

e-Journal of Media & Society Volume 7 No. 1 | Year: 2024 | e-ISSN: 2682-9193 Received: 9 Nov. 2023 Revised: 8 Dec. 2023 Accepted: 8 Dec. 2023 Published: 31 Jan. 2024

Students' Challenges and Mitigation Factors during Covid 19 Pandemic on Teaching and Learning Method

*Aida Hazlin Ismail, Nadiah Abdul Hamid & Zarinah Abdul Rasit Universiti Teknologi MARA

*AIDA HAZLIN ISMAIL Faculty of Accountancy

Universiti Teknologi MARA email: aidah348@uitm.edu.my

ZARINAH ABDUL RASIT

Faculty of Accountancy Universiti Teknologi MARA email: zarinah371@uitm.edu.my

NADIAH ABDUL HAMID

Faculty of Accountancy Universiti Teknologi MARA email: nadiah201@uitm.edu.my

ABSTRACT

The research focuses on identifying challenges and problems faced by the students experiencing the online learning during pandemic covid 19. In this regard, this paper aims to identify factors that may influence online learning among the university students, their perceptions on online learning and the use of E-learning platforms. An online survey based on a semi-structured questionnaire was conducted. Data was collected from 153 students from one of the public universities in Malaysia. The results of the research revealed that students are facing challenges with the online learning. Internet connections, incompatible gadget to join the online lecture are some of the challenges faced by the students. This is to help the students to watch the video during their revision time. Technical issues are the most important, followed by teachers' lack of technical skills and their teaching style improperly adapted to the online environment. However, students provide some suggestions to improve the situation such as for the lecturers to provide recorded lecture video after each learning session and creating interesting lecture using the information technology applications and facilities. Based on these findings, research implications for universities and researchers are discussed.

Keywords: online teaching; E-learning platform; higher education; students' experience; online learning.

INTRODUCTION

The Internet and the World Wide Web have made critical changes to nearly all perspectives of our lives extending from a worldwide economy, individual, and proficient systems to sources of data, news, and learning. The web has made online learning conceivable, and numerous researchers and educators are fascinated by online learning to upgrade and progress student learning results whereas combating the diminishment in resources, especially in higher education (Farinella, Hobbs & Weeks, 2000; Kim & Bonk, 2006; Pape, 2010).

The dangerous and pandemic infection of Corona Virus or Covid-19 has profoundly influenced the worldwide economy, education and human lifestyle. This pandemic has shaken up the global education system. The Covid-19 widespread outbreak constrained numerous schools and universities to stay closed temporarily (Rieley, 2020). In Malaysia, the Ministry of Higher Education declared that all public and private universities in Malaysia are to conduct educating and learning exercises through online learning, with no face-to-face lessons, until the conclusion of December 2020 (Ministry of Higher Education, 2020). However, due to the increasing number of cases at the end of the year 2020, all universities had to remain at their current locations and lessons to continue online (June, 2021). This action is to prevent the virus from spreading while maintaining a competitive edge for students' studies and ensuring accessible classes to students staying in various locations. The education system is transitioning face-to-face classes into completely online or web-facilitated courses.

Online learning, also known as E-learning, could be a common practice nowadays and one can effortlessly discover resources on the web. This can be possible in today's Information and Communication Technology (ICT) period since nearly everybody is associated with a cyber world. In this cyber world setting, everybody is closely associated with one another through computers and smartphones. Presenting innovation into the classroom has made it conceivable for students to memorize up to four times more successfully than traditional learning approaches (Cohen,1997). Islam, Chittithaworn, Rozali and Liang (2010) support the notion that learning involves technology in the students' learning process, and the teachers' teaching approach is more effective than in the traditional classroom. Technology-based education may also enhance learning and teaching experiences, enhancing interaction with people in remote locations, and provide more communication channels. Thus, online learning plays a vital role in higher education teaching and learning (Fry, Ketteridge and Marshall, 2009).

Although it is undeniable that online learning is regarded as the most excellent solution to guarantee progression in learning within the current "new norm", there may be a few setbacks such as the absence of social interaction, an inability to create enjoyable physical study groups, and a few of the challenges they presently need to fight with (Chung, Subramaniam, & Dass, 2020). The media have reported numerous issues on online learning. Mikail (2020) revealed that three students fell from a bridge trying to find internet coverage for their classes. The only place with internet access is in the area around the bridge, which is around 18 meters above the river level. Inus (2020) identified the same scenario whereby a university student from Sabah had to climb a tree to get strong internet coverage for her online exams. Aside from the issue of internet accessibility, one of the issues raised in online learning is the accessibility of facilities. A single mother with nine children shared her phones to fulfil assignments assigned by their respective teachers (Noor, 2021).

Hence, the teaching and learning method has changed tremendously from traditional face-to-face between the lecturer and the students to online teaching and learning method using smartphones, laptops, or tablets. Therefore, this study investigates the students' perceptions of online teaching and learning among the accounting students in Universiti Teknologi MARA Kampus Puncak Alam.

LITERATURE REVIEW

The Malaysian Education System: Since the late 1990s, Malaysian Higher Learning Institutions (HLIs) have introduced online learning (Hussin et al., 2009). The demand for online learning has been growing due to its ability to reach a global audience, unique functionality, accessibility, and long-term flexibility (Azhari and Ming, 2015).

The Malaysian Ministry of Higher Education has introduced initiatives to make online learning an integral component of higher education and long-lasting learning in line with educational developments (Malaysian Education Blueprint 2015–2025 (Higher Education), 2015). E-learning is a new technology that allows for lifelong learning and necessitates a level of digital literacy. The importance and priority of digital literacy, critical thinking, and problem-solving as 21st-century learning skills that will help learners succeed in IR4.0 were highlighted in this blueprint.

By referring to the Ministry of Higher Education's report, 'The Way Forward for Private Higher Education Institutions: Education as an Industry (2020-2025)', there were 1,325,699 students undergoing tertiary education in Malaysia's higher education institutions as of 30 September 2019. In addition, 666,617 students (51.0%) in over 400 private universities and 659,082 students (49.0%) in 20 public universities and branch campuses. Malaysia aims to maintain its status as an international education hub by 2025, with a target of 250,000 international students (Ministry of Education Malaysia, 2020).

As stated by Bujang et al. (2020), the development of Education 4.0 has been the primary focus in educating students to face the real world and be prepared for any kind of challenges. Before Covid-19, the development of Education 4.0 in Malaysia is still ongoing progress at a low level. However, the immediate implementation of developments in online learning and teaching in the learning system suddenly escalated for the students to adapt during the pandemic.

Online Learning and Teaching : An educational practice that takes place through the Internet is known as online learning. Online learning is a convenient way to learn that fits around any time. Time, travel, and other such constraints have been considerably reduced with the introduction of this new technology. Urdan and Weggan (2000) highlighted that e-learning encompasses a wide range of applications and techniques, such as web-based learning, computer-based learning, virtual classrooms, and digital collaborations. It is a type of distance education that allows students to receive education from remote areas or who are unable to attend a school, vocational college, or university for various reasons.

Similarly, research by Hrastinski (2008), Singh and Thurman (2019) and Watts (2016) argue that distance education covers challenges such as geographical distance and other factors

that obstruct students from attending face-to-face classes. Asynchronous or synchronous online learning experiences are available through distance education. Asynchronous learning occurs when students can interact and learn at their own pace using various media tools such as WhatsApp, e-mail, or discussion boards. In this online learning process students can log in whenever they want to chat and do assignments, and they can learn at their own time/independnetly. While synchronous online learning takes place via live video and/or audio conferencing that allows interaction and immediate feedback during class between the lecturers and students (Hrastinski, 2008; Algahtani, 2011).

The impact of online learning and teaching is seen not only in terms of learning quality but also in terms of the role performed by educational entities (lecturers and students), which aids in the development of a better-equipped assessment and marking system (Margottini & Rossi, 2020; Peñarrubia-Lozano, Segura-Berges, Lizalde-Gil & Bustamante, 2021). Lecturers must address both product-oriented and process-oriented aspects of strategic preparation for the class like designers (Goodyear, 2015). An excellent quality design is related to 'defined learning objectives, properly structured content, the managed workload for faculty and students, used integrated media, relevant student activities, and assessment closely linked to intended learning outcomes', (Bates, 2019).

According to Al Maskiry at the Risk Management Conference 2018, some academics in higher education prefer to use the old teaching technique because it is less challenging and straightforward (Times of Oman, 2018). They are hesitant to accept technology. She also stated that being tech-savvy is a 21st-century necessity because it is the new standard for literacy and a market requirement nowadays. Successful online learning can be achieved by lecturers being familiar with this teaching style by use of ICT in more traditional teaching. This could lead to a wider selection of materials and more flexible access to them (Crisol-Moya, Herrera-Nieves & Montes-Soldado, 2020; Firat, 2016).

Although online learning is an efficient alternate learning approach for both students and lecturers, there are some challenges to consider, including limited internet access. According to reports, in Malaysia, particularly in Sabah, roughly 52% of the population do not have internet connections due to a lack of infrastructure (Berita Harian, 2020). Lee (2020) reported that students had to stay overnight in a tree for online preparation. Inadequate online learning infrastructures and limited internet connections make online learning more difficult for students, especially in Malaysia's more rural and isolated places. Moreover, some students had difficulty due to inadequate hardware and software. The cost of communication devices and Internet access is too expensive. During the online class, Students face a delay in communication during the online class that lead to misunderstanding with lecturers because of no face-to-face interaction that they can directly receive information. Specifically, the purpose of this study was to explore students' perceptions of online learning and teaching.

Volume 7 No. 1 | Year: 2024 | ISSN: 2682-9193

RESEARCH METHODOLOGY

This study adopts a qualitative open-ended survey method of analysis which was originally developed for grounded theory methodology (Glaser 1978; Strauss and Corbin 1990). The method falls under an interpretive paradigm with the intention to build theory rather than to test theory. The steps start with a problem statement of what you want to study and tentative research questions. Using open ended survey questionnaire to collect data can reveal that actual variables that currently impact control systems in auditing firms.

Population for this study are Bachelor of Accountancy students from one of the public universities in Selangor. There were 153 respondents for the open-ended survey questionnaires. These students were selected as respondents as they have the experienced using online learning experience for at least one semester. Hence, they would be able to make comparison between the online learning and traditional learning experienced. Survey questionnaires were distributed to the students via the purposive sampling method. The appropriate sample size for qualitative research depends on 'theoretical saturation' is achieved that is when no new or relevant information regarding a category emerged from new data collected. The questions were open-ended, allowing the respondents the opportunity to explain the elaborate their answers according to their own judgments.

Data from the questionnaires were analysed accordingly to the selected theme manually. Based on the analysis, the data shows the trend or pattern of the feedback given by the respondents. The results were compiled and presented in the discussion of the findings from this research.

FINDINGS AND DISCUSSIONS

Online learning vs conventional learning

Respondents were asked about their preference either the online or conventional classes and the majority of the respondents prefer the conventional learning method. The results show that 75% of the students prefer to attend the conventional classes compared to the online learning method. Most of the students prefer to be in class as they can be more focused during the lessons. In addition, the classroom environment is more conducive to study as compared to being at home alone. They can easily feel tired and bored studying online. Looking at the computer screen for long hours every day for the lecture is tiring and they feel bored with the same routine day in and out. Some of the reasons why the students prefer the conventional learning method are that they can easily get distracted when studying online and difficult to concentrate for long hours of lecture in one day. Hence, the students feel that they can be more effective and understand the lesson easily in a classroom setting environment. Besides, interaction with friends and lecturers in class makes it easier to raise any queries that they have during the lecture.

Another reason why students prefer the conventional learning is because of poor internet connection at home. This may cause them to feel frustrated and tried to deal with the technology/technical issues on top of their learning problems. Not all students have the privilege of good internet connection at home especially those staying in rural areas. Some of them need to use their mobile data connection for their online classes. This may cause them to incur more additional costs just to join the online classes. Hence, the students feel more pressure and tension

when engaging with online learning. Some of the students need to stay at some other places, such as their friends or relatives' houses to ensure that their internet connection is strong and able to join the classes and submit their assignments on time.

However, there are also students who prefer online learning. The reason is that they can watch the teaching video again repeatedly until they understand the lesson. This can be considered one of the advantages of online learning where the students can watch the video if they did not understand the lesson. There are students who also prefer online learning as they can attend the class anywhere, not only restricted in the classroom. This is also another advantage of online learning. With online learning, students may be able to manage their time and attend the class at their own convenience. They do not need to travel and prepare themselves to go to class and they can just be at home to attend the online class. This is also another advantage of online learning as students can attend the online class anytime, anywhere, and conveniently.

Learning method and gadget for online teaching and learning

The students feel that online learning is more interesting as compared to conventional learning. The lectures are more interesting as the lecturers use more interactive applications when conducting the online class. Some of the application used as additional teaching materials are youtube videos, interactive quiz online and interesting powerpoint. In addition, online learning makes the students be more innovative and creative in exploring and learning new applications such as google doc, google slides, adobe and google classroom. The students need to create videos, power point slides and use google classroom to present their project papers. This has nevertheless improved their ability to use the computer application and software. In addition, students are exposed to the information technology (IT) which is the trend in daily life now. The experience makes them more confident to deal with IT issues. Hence, students feel more excited and challenging to complete their assignment and project papers using all the applications and software. All these will bring good exposure and experience for the students and can help them when they are working after graduating in the future. It is important for the new generation to know more about information technology as the world is now moving towards IR 4.0 era. They could not be shy or feel intimidated by all the latest technology and gadget. Therefore, online learning nevertheless prepares the students to be more IT savvy and aware of all the latest technology.

Most of the students prefer to use laptop and desktop for their online classes as compared to smart phone. The laptop and desktop have bigger screen and easier to access all the applications and software as compared to using the smart phone. However, the issue is if the laptop and desktop are old version, then it will not be compatible with many latest software and applications.

Application for online classes

There are many applications available for the lecturers to conduct their online classes such as google meet, webex, microsoft team, telegram and zoom. However, each application has their own pro and cons. Students too have their preference to use which application during their online

classes due to many reasons. 88% of the students prefer to use google meet as the medium for their online classes. This is because easy to access and user friendly as compared to webex and zoom. Both webex and zoom are applications that need to be downloaded before they can use the applications. Hence, this may create hassle for the students. However, for google meet the application is included together with the google application and others. Another reason students prefer to use the google meet compared to webex and zoom is because less data usage. Webex and zoom applications need to have strong internet connections and consume lots of data usage. Hence, this may be a burden for the students who are staying in a remote area. They need to spend their money to buy mobile data to join the online classes. Students highlighted that sometimes when using webex, they have problems with the audio and could not hear well their lecturers' voice during the class. In addition, webex requires a stable internet connection and data consumption. Hence, the student prefers using google meet as compared to any other applications during online classes.

Perceptions on online learning

The world is changing to a new paradigm of online teaching and learning. With the pandemic covid 19 that has affected the whole world since 2019, our life routine has changed tremendously. Most of our daily activities are using the information technology such as online purchasing and working using online applications. Meetings d and conferences are conducted via virtual and online applications. Same goes to the teaching and learning method during the pandemic Covid 19. Schools and universities are using the online classes method to conduct their class and lecture activities.

Students were asked about their opinion on the online learning. 45% of the students feels that online learning is tiring and stressful. Online learning requires students to be more independent to complete the assignments and projects. They always need to be more alert and always be in front of the laptop for more than eight hours every day. They feel neck pain and stress just looking at the screen all day long. Although the traditional learning requires them to go to class everyday but that is not as tiring as being glued to the computer screen from morning till late evening every day. Therefore, they feel that they get easily tired and mentally exhausted.

24% of the students feels that it is challenging to study online compared to face-to-face learning method. They feel that online learning is much challenging, and they need to struggle more to be alert and more focused during class. Students admit that online learning it is more flexible and convenient. Students can watch the lecture video again after the class to recall and do revisions. This is convenient for the students as most of the lecturers will provide them with the recording lecture videos after each lesson. Watching the lecture videos repetitiously can help students understand the lesson taught at their own pace and time.

Students also feel that online learning is interesting as every day they can learn new things using the application and software. It is fun for the students as they must be independent and explore new technology while experiencing online learning. Lecturers use other application and online materials such as youtube videos and website to create a more interesting online teaching and learning environment. Online learning saves time and transportation costs to go to the campus every day to attend lectures and lab sessions at the university. Hence, most students feel that online learning has the advantages of saving their transportation time and cost.

Problems faced by students using online learning.

Despite all the benefits of online learning, students experience some problems when preparing their project papers and attending lectures. The biggest challenges are communication among team members. Online discussion creates difficulty for the group members to understand ideas and instructions. Some ideas can't be explained easily without face-to-face meeting. Students feel that it will be easier to discuss when they can meet up and prepare the project paper and assignment together.

Poor internet connection is another unavoidable problem faced by the students. Timing for the lecturers to be conducted has a significant role in ensuring that the internet connection is stable and good. Usually, if the lecturer is conducted late evening, the internet connection will be poor. Another reason for poor internet connection is because of students staying in suburban area. Most of these places only have 3G coverage internet. Because of poor internet connection, students have difficulty to download learning materials or join the google meet class lecture. Sometimes they need to wait during nighttime to download or upload any teaching or learning materials.

Another most significant challenge faced by the students is time management. Students have difficulty dividing/managing their time between learning, entertainment and family. They get easily distracted during learning sessions at home. During MCO, most family members are staying or working from home. Hence, this creates less conducive environment to study. In fact, there are families who need to share using the laptops and gadget during online learning. This may create uneasiness and discomfortable for the students to prepare their assignments or to conduct online discussion with their colleague.

Due to long hours looking at the screen, most of the students are experiencing backache and eye sore. Most of them feel tired easily although during MCO there are limited physical activity can be conducted. Home is always a comfortable place to relax and enjoy with family members. Hence, this create perception that when the students are at home, they are not comfortable to engage in studying or learning process. So, most of the students feel easily distracted when they are surrounded by their family members at home.

Another problem faced by the students is unsupportive lecturer. There are lecturers that tend to hand in assignments or teaching materials during after class hours. Students that rely on prepaid data for their online classes may miss the information. Students also feel that they have difficulty to remember which platform the lecturers used to post all the assignments, teaching materials and conduct online classes as each lecturer has their preferred applications. Students also are facing infrastructure of gadgets to conduct the online learning session. The facilities to study such as proper study tables, chairs and conducive room are not available for the students at home. In addition, some students have run-down laptops which are easily hang and not capable to run some of the latest software or application. Hence, this may distort their interest and ability to complete their assignments or projects. There are also students that do not have any printers at home to print materials for online classes.

eJOMS - Journal of Media and Society

Volume 7 No. 1 | Year: 2024 | ISSN: 2682-9193

CONCLUSION

The COVID- 19 pandemic forced a rapid transition to entirely online teaching for university accounting students. This paper collected online user experience data of the online education platforms after the outbreak of COVID-19 and obtained the respondents experienced focus by analysing the data after the outbreak. The study found that during COVID-19, the users of the platforms have different concerns and requirements, and there are some similar problems faced by the respondents.

Despite the pace of this transition, students' feedback indicated that students have an extremely low level of satisfaction and engagement with online learning activities. The support from the lecturers of providing the recorded videos of the lecture, help the students to be able to review again the subject for revision. However, there are areas of improvement that can be done to ease the online learning.

After nearly two years conducting online teaching and learning sessions, there are many ideas that can be considered as ways to improve the sessions. Firstly, the application use as the platform for online classes should standardise among the lecturers. This is to ensure that it may create less confusion among the students. Besides, students will be more efficient and knowledgeable when mastering one application rather than a few applications during the learning process.

It is also suggested that lecturers should be more creative and innovative to ensure that their online teaching method is interesting. Lecturers can use youtube videos to enhance the students' understanding of any topics that they want to teach during the day. Lecturers also can provide more additional notes and simple self-review questions for the students to read and practice.

Lecturers should reduce the workload given to the students as they have lots of distractions at home compared to in the campus. There are students who must share their laptops or handphones with their other siblings to complete their assignments. Hence, this might burden the students and increase their stress levels. Therefore, the lecturers should plan and discuss with the students their expectations at the beginning of the semester.

Some important aspects of university life, such as such as friendships, personal identity development, exposure to diversity and self- care skills, will be much harder to achieve in a solely online environment, but as we develop plans to reintroduce elements of face- to- face teaching soon, we need to ensure that these are integrated with, and informed by, the advances made in accounting education during the past few months. Hopefully, students will be able to gain benefit from the online teaching and learning method during the pandemic.

eJOMS - Journal of Media and Society Volume 7 No. 1 | Year: 2024 | ISSN: 2682-9193

***CORRESPONDING AUTHOR**

Assoc. Prof. Aida Hazlin Ismail Universiti Teknologi MARA Kampus Puncak Alam Selangor aidah348@uitm.edu.my

Volume 7 No. 1 | Year: 2024 | ISSN: 2682-9193

REFERENCES

- Algahtani, A. F. (2011). Evaluating the effectiveness of the e-learning experience in some universities in Saudi Arabia from male students' perceptions. United Kingdom: Doctoral thesis, Durham University.
- Anderson, T. (2011a). Towards a theory of online learning. In T. Anderson, *The theory and practice of online learning. 2nd Edition* (pp. 45–74). Edmonton: Athabasca University Press.
- Azhari, F. A., & Ming, L. C. (2015). Review of e-learning practice at the tertiary education level in Malaysia. *Indian Journal of Pharmaceutical Education and Research*, 49(4),248-257.
- Bates, A. W. (2019). *Teaching in a digital age. 2nd Edition*. Vancouver: Tony Bates Associates. https://pressbooks.bccampus.ca/teachinginadigitalagev2/.
- Berita Harian. (8 May, 2020). 52 peratus pelajar Sabah tiada akses internet. Retrieved from https://www.bharian.com.my/berita/nasional/2020/05/686499/52-peratus-pelajar-sabah-tiadaakses- internet
- Bujang, S. D., Selamat, A., Krejcar, O., Maresova, P., & Nguyen, N. T. (2020). Digital Learning Demand for Future Education 4.0- Case Studies at Malaysia Education Institutions. *Informatics*, 7(2). Doi:10.3390/informatics7020013.
- Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online Learning Readiness Among University Students in Malaysia Amidst Covid-19. Asian Journal of University Education (AJUE), Volume 16, No 2, pp. 46-58.
- Cohen, V. L. (1997). Learning styles in a technology-rich environment. *Journal of Research on Computing in Education*, 29(4), 339-350.
- Crisol-Moya, E., Herrera-Nieves, L., & Montes-Soldado, R. (2020). Virtual Education for All: Systematic Review. *Education in the Knowledge Society*, 21(5), 1-13. DOI: http://dx.doi.org/10.14201/eks.2020210.
- Farinella, J. A., Hobbs, B., & Weeks, H. s. (2000). Distance delivery: The faculty perspective. *Financial Practice and Education*, 10, pp. 184–194.
- Firat, M. (2016). Measuring the E-Learning Autonomy of Distance Education Students. *Open Praxis*, 8(3), 191–201. DOI:10.5944/openpraxis.8.3.310.
- Fry, H., Ketteridge, S., & Marshall, S. (2009). A Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice (3rd Edition). New York: Routledge.
- Goodyear, P. (2015). Teaching as design. HERDSA Review of Higher Education, 2(2), 27-50.
- Hrastinski, S. (2008). Asynchronous and synchronous e-learning. EDUCAUSE Quarterly, 31(4).
- Hussin, H., Bunyarit, F., & Hussein, R. (2009). Instructional design and e-learning: examining learners' perspective in Malaysian institutions of higher learning. *Campus-Wide Information System*, 26(1), 4-19. DOI:10.1108/10650740910921537.
- Inus, K. (8 September, 2020). Veveonah was having her exams at time of video, confirms UMS. Retrieved from The Star: https://www.thestar.com.my/news/nation/2020/09/08/veveonahwas-having-her-exams-at- time-of-video-confirms-ums
- Islam, M. A., Chittithaworn, C., Rozali, A. Z., & Liang, H. (2010). Factors Affecting E-Learning Effectiveness in a Higher Learning Institution in Malaysia. *Jurnal Pendidikan Malaysia*, 35(2), 51-60.
- Jun, S. W. (31 May, 2021). *Ministry of higher education: Students to remain at their current locations, lessons to continue online.* Retrieved from Malay Mail:

https://www.malaymail.com/news/malaysia/2021/05/31/ministry-of-higher-education-students-to-remain-at-their-current-locations/1978503

- Kim, K.-J., & Bonk, C. J. (2006). The future of online teaching and learning in higher education: The survey says. *Educause Quarterly*, 29(4), 22.
- Lee, S. (16 June, 2020). Sabah student stays overnight in tree to get better Internet connection for online university exams. Retrieved from The Star: https://www.thestar.com.my/news/nation/2020/06/16/sabah-uni-student-stays-overnightin-tree-to-get-better-internet-connection-for-online-exams
- Margottini, M., & Rossi, F. (2020). Self-regulation processes and feedback in online learning. Journal of Educational, Cultural and Psychological Studies, 21, 193–209.
- Mikail, Y. (26 November, 2020). *3 pelajar cari akses internet kelas 'online' jatuh jambatan*. Retrieved from Berita Harian: https://www.bharian.com.my/berita/nasional/2020/11/758832/3- pelajar-cari-aksesinternet-kelas-online-jatuh-jambatan.
- Ministry of Education Malaysia. (2015). *Malaysian Education Blueprint* 2015–2025 (*Higher Education*). Retrieved from https://www.um.edu.my/docs/um-magazine/4-executive-summary-pppm-2015-2025.pdf
- Ministry of Education Malaysia. (2020). *The Way Forward for Private Higher Education Institutions: Education as an Industry* (2020-2025). Retrieved from https://drive.google.com/drive/u/0/folders/1BcStf5h6hqJefiNAwa-EuE7klGPzdhpg
- Ministry of Higher Education. (27 May, 2020). *Higher Education Ministry: All university lectures to be online-only until end 2020, with a few exceptions*. Retrieved from Malay Mail: https://www.malaymail.com/news/malaysia/2020/05/27/higher-education-ministry-alluniversity-lectures-to-be-online-only-until-e/1869975
- Noor, Z. M. (27 January, 2021). *PdPR: Mother of 9 children is sad about the phone partner*. Retrieved from Utusan Malaysia: https://www.utusan.com.my/nasional/2021/01/pdpr-ibu-9-anak-sedih-anak-kongsi-telefon/.
- Pape, L. (2010). Blended Teaching & Learning. School Administrator, 67(4), 16–21. DOI:10.1007/978-0-387-34731-8_24.
- Peñarrubia-Lozano, C., Segura-Berges, M., Lizalde-Gil, M., & Bustamante, J. C. (2021). A Qualitative Analysis of Implementing E-Learning during the COVID-19 Lockdown. *Sustainability*, 13(6), 3317. https://doi.org/10.3390/su13063317.
- Rieley, J. B. (2020). Corona Virus and its impact on higher education. Research Gate.
- Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education*, 33(4), 289-306. https://doi.org/10.1080/08923647.2019.1663082.
- Times of Oman. (19 February, 2018). *Digital the way forward for education in Oman, says expert*. Retrieved from https://timesofoman.com/article/128536/oman/digital-the-
- Urdan, T. A., & Weggen, C. C. (2000). Corporate e-learning: Exploring a new frontier. WR Hambrecht.
- Watts, L. (2016). Synchronous and asynchronous communication in distance learning: A review of the literature. *Quarterly Review of Distance Education*, 17(1), 23–32.