PalArch's Journal of Archaeology of Egypt / Egyptology

DISTANCE EDUCATION: THE CHALLENGES AND EFFECTS OF THE COVID-19 PANDEMIC AMONG FASHION STUDENTS IN MALAYSIA

Mohd Zaimmudin Mohd Zain¹, Rosmaizura Mohd Zain² Hanisa Hassan³,
Norhasliyana Hazlin Zainal Amri⁴, Mohd Hafiz Drahman⁵,
Sarah Wahida Hasbullah⁶, Ainon Ramli⁷

^{1,3,4,5,6}Creative Technology and Heritage, Universiti Malaysia Kelantan, Bachok Campus, Bachok, Kelantan, Malaysia

^{2,7}Entrepreneurship and Business, Universiti Malaysia Kelantan, City Campus,

Pengkalan Chepa, Kelantan, Malaysia

Email: (corresponding author) ¹zaimmudin@umk.edu.my

²rosmaizura.mz@umk.edu.my, ³hanisa@umk.edu.my, ⁴hazlin.za@umk.edu.my

⁵hafiz.d@umk.edu.my@, ⁶sarahwahida@umk.edu.my, ⁷ainon@umk.edu.my

Mohd Zaimmudin Mohd Zain, Rosmaizura Mohd Zain, Hanisa Hassan,Norhasliyana Hazlin Zainal Amri, Mohd Hafiz Drahman ,Sarah Wahida Hasbullah , Ainon Ramli. Distance Education: The Challenges And Effects Of The Covid-19 Pandemic Among Fashion Students In Malaysia-- Palarch's Journal Of Archaeology Of Egypt/Egyptology 18(6), 110-125. ISSN 1567-214x

Keywords: COVID-19 Pandemic, Fashion Courses, Online Learning, Distance Education, Fashion Students, Malaysia

ABSTRACT

The COVID-19 pandemic has affected both the fashion industry and educational practices globally. This situation has forced fashion students in Malaysia to transition to distance education or online learning. This is in contrast to the traditional, hands-on style of fashion education: students attend lecturer demonstrations rather than learn from home, and they need access to studios, workshops and fashion industry internships. To consider the impact of this rapid change in learning style, this study aims to explore the challenges and effects of the COVID-19 pandemic among fashion students in Malaysia by conducting semi-structured interviews with 20 individuals. Results show that students faced challenges such as internet stability, difficulty adapting to new apps and lack of interaction due to communication limitations. Furthermore, students encountered environmental issues such as noise. Finally, results show that online fashion classes affected students' mental wellbeing and caused disinterest in studying.

INTRODUCTION

The fashion education curriculum includes subjects that teach practical skills such as fashion design, sewing or embellishment. These require machinery, equipment and access to studios or workshops. Moreover, Yick et al. (2019) state that fashion courses should be taught by highly skilled professionals who can provide a quality education. Lessons are normally conducted face to face, where students present their work to the class and lecturers demonstrate techniques using machinery or equipment provided by the university.

However, the pandemic has forced people to adapt to new norms, for example in education (la Velle et al., 2020). In Malaysia, case numbers began to rise in March (WHO, 2020), which prompted the government to issue the Movement Control Order (MCO). This order closed schools and universities and changed the way students learn (Yen & Mohammad, 2020). As more schools switched to remote learning, internet connections were upgraded throughout the country to provide better online access for students. Similarly, the pandemic has affected the fashion industry; many fashion brands have faced bankruptcy or lost revenue, and some have pivoted to online businesses. For fashion students, internships or other practical trainings have been postponed or cancelled due to the pandemic's effects on both the fashion industry and fashion education. These circumstances have motivated the researchers to conduct this study.

This study investigates how the pandemic has affected fashion students and how students have handled the sudden change in their learning environment. This research undertakes qualitative studies by interviewing 20 final-year fashion students at a local university who have taken online fashion courses for almost one year. The data were analysed using coding and template analysis. Findings demonstrate that fashion students faced physical and emotional challenges when participating in online classes.

LITERATURE REVIEW

Effects of the COVID-19 pandemic on the fashion industry

In December 2019, the world learned of the existence of the virus that causes COVID-19. The virus is believed to have originated in China from where it spread to countries such as Italy, France, Germany, Spain and the United Kingdom. By early 2020, it had spread all over the world and was declared a pandemic by the World Health Organization (WHO, 2020). A year later, the virus is still active among us, with the US and India having the highest number of cases (Worldometer, 2020). According to the WHO, COVID-19 can be transmitted via a person's mouth or nose when they cough, sneeze, speak, sing or breathe heavily.

Transmission is most likely to occur when individuals are in direct or close contact. Therefore, to combat the virus, people are urged to practise social distancing, wear a mask, use hand sanitiser and stay indoors (Shah et al., 2020). The pandemic has also forced people to work from home (Purwanto et al., 2020), and hard-hit countries, such as Italy, the US, the UK, Brazil,

Mexico, India and Malaysia, have experienced a full lockdown. Under lockdown, malls, restaurants, shops and offices are closed for a period of time. This has affected the economy, with increased unemployment in many sectors (Islam et al., 2020), including the fashion industry.

The fashion industry was predicted to grow in 2020, but due to the pandemic, this has not been the case (Statista, 2020). For example, the pandemic has seriously affected manufacturing in countries such as Bangladesh, where order cancellations have caused US\$1.5 billion of total losses across 1,089 factories (Devnas, 2020). In addition, several fashion brands including Zara (1200 stores), H&M (170 stores), Victoria Secret (250 stores) and Guess (100 stores) have closed physical stores worldwide (Ng, 2020). The brand Superdry has posted lower revenue, H&M's sales have dropped 50%, and Gap lost almost US\$1 billion. Others, such as Aldo, Neiman Marcus, J. Crew, Muji and Brooks Brothers, are facing bankruptcy (Kong, 2020). One of Malaysia's most famous fashion labels, Salikin Sidek, has closed one of its stores and Robinson Co. (Malaya) Sdn Bhd (one of the most leading department stores) is facing bankruptcy. The pandemic has caused the cancellation of thousands of fashion shows around the world and drove companies to seek alternative approaches for presenting shows and promoting products. As a result, fashion shows were streamed online: London Fashion Week launched its show in June, and Milan's Menswear Week took place in July last year. Moschino found an even more creative solution, promoting its product in a puppet show (Andres, 2020).

Additionally, the pandemic has driven fashion consumers to change their habits and adapt to new norms. Since many people are staying indoors or working from home, they are less concerned with fashion and more focused on essentials rather than high-end items. Therefore, slow fashion has become more popular. Sustainable fashion has also become important to consumers because it is more cost-effective than fast fashion. In terms of demand, face masks, as well as lab coats or Personal Protective Equipment (PPE), have recorded high sales (Sharma et al., 2020), and the rise of e-commerce has made it easy for people to buy online (Chaudhary, 2020). The pandemic has greatly affected the fashion industry, but it has also impacted fashion students, who have had to adapt to new norms in their lessons.

Fashion courses in Malaysia.

Fashion courses have become popular in Malaysia in recent years. Aligned with the growth of the fashion industry in the country (Statista, 2020), fashion courses are being offered at every level of education and qualification: certificate (secondary school or college), diploma (college or university) and degree (university). In addition, schools such as Universiti Teknologi Mara, Universiti Malaysia Kelantan, Raffles College, Lim Kok Wing University, Widad University College, Management Science University and Community Colleges all offer fashion programmes (Style Dieter, 2019).

Many fashion courses emphasise practical skills, requiring access to studios and workshops equipped with sewing, embroidery and printing machines.

Subjects in fashion programmes include menswear, womenswear, embroidery and draping, and each subject represents four to six hours of coursework. Programme lengths vary depending on the degree or qualification and can span one to four years. As part of their studies, fashion students must enrol in practical training courses, where they work in the field to gain first-hand knowledge of the fashion industry. The final project usually encompasses an assessment and a fashion show.

In terms of job prospects, fashion programmes offer a range of opportunities such as designer, entrepreneur, buyer, merchandiser, lecturer, retailer, stylist and journalist. Many Malaysian fashion designers, including Rizman Ruzaini, Radzuan Radzwill, Rizalman Ibrahim, Salikin Sidek, Hatta Dolmat and Zery Zambry, graduated from local universities. Currently, fashion students and staff from Universiti Teknologi Mara and Universiti Malaysia Kelantan are applying their skills sewing lab coats or PPE (New Straits Times, 2020). Similarly, alumni and fashion designers such as Alia Bastamam, Radzuan Radziwill and Rizman Ruzaini produced lab coats or PPE that were given to frontline workers treating COVID-19 patients.

The pandemic has changed the educational system worldwide by turning face-to-face classes to online Moorhouse (2020). Previous papers on the pandemic's effect on education have focused on the fields of medicine (e.g. Azlan et al., 2020, Remtulla, 2020), nursing (e.g. Dewart et al. 2020; Subedi et al., 2020) and language (e.g. Atmojo & Nugroho, 2020; Lie et al., 2020); fashion has received little attention. Studies on how fashion students have adapted to online learning should be conducted in order to understand the pandemic's effects on education from a different perspective.

New norms for learning: offline to online.

In Malaysia, schools from kindergarten to university have been closed during the pandemic (Shah et al., 2020), and this has changed the way students learn. They have had to adapt to the rapid changing in education system (Goh & Blake, 2021), such as new online learning norms; therefore, lecturers need to have strong online teaching skills to cater the new norms of learning (Nasri et al., 2020).

Online learning requires devices and an internet connection. Therefore, the demand for internet access in Malaysia has increased (Mohammed, 2020). The government has upgraded the network infrastructure to ensure that students have internet access and that the system can support online learning (MCMC, 2020; Shah et al., 2020). It has invested RM 400 million in improving internet connectivity and an additional RM 20 million to increase internet access and encourage e-commerce hubs in rural areas (BOTS Team, 2020). In addition, citizens are given one gigabyte free data every day to facilitate online access. There is a great need for internet and mobile data, as many users utilise apps such as Zoom and Google Meet for work or online learning.

Online learning has affected students in many ways, and not all lessons can be presented on a laptop or mobile phone. This is the case for fashion courses.

Students can watch video tutorials, but their effectiveness is questionable. It is not known if students can learn as much online as they can in a face-to-face setting. Students are experiencing new norms that may be challenging for them and may affect their performance, and this is one of the reasons this study was conducted.

METHODOLOGY

This study aims to explore the challenges and effects of the pandemic among fashion students in Malaysia. Researchers believe that it is best to interact with the individuals involved in the study to obtain ample information and insights. This qualitative approach gives participants the freedom to express their opinions or experiences rather than limiting them to a set of surveys or questionnaires (Morgan & Spanish, 1984). Qualitative researchers also enjoy the benefit of asking questions by conducting semi-structured interviews.

Semi-structured interviews allow participants to share their experiences, helping researchers gain deeper understanding and insights into the issues they are studying. Hence, respondents' feedback must be carefully analysed. The total number of participants in this study is 20, as the ideal number of interviewees in a study is 15–20 (Robinson, 2014). The data saturation level can be observed between 17 and 20 participants.

As this study explores the challenges and effects of the pandemic among fashion students in Malaysia, purposive sampling was employed to select participants: final-year fashion students. The reason for this choice is that final-year students spent all of 2020 in an online learning environment; therefore, they have more experience with online fashion courses compared to other students, and they can make comparisons between in-person and online classes. Prior to the interviews, participants were introduced to the research objective, and their identity remained anonymous. Interviews were conducted in December 2020 over the phone due to bad weather caused by the rainy season. As a result, the audio quality is superior to what would have been recorded in face-to-face discussions. Moreover, phone interviews are considered reliable and guarantee the safety of participants (Sturges & Hanrahan, 2004). Each interview session lasted 25–45 minutes. Participants were asked to introduce themselves and answer questions about fashion (Thomson & Haytko, 1997), how the pandemic has affected them (Lie et al., 2020), the importance of internet access (Adnan & Anwar, 2020; Atmojo, Nugroho 2020) and the effects of online classes (Azlan et al., 2020; Cutri et al., 2020; Mishra et al., 2020). No sensitive questions were asked, and interviews were conducted in Malay, the participants' preferred language. This allowed them to easily express their opinions. Finally, data were analysed using coding and template analysis, where main themes and subthemes emerged.

Findings and Discussions

Findings through coding and template analysis, four main themes and seven subthemes emerged (Table 1). All themes and subthemes are explained in the following sections.

Table 1.Summary of the results

Main themes	Subthemes
4.1. Technical complications	4.1.1 Internet outages
	4.1.2 New apps adaptation
4.2. Communication limitations	4.2.1 Less interaction
	4.2.2 Roles of students and lecturers
4.3. Environmental issues	4.3.1 Noises disturbance
4.4. Emotional effects	4.4.1 Lack of comprehension
	4.4.2 Lack of performance

Technical complications

The study shows that all participants identified technical complications as one of the main challenges with online classes, especially those who live in rural areas where the internet connection is unstable. Another challenge participants faced was adapting to the new apps needed to follow the lessons.

Internet outages

Since the pandemic has worsened and people have been urged to stay home to help curb the spread of the virus (Minhat & Kadir Sahar, 2020), the participants stated that the internet has been an important tool for connecting people virtually. However, not all locations have a good internet connection, and some places have no internet access at all. Hence, one of the most frequently mentioned obstacles to online fashion classes is internet outages. Most of the participants encountered internet outages during online classes, particularly those located far from the city. This aligns with Lee (2020), that there are students who struggle with internet access in Malaysia, as documented by Veveonah Mosibin (a Malaysian university student) who gave an example of a student who needed to climb a tree to get an internet connection to join online classes or take exams. In this study, participants 4, 8, 9 and 14 expressed their struggle with internet outages and its effects on their online fashion classes:

Participant 4: "One of the biggest problems during online classes is internet access. Not all students have a good internet connection, and some students who live in rural areas have bad experiences with their internet connection, so I think they [the government] have to invest more money to get a better connection".

Participant 8: "I think one of the biggest challenges for online classes is the internet connection, mainly for those who live in rural areas".

Participant 9: "Honestly, I think the most challenging part of online classes is the internet connection. I always experience internet outages, and this will decrease my interest in studying or joining online classes". Participant 14: "In my opinion, the main challenge is the internet connection. I can observe that the internet connection is not stable, so it affects me a lot, and I don't want to miss the lessons".

New apps adaptation

Another challenge encountered by participants was adapting to new apps such as Google Meet and Zoom. Initially, most participants faced difficulties using these apps. Moreover, Zoom data breaches left users in doubt about security and decreased their trust in the app (Yeoh 2020). However, participants also mentioned that they were able to adapt to these apps after using them several times. These students are part of a young, tech-savvy generation who are quick to learn new apps. This also concurs with (Obeng & Coleman, 2021) that technology innovation impacts students positively and receive acceptance to study online. In this context, participants pointed out:

Participant 1: "At the beginning, it was really hard to use Google Meet, but after many trials, I can properly use this platform not only to study but also to present my work".

Participant 14: "Yes, this is the first time using these apps. They were very hard to set up at the beginning, plus we felt insecure because of the data breach news. However, we were convinced by our lecturers to use them and take precautions to guarantee safety".

Communication limitations

Communication between students and lecturers is important for students to understand the lesson and avoid confusion (Rapanta et al., 2020; Muzammil et al. 2020). This study shows that online classes limited communication between students and lecturers, hindering interactions and preventing students from asking questions, concurs with BİLGİÇ & Tuzun (2020).

Less interaction

Despites online platforms providing space to freely express opinions, (Appel et al., 2020), participants mentioned that online classes were not effective for them, as there was little interaction between students and lecturers, concurs with Assunção Flores, and Gago, M. (2020). Consequently, this situation affected their mood and interest in learning, aligning with Saltan (2017) that in-person classes are more effective and easier to follow or even worse, it may discourage them and consequently, they will drop out (Utami et al. 2020).

Furthermore, participants stated that they could not ask many questions due to time constraints. Therefore, they felt demotivated and stopped asking questions during online classes; this lack of interaction affected the quality of the lessons. Delivering high-quality lessons and grooming current students are essential to producing competitive and independent future designers who will develop creative fashion products (Robinson et al., 2019). At the same time, it is important to help students improve their communication skills. Participants

6, 9, 10 and 15 expressed their concern about the communication limitations of online fashion classes:

Participant 6: "In my opinion, in in-person classes, communication with lecturers is different. Students can directly ask questions if they don't understand. However, in online classes, we face difficulties in communicating due to the limitations. Therefore, I think it will be hard for me to show progress or present my final projects".

Participant 9: "Well, in-person [learning] is more face to face. It is more effective. Online [learning] limits the interaction between students and lecturers, so I think it is very hard for the students to "digest" or "process" the lectures. Fashion courses are practical, and we need to perform the techniques".

Participant 10: "As a student, I think it [the pandemic] has affected me a lot. Especially during online classes, the communication between myself and the lecturers is limited. I prefer face-to-face classes. Apart from that, online classes for fashion subjects have darkened my mood and feelings as a student. They are very hard to follow, and I need to focus more compared to in-person classes. Sometimes I feel like to drop out".

Participant 15: "In my opinion, online classes are difficult, as the communication is limited. Students cannot express their thoughts smoothly, and I don't think students can digest all the online lessons. In in-person classes, on the other hand, we can ask lecturers questions directly and perform very well. I prefer in-person classes, of course".

Roles of students and lecturers

It is worth noting the participants' suggestions regarding the roles of both fashion students and lecturers. Although participants state that communication in online fashion courses is limited, they still believe that students and lecturers can motivate each other to enliven the lessons. For example, participants (e.g. 10, 14) recommended that students be more responsible and not miss classes without a legitimate reason so they can stay motivated and follow the lessons properly. At the same time, students should avoid taking advantage such as skipping online classes, as this will affect their comprehension of the material. In addition, technical problems, such as internet outages, can be solved by switching to internet or data providers that offer better coverage. Regarding the lecturers, participants (e.g. 2, 4) suggested that they make the classes more interesting and be well prepared with videos for all lessons, aligned with Yilmaz & Banyard (2020) that lecturers need to be more creative in their teaching method. This is important as Donitsa-Schmidt and Ramot, (2020) demonstrated that most educators were not prepared for online lessons due to the pandemic. On the other hand, participants (e.g. 2, 7) also recommended that the university invest in virtual reality technology, as this will make the lessons much more fun and engaging, which aligns with Lee et al. (2020) that fashion students show more interest in participating in online classes that use virtual reality apps. Additionally,

Mulhem (2020) stated that a proper and well-planned e-learning system need to be considered by the university to enhance and improve the online learning quality. Participants expressed their views regarding the roles of students and lecturers by pointing out:

Participant 2: 'Honestly, I don't prefer online classes, but I would suggest that the university provide better quality devices or introduce virtual reality programmes to make the classes more attractive and stimulate the students' interest. Another step is for lecturers to provide clear and high-quality videos for all lessons. Students can use the videos as a reference, and the most important thing is that they can repeat the video however many times they want'.

Participant 4: "I think lecturers need to be stricter in conducting online classes to make sure students follow or attend the classes because sometimes students take advantage and skip classes. At the same time, lecturers need to improve their skills in preparing the teaching materials and provide more interesting animation and creative videos".

Participant 7: "I think the university can improve the VR (virtual reality) for lectures to make the lessons more interesting".

Participant 10: "Well...I think it is the responsibility of fashion students to cooperate with lecturers. For example, when lecturers inform [students] of the date and time for lectures, students need to make sure that they are available at that time. If they have an internet problem, [they should] try to find another alternative, so they won't miss the sessions. This is the way to show our appreciation for our lecturers' efforts to deliver the lessons to us".

Participant 14: "If students have internet problems, my suggestion is they need to research which internet service is the best for their location, as internet access depends on their location. They have to change their connection, especially from weak to strong coverage. Don't stick with the same one [provider] if the connection is weak".

Environmental issues

Finally, the current study demonstrates that environmental issues related to noises created by animals, humans or vehicles also presented obstacles for fashion students who participated in online classes.

Noise disturbance

The pandemic has changed the way people live, and many now work and study from home. It may be convenient or comfortable for students to stay home and attend classes online (Azlan et al., 2020), but a disadvantage of studying from home is the noise caused by nature or humans, such as animal sounds that interfere with students' concentration during online classes. Another disruption mentioned by participants is the sound of vehicles passing by their homes. Moreover, while participants expressed that they are very

grateful that the pandemic has allowed them to spend more time with family, this has caused problems during online classes, as described below:

Participant 1: "I do attend all classes regardless; however, I cannot really pay attention, due to many interruptions such as noises. For example, at home with family, sometimes my brothers and sisters talk loudly, or there are noises when they are doing housework".

Participant 8: "From my point of view, I can use this app smoothly [Google Meet], except when there are interruptions or distractions, mainly caused by internet connectivity, in addition to noises around me such as motorcycles".

Participant 9: "Well, it was smooth until I encountered an internet connection problem. I also hear noises from my brothers and sister, pets and many more [things], plus [I hear] the heavy rain, mainly in monsoon season".

Participant 10: "I don't have bad internet coverage, but there are interruptions at home – for example, my family is sometimes noisy. Therefore, I normally remind my family that I have classes so they won't make any noise".

Emotional effects

This study indicates that participants are dealing with the emotional effects of online fashion classes. This situation is associated with a lack of comprehension and limits students' performance in online classes.

Lack of comprehension

Participants state that fashion subjects need to be studied face to face as they involve practical, hands-on experiences. For example, lecturers will demonstrate sewing techniques, and if students have questions, they can ask the lecturer directly. However, according to participants, online classes have limited the communication between students and lecturers, which may lead to a lack of comprehension of the subjects in the fashion curriculum. Participants also emphasised that this lack of understanding may cause them mental distress, therefore actions need to be taken to avoid this issue, for example by emphasising mental health among lecturers and students (Hill et al., 2020). Participants expressed:

Participant 1: "I think the main challenge is the level of understanding. For me, online fashion classes limit the knowledge I want to learn compared to inperson classes. Internet connectivity is also one of the main challenges because interruptions occur in the middle of classes, and this creates pressure for me".

Participant 9: "Of course, I feel unhappy when I have problems during online fashion classes, and this will affect my performance. I will also feel frustrated and will take advantage of the situation. Besides, to learn how to sew, we need to learn the process step by step. If I miss one step [due to the internet connection], I'll get lost".

Participant 10: "It [online fashion classes] does affect my emotional state. I will feel stress when attending online fashion classes. Why? If I cannot perform well, I will feel frustrated and cry. Therefore, I prefer face to face' [classes]".

Lack of performance

Comprehension challenges have led to students' poor performance in online classes. Participants expressed that they lose interest when they cannot focus or concentrate during classes, and this affects their performance. At the same time, participants are used to having access to studios or workshops at the university where they can use machinery and tools. Not everyone can afford to buy equipment to use at home, especially during the pandemic, when everyone needs to save money. Participants expressed their concern:

Participant 3: "To me, it is due to the impact of online classes that I can't follow the lessons properly. Honestly, sometimes I cannot understand the lessons at all due to them being online. It is very hard to understand because, as we know for fashion courses, we need to practise the lessons, not just watch or listen as in a theoretical class. Therefore, I strongly disagree with having online classes for fashion courses. Emotionally, I feel stressed when I don't perform well in an online class. For example, when I want to show my sketches to my lecturers, it is really difficult to get feedback due to the limitations [of online classes]".

Participant 4: "Yes, of course, online classes affect me a lot. For example, if we have questions regarding the fashion lesson, we can directly ask the question during in-person classes. It is a bit difficult with online classes due to limitations in communicating with lecturers. Another thing is the facilities; we have all that we need at the university, from machines to materials. At home, most of the students do not have these items, so it may affect their performance".

CONCLUSION

Although online classes allow students to conveniently take classes from home during the pandemic, this study shows that fashion students encountered challenges when studying fashion subjects online.

This study is among the earliest to explore the challenges and effects of the pandemic on fashion students in Malaysia. This research expands the literature on online classes during the pandemic (e.g. Cutri et al., 2020; Mishra et al., 2020; Shah et al. 2020), that the most difficult aspects of online classes for fashion students are technical complications involving internet outages and adapting to new apps. Students also face communication issues due to limitations in interactions between students and lecturers, and this has driven them to work together to motivate themselves to carry on with online classes. This study reveals that one of the greatest obstacles to online learning is environmental issues and most students contend with various noises from nature and humans disrupting their concentration during online classes. Finally, this study expands the effects of online classes (e.g. Azlan et al.,

2020) to include the emotional impact of a lack of comprehension on students and how this contributes to a decline in performance. This study illustrates how emotions can negatively affect students' achievement and interest levels in online fashion classes.

However, a limitation of this study is sampling, where fashion students were chosen from the same university. Therefore, results could differ if students were recruited from multiple universities. In the future, it is recommended to extend the study to other practical courses such as textile design or to compare fashion and textiles programmes to explore the extent to which the pandemic has affected fashion and textiles students.

REFERENCES

- Adnan, M., & Anwar, K. (2020). Online Learning amid the COVID-19 Pandemic: Students' Perspectives. Online Submission, 2(1), 45-51.
- Andres C.M. (2020). From Jeremy Scott at Moschino, a Celebration of the Magic, Whimsy, and Fantasy of Fashion in 40 Puppet-Sized Looks. Retrieved December 15, 2020 from https://www.vogue.com/fashion-shows/spring-2021-ready-to-wear/moschino
- AlMulhem, A. (2020). Investigating the effects of quality factors and organizational factors on university students' satisfaction of e-learning system quality. Cogent Education, 7(1), 1787004.
- Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. Journal of the Academy of Marketing Science, 48(1), 79-95.
- Assunção Flores, M., & Gago, M. (2020). Teacher education in times of COVID-19 pandemic in Portugal: national, institutional and pedagogical responses. Journal of Education for Teaching, 46(4), 507-516
- Atmojo, A. E. P., & Nugroho, A. (2020). EFL Classes Must Go Online! Teaching Activities and Challenges during COVID-19 Pandemic in Indonesia. Register Journal, 13(1), 49-76.
- Azlan, C. A., Wong, J. H. D., Tan, L. K., Huri, M. S. N. A., Ung, N. M., Pallath, V., ... & Ng, K. H. (2020). Teaching and learning of postgraduate medical physics using Internet-based e-learning during the COVID-19 pandemic—A case study from Malaysia. Physica Medica, 80, 10-16.
- BİLGİÇ, H. G., & Tuzun, H. (2020). Issues and Challenges with Web-Based Distance Education Programs in Turkish Higher Education Institutes. Turkish Online Journal of Distance Education, 21(1), 143-164.
- BOTS Team (2020) #TECH: RM20mil to empower rural e-commerce initiative. Retrieved November 15, 2020 from https://www.nst.com.my/lifestyle/bots/2020/03/572270/tech-rm20mil-empower-rural-e-commerce-initiative
- Chaudhary, H. (2020). Analyzing the Paradigm Shift of Consumer Behavior Towards E-Commerce During Pandemic Lockdown. (Master's dissertation). Amity University. Available at SSRN: https://ssrn.com/abstract=3664668or http://dx.doi.org/10.2139/ssrn.3664668

- Cutri, R. M., Mena, J., & Whiting, E. F. (2020). Faculty readiness for online crisis teaching: transitioning to online teaching during the COVID-19 pandemic. European Journal of Teacher Education, 43(4), 523-541.
- Devnas, A. (2020). European Retailers Scrap \$1.5 Billion of Bangladesh Orders. Retrieved November 13, 2020 from https://www.bloomberg.com/news/articles/2020-03-23/europeretailers-cancel-1-billion-of-bangladesh-garment-orders
- Dewart, G., Corcoran, L., Thirsk, L., & Petrovic, K. (2020). Nursing education in a pandemic: Academic challenges in response to COVID-19. Nurse Education Today. doi: 10.1016/j.nedt.2020.104471
- Donitsa-Schmidt, S., & Ramot, R. (2020). Opportunities and challenges: teacher education in Israel in the Covid-19 pandemic. Journal of Education for Teaching, 46(4), 586-595.
- Hill, C., Rosehart, P., St. Helene, J., & Sadhra, S. (2020). What kind of educator does the world need today? Reimagining teacher education in post-pandemic Canada. Journal of Education for Teaching, 46(4), 565-575.
- Goh, P. S. C., & Blake, D. (2021). E-readiness measurement tool: Scale development and validation in a Malaysian higher educational context. Cogent Education, 8(1), 1883829.
- Islam, M. S., Ferdous, M. Z., & Potenza, M. N. (2020). Panic and generalized anxiety during the COVID-19 pandemic among Bangladeshi people: An online pilot survey early in the outbreak. Journal of Affective Disorders, 276, 30-37.
- Kong, J. (2020). All the fashion brands that have announced closures or filed for bankruptcies during the COVID-19 pandemic. Retrieved November 11, 2020 from https://www.buro247.my/fashion/news/fashion-brandsclosures-bankruptcies-covid-19.html
- la Velle, L., Newman, S., Montgomery, C., & Hyatt, D. (2020). Initial teacher education in England and the Covid-19 pandemic: challenges and opportunities. Journal of Education for Teaching, 46(4), 596-608.
- Lee, J. H., Yang, E. K., Lee, E. J., Min, S. Y., Sun, Z. Y., & Xue, B. J. (2020). The use of VR for collaborative exploration and enhancing creativity in fashion design education. International Journal of Fashion Design, Technology and Education, 1-10.
- Lee, S. (2020). Sabah student stays overnight in tree to get better Internet connection for online university exams. Retrieved November 29, 2020 from https://www.thestar.com.my/news/nation/2020/06/16/sabah-uni-student-stays-overnight-in-tree-to-get-better-internet-connection-for-online-exams
- Lie, A., Tamah, S. M., Gozali, I., Triwidayati, K. R., Utami, T. S. D., & Jemadi, F. (2020). Secondary school language teachers' online learning engagement during the COVID-19 pandemic in Indonesia. Journal of Information Technology Education: Research, 19, 803-832.
- MCMC (2020). Media Statement: Changing Usage Patterns Influence Internet Speed In Malaysia. Retrieved December 12, 2020 from https://www.mcmc.gov.my/en/media/press-releases/media-statement-changing-usage-patterns-influence

- Minhat, H. S., & Kadir Shahar, H. (2020). The trajectory of COVID-19 scenario in Malaysia: facing the unprecedented. Current Medical Research and Opinion, 36(8), 1309-1311.
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. International Journal of Educational Research Open, 1, 100012.
- Mohamad Nasri, N., Husnin, H., Mahmud, S. N. D., & Halim, L. (2020). Mitigating the COVID-19 pandemic: a snapshot from Malaysia into the coping strategies for pre-service teachers' education. Journal of Education for Teaching, 1-8.
- Mohammed, Y. (2020). Covid-19 accelerates digitalisation adoption rate in Malaysia. Retrieved November 12, 2020 from https://www.nst.com.my/opinion/columnists/2020/09/627311/covid-19-accelerates-digitalisation-adoption-rate-malaysia
- Moorhouse, B. L. (2020). Adaptations to a face-to-face initial teacher education course 'forced'online due to the COVID-19 pandemic. Journal of Education for Teaching, 1-3.
- Morgan, D. L., & Spanish, M. T. (1984). Focus groups: A new tool for qualitative research. Qualitative sociology, 7(3), 253-270.
- Muzammil, M., Sutawijaya, A., & Harsasi, M. (2020). Investigating student satisfaction in online learning: The role of student interaction and engagement in distance learning university. Turkish Online Journal of Distance Education, 21(Special Issue-IODL), 88-96.
- New Straits Time (2020). UMK makes PPE and shield visors for Covid-19 front liners. Retrieved October 30, 2020 from https://www.nst.com.my/news/nation/2020/03/579548/umk-makes-ppe-and-shield-visors-covid-19-frontliners
- Ng, T. (2020). Covid-19 casualties: H&M, Gap, Zara and other famous fashion brands are closing their physical stores worldwide. Retrieved October 28, 2020 from https://www.asiaone.com/lifestyle/covid-19-casualties-hm-gap-zara-and-other-famous-fashion-brands-are-closing-their
- Purwanto, A., Asbari, M., Fahlevi, M., Mufid, A., Agistiawati, E., Cahyono, Y., & Suryani, P. (2020). Impact of Work From Home (WFH) on Indonesian Teachers Performance During the Covid-19 Pandemic: An Exploratory Study. International Journal of Advanced Science and Technology, 29(5), 6235-6244.
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. Postdigital Science and Education, 2(3), 923-945.
- Remtulla, R. (2020). The present and future applications of technology in adapting medical education amidst the COVID-19 Pandemic. JMIR Medical Education, 6(2), e20190.
- Robinson, J. R., Workman, J. E., & Freeburg, B. W. (2019). Creativity and tolerance of ambiguity in fashion design students. International Journal of Fashion Design, Technology and Education, 12(1), 96-104.
- Robinson, O. C. (2014). Sampling in interview-based qualitative research: A theoretical and practical guide. Qualitative Research in Psychology, 11(1), 25-41.

- Saltan, F. (2017). Blended learning experience of students participating pedagogical formation program: Advantages and limitation of blended education. International Journal of Higher Education, 6(1), 63-73.
- Shah, A. U. M., Safri, S. N. A., Thevadas, R., Noordin, N. K., Abd Rahman, A., Sekawi, Z., & Sultan, M. T. H. (2020). COVID-19 Outbreak in Malaysia: Actions Taken by the Malaysian Government. International Journal of Infectious Diseases, doi.org/10.1016/j.ijid.2020.05.093
- Sharma, P., Leung, T. Y., Kingshott, R. P., Davcik, N. S., & Cardinali, S. (2020). Managing uncertainty during a global pandemic: An international business perspective. Journal of Business Research, 116, 188-192.
- Statista (2020). Coronavirus (COVID-19) impact on apparel and textile industry in Europe statistics & facts. Retrieved December 2, 2020 from https://www.statista.com/topics/6766/coronavirus-covid-19-impact-on-apparel-and-textiles-in-europe/
- Statista (2020). Fashion worldwide. Retrieved November 20, 2020 from https://www.statista.com/outlook/244/100/fashion/worldwide
- Subedi, S., Nayaju, S., Subedi, S., Shah, S. K., & Shah, J. M. (2020). Impact of E-learning during COVID-19 pandemic among nursing students and teachers of Nepal. International Journal of Science and Healthcare Research, 5(3), 68-76.
- Sturges, J. E., & Hanrahan, K. J. (2004). Comparing telephone and face-to-face qualitative interviewing: a research note. Qualitative research, 4(1), 107-118.
- Style Dieter (2019). All Fashion Courses & Fashion Schools in Malaysia. Retrieved December 10, 2021 from https://styledieter.com/fashion/fashion-courses-schools-malaysia/
- Thompson, Craig J. & Diana L. Haytko (1997). Speaking of Fashion: Consumers' Uses of Fashion Discourses and Appropriation of Countervailing Cultural Meanings. Journal of Consumer Research, 24(1), 15-42.
- Utami, S., Winarni, I., Handayani, S. K., & Zuhairi, F. R. (2020). When and Who Dropouts from Distance Education?. Turkish Online Journal of Distance Education, 21(2), 141-152.
- WHO (2020). Coronavirus disease 2019 (COVID-19). Retrieved November 12, 2020 from https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200304-sitrep-44-covid-19.pdf?sfvrsn=783b4c9d_2
- Worldometer (2020). COVID-19 CORONAVIRUS PANDEMIC. Retrieved November 12, 2020 from https://www.worldometers.info/coronavirus/
- Yaw Obeng, A., & Coleman, A. (2020). Evaluating the effects and outcome of technological innovation on a web-based e-learning system. Cogent Education, 7(1), 1836729.
- Yen, E. L. Y., & Mohamad, M. (2020). Utilising E-Learning to Assist Primary School ESL Pupils in Learning to Spell during COVID-19 Pandemic: A Literature Review. Creative Education, 11(8), 1223-1230.
- Yeoh, A. (2020). Over 500,000 Zoom accounts on sale on dark web for less than 1 sen each. Retrieved November 11, 2020 from https://www.thestar.com.my/tech/tech-news/2020/04/14/over-500000-zoom-accounts-on-sale-on-dark-web-for-less-than-1-sen-each

Yick, K. L., Yip, J., Au, S. C., Lai, Y. Y., & Yu, A. (2019). Effectiveness of blended learning in the first year of fashion education. International Journal of Fashion Design, Technology and Education, 12(2), 178-188.

Yilmaz, A. B., & Banyard, P. (2020). Engagement in distance education settings: A trend analysis. Turkish Online Journal of Distance Education, 21(1), 101-120.