

# Journal of Information Technology Management

Print ISSN: 2008-5893

Online ISSN: 2423-5059

# Online Education as a New Normal: Are We Ready for this New Teaching and Learning Mode?

#### Abdul Kadir Othman\*



\*Corresponding Author, Associate Professor, Institute of Business Excellence, University Technology MARA, 40450 Shah Alam, Selangor, Malaysia. Email: abdkadir@uitm.edu.my

### Mohd Khirzanbadzli A. Rahman

Associate Professor, Institute of Business Excellence, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia. Email: khirzan@uitm.edu.my

### **Abstract**

The spread of COVID-19 pandemic starting in late 2019 has changed the way we conduct our teaching and learning activities especially in Higher Education Institutions (HEIs). Since March 2020, classes have been conducted via online platforms. As a consequence, students missed the campus life, teamwork has been given less emphasis, fieldwork, industry visits and community service have been put aside, and most importantly the achievement of the learning outcomes towards a certain extent has been compromised. The implications of these changes need to be highly considered as they might affect the quality of graduates. This paper intends to discuss the impact of COVID-19 pandemic on the education system and highlight some potential solutions that can be considered by the academics and the top management of HEIs to address the negative repercussions of the current practices. Some research implications are also highlighted in the paper.

Keywords: COVID-19 Pandemic, Online Education, Teaching and Learning Outcome, Graduate Quality.

Journal of Information Technology Management, 2023, Vol. 15, Special Issue, pp. 133-141. Published by University of Tehran, Faculty of Management

doi: https://doi.org/ 10.22059/jitm.2022.89416

Article Type: Research Paper

© Authors

Received: February 26, 2022 Received in revised form: May 07, 2022 Accepted: August 18, 2022 Published online: October 19, 2022



### **Introduction**

Malaysian education system is considered among the best in the region, if not in the world. It has gone through a series of reform to ensure its relevancy to meet the current demand (Sivalingam, 2020). The Malaysian Qualifications Agency (MQA) and Ministry of Higher Education (MOHE) are the two government agencies responsible to monitor, audit and accredit all the academic programs and the higher education institutions (HEIs) both public and private to ensure that they are following the guidelines and standards (Ahmad, Ahmad, Sagir, & Jaafar, 2020). There are different levels of accreditation process (provisional, full, and compliance audit) where all programs have to go through before getting the approval to operate. Only programs and HEIs that meet these stringent requirements are recognized and allowed to offer and conduct academic programs.

The audit process is comprehensive as it covers seven main areas comprising curriculum development and delivery, student assessment, student selection and support services, academic staff, educational resources, program management, and continual improvement of the program (Hou, Hill, Chan, Chen, & Tang, 2021). Each area has specific requirements that must be complied by the higher education providers before getting the approval to offer and conduct the programs. Each program has its standard that specifies the requirements that must be fulfilled including those for the online academic programs. However, the COVID-19 pandemic has changed the mode of most academic programs to be offered using online approach (Azman & Abdullah, 2021).

As mentioned earlier, there are two types of programs offered by HEIs; conventional face-to-face programs and online programs. These programs have their respective standards to be followed (Hou et al., 2021). However, when the COVID-19 pandemic hit the country, those HEIs that offer conventional face-to-face programs had to cease operations and change their modes of offer (Azman & Abdullah, 2021). Since the change is too drastic and abrupt, there was no time to comply with all the requirements stated in the standard. The main objective was to continue the academic programs so that students can graduate on time. This approach continues until now as most HEIs expect the pandemic to be over soon and everything will be back to normal.

# **Some Issues Pertaining to the Current Practices**

There are some practices that contradict with the requirements of the Malaysian Qualifications Agency. First, the academic programs are delivered using the conventional program structure without appropriate adjustment to the online requirements (Scull, Phillips, Sharma, & Garnier, 2020; Seah, Ang, Liaw, Lau, & Wang, 2021). The only difference is the mode used to deliver the program. For online programs, there must a system to conduct online classes where the lecture notes are uploaded, the discussions are made, the activities are recorded, and the assessments are conducted, marked and recorded (Theeke, Carpenter, &

Mallow, 2019). However, for conventional programs, most of the teaching and learning activities are organized around physical interactions between students and the lecturers within the confines of the classroom setting. Changing the mode of delivery alone does not make the delivery equally effective.

During the online class, the lecturers act as the facilitators to assist students understand the concepts and theories and apply them in the real workplace setting. Questions and case studies are designed to engage discussion among the students that will be facilitated by the tutors during the online discussion that takes place 24/7 using the online platforms (McKay, & Jamaludin, 2020). When the conventional classrooms were changed to be online classes, the same approach as previously used are continued, for example, the class is conducted as scheduled, no extended discussion and the activities are limited during the scheduled class sessions. This is because lecturers are assigned with heavy workload as previously done and they have limited time to engage with students on a continuous basis. Their readiness is questionable (Sulisworo, Astuti, & Fatimah, 2020).

Second, regarding the assessment, since there is no physical gathering allowed, final examination is done via online platforms (Alfiras, Bojiah, & Yassin, 2020; Elsalem, Al-Azzam, Jum'ah, Obeidat, Sindiani, & Kheirallah, 2020). However, the questions used to assess the students' learning outcome are still similar to those used for conventional face-to-face final examination. This is because the same syllabus is used and the same course learning outcomes are referred to. Simply changing the method of examination beats the purpose of the examination since students can answer these questions simply by referring to their notes, textbooks and online materials. It is timely to change the level of assessment from assessing lower level of thinking skills (LOTS) to higher level of thinking skills (HOTS) to address this problem.

Third, the values promised to be transferred to the students are less given attention. Values such as teamwork, leadership, entrepreneurship, and ethics are difficult to be taught and assessed except when students are assigned to conduct individual or group assignments and lecturers can assess them via observation, presentation, and self-reflective assessment (McKay, & Jamaludin, 2020). When most continual assessments are based on individual approach (mostly article review or critique), this type of assessment fails to evaluate the levels of achievement especially those that relate to psycho-motor and affective domains. Most assessments that have been used evaluate the cognitive aspect alone, which is not sufficient to evaluate all the promised values that students will acquire from the learning process that might affect their employability (Othman, Abdullah, & Romli, 2020).

Fourth, the infrastructure is not readily established to allow for online teaching and learning to effectively take place (Budur, Demir, & Cura, 2021; Garad, Al-Ansi, & Qamari, 2021). Many students have no suitable device such as laptop to engage in online learning. They rely heavily on their handphone to participate in this new learning approach. Some of

them have limited mobile data that are required to facilitate the online learning process (Laksana, 2021). To make it worse, their hometown has limited internet coverage. From the institutional perspective, some HEIs do not have the suitable online platform to manage the online teaching and learning process (Garad et al., 2021). It all depends on the lecturers to decide on the best platform for this purpose. Therefore, there is an urgent need to resolve the issue of online teaching and learning infrastructure.

Fifth, students have less exposure to the real working environment since students are not allowed to do practical training (Allande-Cussó, 2020; Almonacid-Fierro, Souza de Carvalho, Castillo-Retamal, & Almonacid, 2021). Practical training is meant to make sure students are ready to enter into the working world. The COVID-19 pandemic restricts movement thus making this valuable activity less feasible to be conducted. As a result, students will not be ready to join the ever-demanding working world and may experience mental and emotional shock when joining the workforce. It is not surprising that the turnover rate will be higher for the new graduates when they join the workforce. Something needs to be done by the HEIs to ensure that students have the required exposure in their chosen employment before they graduate.

# **Some Suggestions to Resolve the Problems**

The COVID-19 pandemic has brought significant changes to the teaching and learning approach compared with what we have been accustomed to for so many years. We have been so complacent with the existing approach that makes it difficult for us to change. With the spread of the pandemic, we have no choice but to change our teaching approach to suit with the new requirement (Daumiller, Rinas, Hein, Janke, Dickhäuser, & Dresel, 2021). Here are some suggestions that can be considered by the top management of HEIs to ensure that the new teaching and learning process becomes more effective.

First, the academic programs should be delivered using the amended program structure with appropriate adjustment to the online requirements. Since we are not sure when the pandemic will end, it is timely to re-look into the mode of delivery of the program (Binks, LeClair, Willey, Brenner, Pickering, Moore,... & Schwartzstein, 2021; Dhawan, 2020). To do this, the standard that governs the program and that has been referred to by the program developer has to be extended to include the one that relates to online program delivery. Offering online program does not only involve the change in the mode of delivery but also the teaching and learning activities and the resources in order to ensure effective delivery of the program.

The teaching and learning activities must be carefully crafted to engage students during the learning process. Therefore, the use of the current technological applications (Al-Maroof, Salloum, Hassanien, & Shaalan, 2020; Ferdig, Baumgartner, Hartshorne, Kaplan-Rakowski, & Mouza, 2020; Kaharuddin, 2020) such as Kahoot! and Powtoon is required for this

purpose. Online collaborative learning apps such as Padlet and Scribblar are also beneficial to encourage online interactions among students. One private university in Malaysia has used advanced learning technology known as X-Space where students can interact, search for information and collaborate online in order to create engaging learning environment.

Second, regarding the online or take-home assessment, the questions used to assess the students' learning outcome should be changed (Adedoyin, & Soykan, 2020; Almossa, 2021; Elzainy, El Sadik, & Al Abdulmonem, 2020). We cannot use the old approach of examination where students memorize points and put them in writing during the examination period. Now, it is timely to change the purpose of examination to be more practical and test the higher order thinking skills (HOTS) rather than testing the lower order thinking skills (LOTS). Students should be tested on how they can use theories and concepts learned during the learning sessions to solve real problems or make things better.

Third, in order to ensure that the values and skills promised to be transferred to the students are given due consideration, the activities conducted during the online class must properly crafted (Mobasher, 2020; Persky, Fuller, Jarstfer, Rao, Rodgers, & Smith, 2020). Values and skills such as interpersonal, communication, digital, numerical, personal management, leadership, entrepreneurship and ethics must be given upmost attention when assignments and projects are given to students. For instance, students taking entrepreneurship subject must be requested to conduct a project to market products online and at the same time ensuring that ethics and integrity are fully observed. There must also be the right assessment tools or rubrics to evaluate this exercise.

Fourth, with regard to the online learning infrastructure that has not been readily established, the management must look at this matter seriously and promptly take the required improvement measures (Jogezai, Baloch, Jaffar, Shah, Khilji, & Bashir, 2021; Yudiawan, & Sunarso, 2021). First, there must be a reliable system such as Learning Management System (LMS) that can support all the online activities. A system that experiences frequent interruptions is not ready this purpose. Second, students should be assisted in getting the required devices such as laptop and internet data and this support can be included in their program fees. Third, the HEIs must appoint the right (trusted and ethical) vendors to provide the services required. Lastly, the system must be regularly maintained to avoid future mishaps.

Fifth, pertaining to students' limited exposure to the real working environment, the top management of HEIs can consider bringing the industry to the virtual classroom instead of having students to be physically present at their premises (Allande-Cussó, 2020; Almonacid-Fierro et al., 2021; De Ponti, Marazzato, Maresca, Rovera, Carcano, & Ferrario, 2020). It must be clearly stated in the course syllabus that guest lecturers from the industry will be invited to deliver certain parts of the course contents and share their vast valuable experience with the students. To do this, of course, lecturers have to play their role to identify the

relevant courses and contents besides the aspects that must be covered and observed by the industrial lecturers especially on the Outcome Based Education (OBE) and other requirements so that their involvement fits with the academic requirements.

### **Research Implications**

This paper is based on the observation, personal experience and reviews of existing studies, therefore, future research are also required to assess the readiness of the academic staff and students in using the new teaching and learning approaches. This is meant to assess whether they have all the required facilities, support and the right mindset to engage in the online teaching and learning activities. Online teaching and learning activities are different from the conventional approach as they require a major shift in the way they perceive learning. Academics and students are required to be fully committed and independent in the process. Otherwise, they will suffer.

Since very few studies have looked into the effectiveness of online teaching and learning approach, future studies are also required to compare these two teaching and learning approaches. Comparing the strengths and limitations of both approaches might provide some clues on how to make online teaching and learning more effective especially in achieving the learning outcomes. As discussed earlier, the affective and psychomotor domains are difficult to be implemented and assessed online as they require the lecturers to carefully plan, implement and assess the right activities that truly reflect these domains.

Future studies are also suggested to evaluate the feasibility of the suggested solutions to ensure that the new online learning and teaching approaches are effective in meeting the required learning outcomes. For example, inviting the industrial practitioners to deliver lectures as part of the compulsory learning activities may not be effective since industrial practitioners are mostly occupied with their daily tasks in leading and managing their organizations. As a result, those involved in the delivery of the subjects might not be the right person from whom students can learn to enhance their knowledge and experience.

### **Conclusion**

Online teaching and learning have become a new norm in the academic world and it will continue to be the practice in future. In this regard, we need to ensure that the new approach that we use in delivering the lessons is as effective as the conventional approach that we have been using for quite some time. This paper has highlighted a few challenges that need to be considered comprising the program structure, the assessment used, the transferable values and skills, the learning infrastructure and the exposure to the real working environment. Some suggestions are also provided to address the identified challenges including revising the curriculum and adapt the latest applications in the teaching approach, focusing on HOTS aspect in the assessment, reconsider the assignments given to students, establishing reliable support system, and instituting industrial guest lecture in the syllabus. These points discussed

are based on the observation, personal experience and reviews from published academic articles, thus, verification through research effort is required. Future research is highly recommended to evaluate the feasibility of the suggested solutions in making online teaching and learning effective in meeting the learning outcomes.

### **Conflict of Interest**

The authors declare no potential conflict of interest regarding the publication of this work. In addition, the ethical issues including plagiarism, informed consent, misconduct, data fabrication and, or falsification, double publication and, or submission, and redundancy have been completely witnessed by the authors.

# **Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article

### References

- Adedoyin, O. B., & Soykan, E. (2020). COVID-19 pandemic and online learning: the challenges and opportunities. *Interactive Learning Environments*, 1-13.
- Ahmad, R., Ahmad, R., Sagir, M. I., & Jaafar, T. J. (2020). Paradigm of shift in assessment: Constructivist and instructional technology model. *Journal of Critical Reviews*, 7(8), 1394-1397.
- Alfiras, M., Bojiah, J., & Yassin, A. A. (2020). COVID-19 pandemic and the changing paradigms of higher education: A Gulf university perspective. *Asian EFL Journal*, 27(5), 1-9.
- Allande-Cussó, R. (2020). Creating learning scenarios for final-year nursing students during the COVID-19 pandemic. *Journal of Nursing Education*, 59(12), 709-713.
- Al-Maroof, R. S., Salloum, S. A., Hassanien, A. E., & Shaalan, K. (2020). Fear from COVID-19 and technology adoption: the impact of Google Meet during Coronavirus pandemic. *Interactive Learning Environments*, 1-16.
- Almonacid-Fierro, A., Souza de Carvalho, R., Castillo-Retamal, F., & Almonacid, M. (2021). The practicum in times of COVID-19: Knowledge developed by future physical education teachers in virtual modality. *International Journal of Learning, Teaching and Educational Research*, 20(3), 68-83.
- Almossa, S. Y. (2021). University students' perspectives toward learning and assessment during COVID-19. *Education and Information Technologies*, 1-19.
- Azman, N., & Abdullah, D. (2021). A critical analysis of Malaysian higher education institutions' response towards COVID-19: Sustaining academic program delivery. *Journal of Sustainability Science and Management*, 16(1), 70-96.
- Binks, A. P., LeClair, R. J., Willey, J. M., Brenner, J. M., Pickering, J. D., Moore, J. S., ... & Schwartzstein, R. M. (2021). Changing medical education, overnight: the curricular response to COVID-19 of nine medical schools. *Teaching and Learning in Medicine*, 1-9.

- Budur, T., Demir, A., & Cura, F. (2021). University readiness to online education during COVID-19 pandemic. *International Journal of Social Sciences and Educational Studies*, 8(1), 180-200.
- Daumiller, M., Rinas, R., Hein, J., Janke, S., Dickhäuser, O., & Dresel, M. (2021). Shifting from face-to-face to online teaching during COVID-19: The role of university faculty achievement goals for attitudes towards this sudden change, and their relevance for burnout/engagement and student evaluations of teaching quality. *Computers in Human Behavior*, 118, 106677.
- De Ponti, R., Marazzato, J., Maresca, A. M., Rovera, F., Carcano, G., & Ferrario, M. M. (2020). Pregraduation medical training including virtual reality during COVID-19 pandemic: A report on students' perception. *BMC Medical Education*, 20(1), 1-7.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5-22.
- Elsalem, L., Al-Azzam, N., Jum'ah, A. A., Obeidat, N., Sindiani, A. M., & Kheirallah, K. A. (2020). Stress and behavioral changes with remote E-exams during the COVID-19 pandemic: A cross-sectional study among undergraduates of medical sciences. *Annals of Medicine and Surgery*, 60, 271-279.
- Elzainy, A., El Sadik, A., & Al Abdulmonem, W. (2020). Experience of e-learning and online assessment during the COVID-19 pandemic at the College of Medicine, Qassim University. *Journal of Taibah University Medical Sciences*, 15(6), 456-462.
- Ferdig, R. E., Baumgartner, E., Hartshorne, R., Kaplan-Rakowski, R., & Mouza, C. (Eds.). (2020). *Teaching, technology, and teacher education during the COVID-19 pandemic: Stories from the field.* Association for the Advancement of Computing in Education.
- Garad, A., Al-Ansi, A. M., & Qamari, I. N. (2021). The role of e-learning infrastructure and cognitive competence in distance learning effectiveness during the COVID-19 pandemic. *Jurnal Cakrawala Pendidikan*, 40(1), 81-91.
- Hou, A. Y. C., Hill, C., Chan, S. J., Chen, D. I. R., & Tang, M. (2021). Is quality assurance relevant to overseas qualification recognition in Asian higher education? Examining the regulatory framework and the roles of quality assurance agencies and professional accreditors. *Journal of Education and Work*, 1-15.
- Jogezai, N. A., Baloch, F. A., Jaffar, M., Shah, T., Khilji, G. K., & Bashir, S. (2021). Teachers' attitudes towards social media (SM) use in online learning amid the COVID-19 pandemic: The effects of SM use by teachers and religious scholars during physical distancing. *Heliyon*, 7(4), e06781.
- Kaharuddin, A. (2020). Contributions of Technology, Culture, and Attitude to English Learning Motivation during COVID-19 Outbreaks. Contributions of technology, culture, and attitude to English learning motivation during COVID-19 outbreaks. *Systematic Reviews in Pharmacy*, 11(11), 76-84.
- Laksana, D. N. L. (2021). Implementation of online learning in the pandemic COVID-19: Student perception in areas with minimum internet access. *Journal of Education Technology*, 4(4), 502-509.
- McKay, E., & Jamaludin, R. (2020). Interactive effect of information systems and instructional systems design on digital leadership training development. *Systemics, Cybernetics and Informatics*, 18(2), 20-24.
- Mobasher, M. (2020). Virtual learning for teaching medical ethics during COVID-19 pandemic. Journal of Medical Ethics and History of Medicine, 13, 1-5.

- Othman, W. N. A. W., Abdullah, A., & Romli, A. (2020, February). Predicting graduate employability based on program learning outcomes. In *IOP Conference Series: Materials Science and Engineering* (Vol. 769, No. 1, p. 012018). IOP Publishing.
- Persky, A. M., Fuller, K. A., Jarstfer, M., Rao, K., Rodgers, J. E., & Smith, M. (2020). Maintaining core values in postgraduate programs during the COVID-19 pandemic. *American Journal of Pharmaceutical Education*, 84(6), 697-702.
- Scull, J., Phillips, M., Sharma, U., & Garnier, K. (2020). Innovations in teacher education at the time of COVID-19: an Australian perspective. *Journal of Education for Teaching*, 46(4), 497-506.
- Seah, B., Ang, E. N. K., Liaw, S. Y., Lau, S. T., & Wang, W. (2021). Curriculum changes for preregistration nursing education in times of COVID-19: For the better or worse?. *Nurse Education Today*, 98, 104743.
- Sivalingam, A. D. (2020). History of Malaysian Education System: Year 1824 to 2025 (November 22, 2020). Available at SSRN: https://ssrn.com/abstract=3735372 or http://dx.doi.org/10.2139/ssrn.3735372
- Sulisworo, D., Astuti, A. Y., & Fatimah, N. (2020). Online learning implementation during COVID-19 mitigation in Indonesia: Measuring the lecturers' technology readiness. *International Journal of Advanced Science and Technology*, 29(7), 2252-2263.
- Theeke, L. A., Carpenter, R. D., & Mallow, J. A. (2019). Transitioning graduate courses from synchronous to hybrid while meeting quality matters standards for on-line education. 45th Biennial Convention (16-20 November 2019).
- Yudiawan, A., & Sunarso, B. (2021). Successful online learning factors in COVID-19 era: Study of Islamic higher education in West Papua, Indonesia. *International Journal of Evaluation and Research in Education*, 10(1), 193-201.

### Bibliographic information of this paper for citing:

Othman, Abdul Kadir & Rahman, Mohd Khirzanbadzli A. (2023). Online Education as a New Normal: Are We Ready for this New Teaching and Learning Mode? *Journal of Information Technology Management*, 15 (Special Issue), 133-141. https://doi.org/ 10.22059/jitm.2022.89416