had to redirect their operations online to avoid the physical contact amongst employees and customers, but some had to temporarily shut down due to not having the resources to move all their operations online. The country's economy was failing because of businesses not generating profits as they used to before. There was a shortage in demand for certain products and services because the demand for health and safety was higher than the social contact, this threatens all of Maslow's hierarchy of needs layers (Hagerty and Williams, 2020).

2.2 COVID-19 in Higher Education Institutions

The pandemic Covid-19 has affected higher education institutions around the world. In India, higher education institutes were impacted by covid-19 in several ways including; all educational activities were destabilized, mixed impact on academic research and professional development, the educational assessment system was severely affected and employment opportunities decreased

(JENA, 2020). In Nigeria, international education was reduced, Higher Education Institution academic calendar was disrupted, both local and international conferences had to be cancelled, budget cut for higher education institutions, and examinations were cancelled or postponed (Jacob et al., 2020).

Berezhna and Prokopenko (2020) explained that due to the spread of Covid-19, the Ministry of Education and Science in Ukraine issued orders where Higher Education Institutions had to adjust their operations to meet the Ministry of Health requirements in avoiding further spread of the virus. These orders were to switch to fully online teaching and learning for all undergraduate, graduate, and post-graduate programs, no holding of any sort of events, sending of doctoral students abroad and within Ukraine was prohibited, and also for the institutions that had dormitories, the permit monitoring system was enhanced to fit the Covid-19 requirements.

Not only has Covid-19 disrupt the way students' learning by moving from a traditional face to face means of learning to conducting classes fully online. Although some universities adapted quite well with this in the UK, there were a lot of financial loses throughout UK Universities due to the pandemic. Burki (2020) explains that as much as the Higher Education Institutions in UK have quickly adapted to e-learning, they have lost about £790 million when the pandemic hit. Due to the lockdown, most of their operating activities that brought them revenue had be shut down due to the regulations. These activities include conferences, catering, and accommodation for local and international students. Since everything was done online, most students receded to their homes where they could avoid having living expenses in campus accommodations as life during the pandemic was hard enough.

2.3 E-Learning in General

Due to the spread of COVID 19, e -learning/online education becomes a global strategy for implementation across higher education institutions due to the experienced global lockdown. In view of this, educational leaders consider e-learning/online education a crucial strategy for institutional growth and sustainability (Al Odeh, 2019), and students who were enrolled in e-learning/online courses performed better than the ones who were admitted to traditional face to face classes (U.S. Department of Education, 2010).

E-Learning has been defined in so many ways by different authors (Musa & Othman, 2012). Parsazadeh et al. (n.d.) defines e-learning as the outcome from merging technology with education. Teo (2011) defined it as the use of electronic resources for teaching and learning. Masrom et al. (2008) defines e-learning as learning from the use of internet or intranet. Sangra et al. (2012: 152) defined e-learning *as an approach to teaching and learning, representing all or part of the educational model applied, that is based on the use of electronic media and devices as tools for improving access to training, communication, and interaction and that facilitates the adoption of new ways of understanding and developing learning*. With different definitions given by several authors, they all end up stating the same thing. Within the context of this paper we define e-learning as a form of knowledge sharing platform that higher education institutions implement to either use it partially (blended learning) or fully online delivery that allows learners to access information from electronically wherever they are located.

Blended learning is a form of learning that merges both conventional educational style with technology (Hoq, 2020). This was first introduced before exclusive technology-based learning. Several authors state that blended learning presents more advantages since it incorporates teacher-student interaction, decreases the procrastination posed in asynchronous learning and motivates

learners to participate more during virtual classes with both fellow students and lecturer (López-Pérez et al., 2011; Tayebinik and Puteh, 2013). Some authors argue that exclusive technology-based learning provides learners the opportunity to learn on their own pace with far more thorough research on subjects to achieve their desired outcome (Odunaike et al., 2013; Rhema, 2013).

As e-learning has been adapted due to COVID 19, it important to demonstrate the great benefits of implementing such concept in higher education. One of the greatest benefit of e-learning is that people gained a platform where they could learn from anywhere they are in the world due to having an increased accessibility to information (Ragan, 2018; Al Qahtani and Higgins, 2013; Simonson et al., 2009; Bhuasiri et al., 2012). Students have control over their learning process and can study at their convenience and geographically is not restricted (Raoe, 2011; Riggs and Linder, 2016; Dutta et al., 2011; Bhuasiri et al., 2012; Hanover Research, 2009). Diversity is another benefit where different students with different backgrounds can be placed in the same class where students are more open, more creative, more innovative, and not constrained with their own ideas, and they will tend to think outside the box (Al Odeh, 2019). Additional benefits that were documented in the literature are improved teaching, cost effectiveness (Aitken, 2015), cost effectiveness (Welsh et al., 2003), and consistent delivery of contents, breaks boundaries of time and space (Shraim and Crompton, 2015; Wang, 2011; Ruiz et al., 2006; Zhang et al., 2004).

2.4 Challenges of E-learning across the world

Almaiah et al., (2020) categorized challenges of E-Learning into four main categories which includes individual, technological, course and cultural challenges. The authors revealed how the main challenges priorities varied from whether they were a developed or developing country, the reason for this is because of different cultures and readiness. For example, developing countries suffered mostly from lack of internet infrastructure and poor ICT knowledge. In addition, inadequate technical support is, unsuccessful adaptation of e-learning system is a major issue. Whereas Dhawan (2020) paper associates the biggest problems with online learning is mainly associated with modern technologies such as downloading errors, login problems, issues with video or audio clarity. Other general problems found was that students find e-learning to be unengaging and boring due to the lack of proper two-communication. Aboagye et al., (2020) associated similar challenges in this literature such as institutions are not prepared and not educated well enough to convert their system to an electronic learning. Besides, many lecturers suffered with upgrading existing practices and pedagogies to be more innovative.

Qureshi et al., (2012) explained that from the literature review and survey conducted, several e-learning issues were identified relevant to Iqra University in Pakistan including technical difficulties, access to computers, English competency, need for face-to-face interaction, resistance to change, student assistance and computer literacy. Whereas in an article written by Tarus et al., (2015) based on implementation of e-learning in Kenyan Universities, the authors identified the challenges of e-learning including inadequate technological and e-learning infrastructure, financial constraints, lack of affordable and adequate internet bandwidth, lack of operational e-learning policies, lack of interest and commitment among the teaching staff, and amount of time required to develop e-learning content.

As e-learning comes with a lot of benefits such as easy access, learners flexibility and endless materials, Islam et al., (2015) discussed that learning style and culture, pedagogy, technology, technical training and time management are challenges that are faced by academics with regard to e-learning in higher education. Rana et al., (2014) offered similar views and categorized the

challenges into three factors, pedagogical: *The change to e-learning should come with its own pedagogy to suit the entire course concept*, technical: *Technology can sometimes be complicated especially to those who aren't tech savvy and ends up causing issues when it comes to e-learning* and organizational concerns: *The design of the e-learning platform and training of the lecturers to be familiar with how e-learning should be operated were seen to be the most challenging part of the organizational concerns.*

2.5 E-learning in Oman/ME

The movement towards e-learning in the Middle East and Oman is relatively low in comparison to other parts of the world and western universities (Al Odeh, 2019). This contribution due to the slow adoption of the Internet and poor technological infrastructure (Docebo, 2016), while other views indicate that online education represent poor quality education than the regular and traditional higher education (Spinks and Bedi, 2012; Mirza and Al Abdulkareem, 2011).

Osman (2020) discussed the implementation of emergency e-learning adaptation in a public university (Sultan Qaboos University). As the university asked students after the lockdown to use available online technologies to get familiar to the next stage of e-learning. Students were asked to design their own lesson using Moodle, Google Classroom, Seesaw and Schoology. Just before the lockdown in Oman, only 41% of the College of Education courses went online, which demonstrates the level of unreadiness and slow adaptation of online learning during the beginning of the pandemic.

Mohammed et al., (2020) paper based their study on a private college (Middle East College) experience to emergency remote teaching. After physical classes were cancelled, they first introduced ERP model to one department. The study found that the college had to complete the transformation from physical to e-learning through two phases which were completed simultaneously, this included staff development and curriculum transformation. Tawafak et al., (2019) study assessed the effectiveness of e-learning model in Oman, as they discovered e-learning will not only improve the educational process, yet it will also be beneficial for quality assurance purposes. However, they concluded that the biggest limitation would result from the faculties limitation of using online technology to deliver their courses.

2.6 Challenges of e-learning in Oman/ME

Syahrin and Abdalla Salih (2020) presents the main problems found in their study was categorized into three areas, in no specific order: student distraction, untrained faculty in online delivery and technological infrastructure. Slimi (2020) paper analyzed various challenges; however, the author concluded the primary challenge found in Oman was related to technological infrastructure due to the weak internet connection in general. Followed by the next common challenge which was related to the readiness of faculty and students to online learning. Other problems result in audio and video platforms, lack of time management, lack of virtual learning and teaching experience and depression from both students and academic staff due to the pandemic. Secondary level issues showed common such as the culture issues arises, where female students refuse to show their face in a recorded video, pressure from management and lack of policies regarding online teaching and learning. Third level challenges are lack of support from the institution in terms of lack of IT support, lecturer's criticisms and misunderstanding of the notion of quarantine time as students observe it as a holiday time and not online study time.

Mohammed et al., (2020) analyzed the challenges in terms of student, lecturer, and content perspectives. In terms of students, they had diverse range of students, and most are not from the capital Muscat, they lived in rural areas and Internet access were very limited, even though lectures were being recorded however many students seek an online interaction. Living situations also effected not just students, but educators as it was difficult for them to deliver live lectures due to family surrounding. Other factors included difficulties with online interaction and engagement as students were not live on camera and some lecturers, therefore no eye contact or class atmosphere existed causing a strain on teaching and learning.

Based on the study performed in the Kingdom of Saudi Arabia on e-learning during the period of the pandemic, after an empirical study by Hoq, (2020) which identified hardware and software being the first challenges as both are essential for the success and effectiveness of e-learning. The author further discussed other challenges such as internet connectivity, unavailability of instructor and support staff, lack of face-to-face interaction as some students learn differently than others. Furthermore, the shift to e-learning caused psychological issues to both learners and lecturers as they were both not prepared for the drastic change with no knowledge and understanding on the operational side. Technical support, confidentiality and finances were also described by the author as the challenges of e-learning in the Kingdom of Saudi Arabia.

In the analysis of e-learning implementation in Jordanian higher education system, Al-adwan and Smedley (2012) discussed challenges of e-learning affecting three categories; students, instructors and institutions. The authors elaborated that e-learning is challenging to these categories in different ways, some students aren't tech savvy hence not having the proper skills in being successful and effective in e-learning. Instructors lack training in operating e-learning platforms and that they require plenty of time to prepare for their e-learning requirements. Institutions are faced with financial challenges because they must purchase proper resources, hardware, and software for the implementation of e-learning.

3. Research Methodology

The focus of the paper is to review the e-learning challenges facing higher education institutions on a global context and more specifically on an Omani context. The paper focused on an extensive literature review to reach the common challenges to offer solutions to higher education institutions to master e-learning delivery as this is becoming the new normal due to the pandemic. The outcome of this review is the development of e-learning success factors conceptual model. The proposed model is based on the available publications on e-learning challenges across different contexts.

4. Discussion: Global analysis of E-learning Challenges

After a thorough analysis of several articles by different authors regarding e-learning challenges across the world, Middle East and specifically Oman, variety of challenges were discussed depending on the country the research was done. Common e-learning challenges were identified throughout the analysis and was categorized into four areas where they will be discussed below:

Technology: E-learning without technology is like a car without fuel. Fuel ensures the car runs same as how technology allows e-learning to prosper. As technology developed, it provided platforms that are used today in e-learning (Arkorf and Abaidoo, 2015). As it has a lot of advantages in e-learning with endless resources, it is also considered a challenge since not every individual is familiar with technology and wouldn't be able to navigate it. Furthermore, internet

connectivity and access reliability plays a role in the effectiveness of e-learning and from the developing countries, this is still an issue (Musa and Othman, 2012).

Student: Students are the major drivers of e-learning, without students there wouldn't be a point of e-learning or learning in that matter. Students have different learning styles; some learn better on their own, but some need face-to-face interactions. E-learning is more a self-focused learning environment where students take the initiative of using different resources on the internet to enhance their knowledge. Computer literacy comes as a factor affecting some students due to not having interest in technology which could lead to having attitude towards e-learning (Bhuasiri et al., 2012). E-learning allows students from all around the world to enroll into a course which is one of the major advantages of it but keep in mind not everyone speaks English as it the universal learning language very well, as a result, language becomes a barrier for the effectiveness and success of e-learning.

Faculty/Instructor: As students are one of the drivers of e-learning, instructors are as important. The move from face-to-face traditional teaching style especially during the pandemic (COVID-19) has forced instructors to e-learning. Although blended learning was practiced, the move to a fully online delivery style was problematic due to most instructors using the same teaching style not considering the change of pedagogy. As most instructors have been lecturing for quite a period, with the transfer to a fully online delivery style the same pedagogy was used to there. This is one of the main problems that instructors faced and as a result it affected the effectiveness and success of e-learning (McGill et al., 2014).

Culture: Changing technology can be done easily either by updating or purchasing of new equipment, but it is very difficult to change a person's culture as he or she has been living that way for all his or her life. From the analysis done, it's shown that culture was a common e-learning challenge through the middle eastern countries. As part of e-learning, classes were to be taken virtually either on Microsoft teams or zoom at MCBS. For better student and teacher engagement, both cameras from both ends should be switched on. With the camera switched off, it is not clear on whether the student is behind the laptop or just logged in for the purpose of attendance and not for the purpose of learning. The reason the camera feature is switched off goes back to the culture to which the students were raised with. For cultural reason it is considered improper for them to feature their faces and having the lecture recorded and published publicly without their permission or family's permission to allow it.

Institution: Once Covid-19 became a worldwide havoc and higher education institutions were forced to transition to a fully online delivery style. Some of the higher education institutions didn't have the right resources for that transition and a temporarily closure of the institutes was initiated while they worked on getting and implementing the right resources. This can be seen mainly in the case of Oman where only a few higher education institutions had the resources for the transition and went on providing their services after government initiation the lockdown protocols with social distancing in place.

5. Conclusions and Recommendations

According to Osman (2020) who recommended few solutions to the common challenges of e-learning. Students' requirement and technical profiles needs to be assessed early on, specifically for those where there is known to be weak internet connection. Furthermore, digital literacy skills should be implemented for the faculty delivering lectures online, where it is important to integrate various forms of online methods and assessments methods, in addition to providing faculty with

readymade templates in case an online lecture goes wrong, and staff technical assistance are unavailable.

Slimi (2020) suggested to provide regulations to students which is unified from the Ministry of Education where all students much adhere too. Such as to enforce the idea of students as they did for physical face-to-face lecture, regarding commitment to time, attendance, and class participation.

Syahrin and Abdalla Salih (2020) recommended for higher education institutes in Oman to encourage students to find various learning styles and choose which fits them best, where the college or university can provide a list of various learning styles on their website and students can choose the type which fits them the most and thus, the institute can accommodate the learning style into e-learning. As this will enhance student motivation and engagement and will help faculty deliver courses more effectively.

Mohammed et al., (2020) concluded that constant feedback and assessments data of e-learning should be gathered from students and faculty to review progress and solve any upcoming issues. This will in turn provide information on what could go wrong and solve it before it happens.

The Modern College of Business & Science (MCBS) in Oman purchased several Interactive Teaching Consoles (ITC) at the college where faculty would book the classroom where the ITC exists, this method of technological enhancement assists with more student's engagement as it shows a real classroom environment. Regarding the culture issue, where female students refuse to show their face in a video during class as it is recorded, the HEI can provide a confidentiality agreement for each student to sign that the recorded lectures which includes their faces cannot be tampered with for any misuse.

The authors also believe that the government should play a crucial role in supporting with the technology infrastructure, and connectivity issues to enable students to have smooth online courses. Additionally, a governmental marketing campaign to make individuals aware about the importance of e-learning/online to start helping with the change from face-to-face traditional delivery, and the culture of online interactions.

Considering all the issues that were discussed throughout the article, the authors illustrated a conceptional model to help in the success of e-learning (see Figure 1). Figure 1 demonstrates that there are certain recommendations/factors that can be offered to enable the success of e-learning and they are institutional factors; technological factors; human factors and cultural factors.

6. Study Limitations and Future Scope

This research is exploratory, and the research outcomes need to be validated in further studies. Since the article was based on literature review, the researchers used data obtained from different articles from all around the world to determine the common challenges of e-learning in Private Higher Education Institutions. This is considered as a limitation because the extent to which how accurate these challenges are to Oman cannot be validated. Furthermore, majority of these studies were not based during the period of COVID-19 and e-learning challenges as the emergency e-learning adoption in Oman started only in March 2020.

It's essential to note that as e-learning is the new directions that has been adapted by the rest of the world, the authors believe that further research must be carried out to determine the challenges that Private Higher Education Institutions in Oman are facing. This research was merely exploratory in nature and investigating the challenges from various countries and identifying the common ones, therefore there is a need to conduct an empirical study to determine the applications of these

specific challenges in the context of PHEIs in Oman and validate the model proposed by the authors.

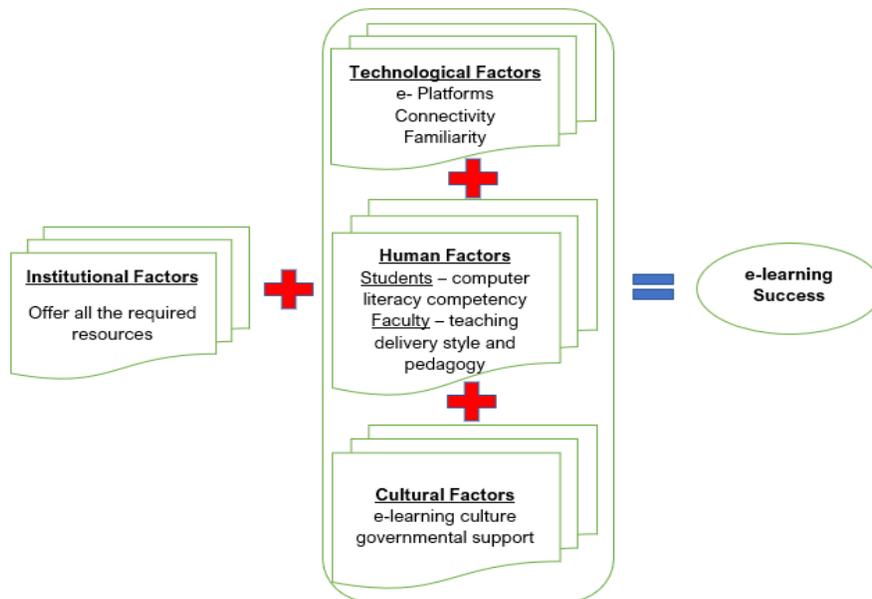


Figure 1: e-learning success factors

7. References

- Aboagye, E., Yawson, J. A., & Appiah, K. N. (2020). COVID-19 and E-Learning: the Challenges of Students in Tertiary Institutions. *Social Education Research*, 2(1), 109–115. <https://doi.org/10.37256/ser.122020422>
- Al-adwan, A., & Smedley, J. (2012). Implementing e-learning in the Jordanian Higher Education System: Factors affecting impact. *International Journal of Education & Development Using Information & Communication Technology*, 8(1), 121–135.
- Al Ghafri, T., Al Ajmi, F., Anwar, H., Al Balushi, L., Al Balushi, Z., Al Fahdi, F., Al Lawati, A., Al Hashmi, S., Al Ghamari, A., Al Harthi, M., Kurup, P. M., Al Lamki, M., Al Manji, A., Al Sharji, A., Al Harthi, S., & Gibson, E. (2020). The Experiences and Perceptions of Health-Care Workers During the COVID-19 Pandemic in Muscat, Oman: A Qualitative Study. *Journal of Primary Care and Community Health*, 11. <https://doi.org/10.1177/2150132720967514>
- 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(6), 5261–5280. <https://doi.org/10.1007/s10639-020-10219-y>
- Arkorful, V., & Abaidoo, N. (2015). *The role of e-learning, advantages and disadvantages of its adoption in higher education*. 12(1), 29–43.
- Berezhna, S., & Prokopenko, I. (2020). Higher Education Institutions in Ukraine during the Coronavirus, or COVID-19, Outbreak: New Challenges vs New Opportunities. *Revista*

- Romaneasca Pentru Educatie Multidimensionala*, 12(1Sup2), 130–135.
<https://doi.org/10.18662/rrem/12.1sup2/256>
- Bhuasiri, W., Xaymoungkhoun, O., Zo, H., Rho, J. J., & Ciganek, A. P. (2012). Critical success factors for e-learning in developing countries: A comparative analysis between ICT experts and faculty. *Computers and Education*, 58(2), 843–855.
<https://doi.org/10.1016/j.compedu.2011.10.010>
- Burki, T. K. (2020). COVID-19: consequences for higher education. *The Lancet. Oncology*, 21(6), 758. [https://doi.org/10.1016/S1470-2045\(20\)30287-4](https://doi.org/10.1016/S1470-2045(20)30287-4)
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>
- Hagerty, S. L., & Williams, L. M. (2020). The impact of COVID-19 on mental health: The interactive roles of brain biotypes and human connection. *Brain, Behavior, & Immunity - Health*, 5(May), 100078. <https://doi.org/10.1016/j.bbih.2020.100078>
- 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. <https://doi.org/10.12691/education-8-7-2>
- Islam, N., Beer, M., & Slack, F. (2015). E-Learning Challenges Faced by Academics in Higher Education: A Literature Review. *Journal of Education and Training Studies*, 3(5), 102–112. <https://doi.org/10.11114/jets.v3i5.947>
- Jacob, O. N., Abigeal, I., & A.E., L. (2020). *Impact of COVID-19 on the Higher Institutions Development in Nigeria*. 2(I), 168–172.
- JENA, P. K. (2020). *Impact of Covid-19 on Higher Education in India*. 77–81.
<https://doi.org/10.31235/osf.io/jg8fr>
- López-Pérez, M. V., Pérez-López, M. C., & Rodríguez-Ariza, L. (2011). Blended learning in higher education: Students' perceptions and their relation to outcomes. *Computers and Education*, 56(3), 818–826. <https://doi.org/10.1016/j.compedu.2010.10.023>
- Masrom, M., Zainon, O., & Rahiman, R. (2008). Critical Success in E-learning: An Examination of Technological and Institutional Support Factors *. *International Journal of Cyber Society and Education Pages*, 1(2), 131–142.
- McGill, T. J., Klobas, J. E., & Renzi, S. (2014). Critical success factors for the continuation of e-learning initiatives. *Internet and Higher Education*, 22, 24–36.
<https://doi.org/10.1016/j.iheduc.2014.04.001>
- Mohammed, A. O., Khidhir, B. A., Nazeer, A., & Vijayan, V. J. (2020). Emergency remote teaching during Coronavirus pandemic: the current trend and future directive at Middle East College Oman. *Innovative Infrastructure Solutions*, 5(3), 1–11.
<https://doi.org/10.1007/s41062-020-00326-7>
- Musa, M. A., & Othman, M. S. (2012). Critical Success Factor in E-Learning: an Examination of Technology and Student Factors. *International Journal of Advances in Engineering & Technology*, 3(2), 2231–1963.

- Odunaike, S. A., Olugbara, O. O., & Ojo, S. O. (2013). E-learning implementation Critical Success Factors. *Lecture Notes in Engineering and Computer Science*, 2202, 560–565.
- Osman, M. E. T. (2020). Global impact of COVID-19 on education systems: the emergency remote teaching at Sultan Qaboos University. *Journal of Education for Teaching*, 46(4), 463–471. <https://doi.org/10.1080/02607476.2020.1802583>
- Ozili, Peterson and Arun, T. (2020). Prepare for the coronavirus global recession. *SSRN Electronic Journal*, 99850, 1–28.
- Parsazadeh, N., Megat, N., Zainuddin, M., Ali, R., & Hematian, A. (n.d.). *a Review on the Success Factors of E-Learning*. 42–49.
- Qureshi, I. A., Ilyas, K., Yasmin, R., & Whitty, M. (2012). Challenges of implementing e-learning in a Pakistani university. *Knowledge Management and E-Learning*, 4(3), 310–324. <https://doi.org/10.34105/j.kmel.2012.04.025>
- Rana, H., Rajiv, R., & Lal, M. (2014). E-learning: Issues and Challenges. *International Journal of Computer Applications*, 97(5), 20–24. <https://doi.org/10.5120/17004-7154>
- Rhema, A. (2013). No Title 39–37 ,(1997)66, עלון הנטע, תמונת מצב. ענף הקיווי:
- Shen, H., Fu, M., Pan, H., Yu, Z., & Chen, Y. (2020). The Impact of the COVID-19 Pandemic on Firm Performance. *Emerging Markets Finance and Trade*, 56(10), 2213–2230. <https://doi.org/10.1080/1540496X.2020.1785863>
- Slimi, Z. (2020). Online learning and teaching during COVID-19: A case study from Oman. *International Journal of Information Technology and Language Studies*, October. <https://kopernio.com/viewer?doi=10.1080%2F02673843.2016.1179204&token=WzI5MzYxNTMsIjEwLjEwODAvMDI2Nm4NDMuMjAxNi4xMTc5MjA0Il0.YkTGTVkaKysA7n uwXps8-4dVCuA>
- Syahrin, S., & Abdalla Salih, A. (2020). An ESL Online Classroom Experience in Oman during Covid-19. *Arab World English Journal*, 11(3), 42–55. <https://doi.org/10.24093/awej/vol11no3.3>
- Tarus, J. K., Gichoya, D., & Muumbo, A. (2015). *Challenges of Implementing E-Learning in Kenya: A Case of Kenya Public Universities*. 17(3).
- Tawafak, R. M., Romli, A., Malik, S. I., Shakir, M., & Al Farsi, G. (2019). A systematic review of personalized learning: Comparison between e-learning and learning by coursework program in Oman. *International Journal of Emerging Technologies in Learning*, 14(9), 93–104. <https://doi.org/10.3991/IJET.V14I09.10421>
- Tayebinik, M., & Puteh, M. (2013). *Blended Learning or E-learning? 2008*.
- Teo, T. (2011). Modeling the determinants of pre-service teachers' perceived usefulness of e-learning. *Campus-Wide Information Systems*, 28(2), 124–140. <https://doi.org/10.1108/10650741111117824>