

Distance learning in higher education during coronavirus (covid-19) outbreak

M. Khalil¹ *, M. Afifi², W. El-Nahal¹

¹ Faculty of Engineering, October University for Modern Sciences and Arts (MSA), Giza, Egypt

² Head Quality Assurance, Audit & International Partnership Unit, October University for Modern Sciences and Arts (MSA), Giza, Egypt

*Corresponding author E-mail: mkibrahim@msa.eun.eg

Abstract

When E-Learning is not a choice but the salvation for proceeding in education across the globe. In this paper, we spotlight on the challenges facing the higher education systems during the COVID-19 pandemic. The impact of the COVID-19 crisis on students and higher education institutes are discussed to clarify the available technological opportunities that can be used to address students' needs. A Case Study is presented in this work to discuss the role of the E-learning in the international pandemic outbreak.

Keywords: Distance Learning During Outbreaks; E-Learning; Higher Education in COVID-19 Pandemic Era.

1. Introduction

At the end of 2019, a novel coronavirus was identified as the cause of a cluster of pneumonia cases in Wuhan, a city in the Hubei Province of China [Cao et al., 2020]. It rapidly spread, resulting in an epidemic throughout China, followed by an increasing number of cases in other countries throughout the world. The effect of the Covid-19 in the world, is an actual model of the Dominos theory; a falling domino causing an entire row of upended dominoes to fall. In February 2020, the entire world has woken up on a world health disaster, when the World Health Organization designated the disease COVID-19, which stands for coronavirus disease 2019 [WHO remarks, 2020], as an international pandemic having a serious effect on all and future unfolding aspects of life in the entire world; political, economical, social and definitely on the Educational facades [UN report warns, 2016]. Millions of students worldwide are having their education disrupted by the spread of Coronavirus. Schools and universities haven't faced this level of disruption in generations, In this uncertain environment, it's important that learning continues even when schools are close., even if it can't happen in person [Daniel, 2020, pp.1-6]. While online learning isn't new for many digitally savvy teachers and students, it takes some adjustment when it suddenly turns into a full time way to teach and learn [Pearson news and research, 2020] It is a race against time.

2. How corona virus pandemic affected students , staff, administration, policy makers

The strategic envisage and intervention of Governments & Universities were instrumental, managing and streamlining the strategic procedures and policies. The decision of terminating the physical teaching in school and universities to save the lives of students as a measure for ceasing the spread of the corona virus, was definitely a wise decision to overcome the uprising pandemic, this decision was taken in most countries in favor of the welfare of the society and protecting the health safety of the upcoming generations. Governments & Universities had to develop a vision to meet the unprecedented circumstances, with resilience approaches, to ensure that the students receive the intended learning outcomes, and to have the ability to continue education. The mode of course delivery (Teaching & Learning) as well as assessment was re-tailored to meet the current ongoing situation. Students were provided with information to help them make the transition in the mode of education [Kumar et al., 2018].

3. The physiological aspects

The physiological aspect is very important [Daniel, 2020, pp.1-6] and must be regarded as highest priority for educational policy makers, considering these circumstances below are lines written by a graduating senior, a sigh of grief, I cogitate, "Put aside all the jokes and funny memes, graduating seniors are all frustrated and depressed. Not only we miss our graduation and prom, but we wonder when and how we will graduate! Let us admit it, this quarantine has put each and everyone of us in a mental breakdown at least once. These are not normal circumstances for normal human beings to be productive. COVID-19 has a psychological impact too!" Sad words written by a graduating senior, this is how this generation perceives its state. Graduating seniors are struggling as the walls of their Universities are not only limited to their academic life but also their social life, their entire life [Komulainen,, Tani, & Ylikoski 2017].

4. Case study university administration

Our educational institution “October University for Modern Sciences and Art (MSA)” has developed an interactive and successful learning model for E-Learning for more than 12 years and before the Coronavirus global pandemic (COVID-19) existence in our world. MSA e-learning system model includes all the requirements that all staff and students need to complete their teaching and learning process before COVID-19 existence, and also this model enables the learning process to be more effective and flexible after COVID-19 existence.

MSA e-learning system model enables the staff and the students to do different issues in an easy way and a satisfaction manner and that engage both of them to interact well during the learning from home period and hence the learning process can't be affected badly due to the learning from home. MSA e-learning system model includes the following issues and activities to achieve better interaction and engagement to students:

- Uploading courses materials (course outlines, weekly plan, past exams, assignments, lectures, tutorials, labs, references, additional books and other useful links)
- Making online quizzes
- Uploading video lectures
- Announcing form staff to students for any inquiry
- Sending emails from students to staff, if there is any inquiry
- Posting the coursework
- Auto attendance codes for lectures, tutorials and labs
- Supporting to different interaction tools computers, smartphones or tablets

The Faculty of Engineering in October University for Modern Sciences and Art (MSA) has presented a successful model for E Learning. The Head of Quality Assurance, Audit & International Partnerships along with the faculty QA team had the vision to transfer from a hard copy model to a full automated e learning model targeting aligning with the rapid technological ethos, sustainability in higher education and going green by decreasing the paper usage. It is worth noting that the moderation model already adopted was a successful renowned model commended by the External Examiner, these first steps were acknowledged by the external examiner expressing that the presentation of all the Teaching Learning and Assessment materials on all courses was made very easy to him as the information is very well organized and catalogued. This also included new and much improved e-learning facility which he had the opportunity to see. The practices are commendable as they have facilitated the audit and full transparency of educational materials for every course.

Later a full move to e learning was adopted and commended by the External Examiner, expressing in his report that the level of quality assurance standards practiced by the quality unit in the faculty of Engineering has managed to address the recommendations of Washington Accord and is in line with IET and Abbet standards for accreditation. He also commended what he witnessed as a model of sustainability in higher education, managing to upload all review material and student portfolios on MSA eLearning system as well as developing the module review report and submitting all module review reports electronically. Thus facilitating and smoothening the review process for the external examiner and moderation team as well as raising the students graduate attributes via encouraging a virtual environment.

This reflects that the vision towards transferring to eLearning facilitated the process for faculty, staff and students when they were faced by the pandemic. E learning was already a culture where all participating parties were trained towards it. This model was considered as a successful risk management model [Komulainen, Tani, & Ylikoski,].

5. Students and academic staff in coronavirus global pandemic: challenges and opportunities

By the end of March 2020, the Coronavirus pandemic forced millions of students to leave their educational institutes and study from home [Cao et al., 2020]. The pandemic enforced teaching and learning to be displayed through distance learning. The new generations of students; who was subjected to a very high rate of rapid technological developments and innumerable interactive choices and channels of social media for the last two decades, living in a virtual world is currently facing that their educational progression will also be virtual as the only option via e learning means. On the other hand, there are some concerns for solitary as students study alone at home. Also, slow Internet connections in developing countries is a significant big problem. To come over this crisis, educators should collaborate, work together and share their works globally. Educators can draw on what others are doing. For example, international platforms like Khan Academy can be followed and shared among educators instead of recording new videos to save efforts and time.

6. Challenges and opportunities of technology in education during coronavirus global pandemic

As digitization sweeps through all aspects of life around the globe, new technologies help to overcome long distances. Globalization as a contemporary condition or process that clearly shapes education around the globe, in terms of policies and values; curriculum and assessment; pedagogy; educational organization and leadership; conceptions of the learner. Digital technology encourages education for sustainable development as a component of curriculum and pedagogy that speaks back to globalization - discussed in education as internationalization [Komulainen, Tani, & Ylikoski 2017].

Technologies are very important tools that can be used in a variety of ways, especially nowadays where all the world suffer from the Coronavirus global pandemic, and as one of the most important precautions for students to avoid Coronavirus global pandemic (COVID-19) is that “they can't be existed in their educational communities and study from home”, and also even after the evolution of the vaccine of the Coronavirus global pandemic (COVID-19) students can't exist in a large number at the same place at the same time”, and that will affect badly the learning process of all students all over the world if the using of different technologies in the learning process can't compensate the existence of the students in their learning institutions [Kumar et al., 2018].

After COVID-19 existence, one of the important proposals for the future of education technology is the cloud. In the future, teaching and learning is going to be social. Educators in higher education can use the cloud to set, collect and grade work online. Students will have instant access to grades, comments and work via a computer, smartphone or tablet. Many universities are already doing this. Plus, services such as the educational social network Edmodo offer this for free [Daniel, 2020, pp.1-6].

Technology is also changing the nature of work with cloud, mobile, social media and big data advances. Higher education providers, secondary schools and vocational schools have the means to develop shared learning offerings that harness the power of e-learning and provide students with flexible learning opportunities that cross borders in the educational system [Kumar et al., 2018].

7. Conclusion

This pandemic has raised the awareness towards the role of teachers, (no doubt as well doctors, nurses, clinical pharmacists), in the society that should be re-ranked to meet their actual worth. Teachers are the fuel of the society, they stood gracefully in the battle field using all the IT tools to deliver the learning outcomes and to ensure that the students are will equipped to meet the growing requirements and graduate attributes of the dynamic work force.

Technology does not walk backward; we are, as a globe moving towards becoming digital citizens on all facades. There is a direct proportional attribute between the increase of the number of digital citizens and individual national output thus will shed its impact on the level of employability, it will not be a choice for the international community to become e learning literate.

Within this revolving situation, we assume that the world's priorities will be focused towards the following domains: Education, Pharmaceutical Industry, Agriculture, Agricultural industries.

References

- [1] Cho Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J. and Zheng, J., 2020. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry research*, p.112934. <https://doi.org/10.1016/j.psychres.2020.112934>.
- [2] Daniel, S.J., 2020. Education and the COVID-19 pandemic. *Prospects*, pp.1-6. <https://doi.org/10.1007/s11125-020-09464-3>.
- [3] Komulainen, K., Tani, P. and Ylikoski, T., 2017. Facilitating the transition to higher education with a digital pathway. <https://doi.org/10.21125/ic-eri.2017.0196>.
- [4] Kumar, D., Radhamani, R., Nizar, N., Achuthan, K., Nair, B. and Diwakar, S., 2018. *Virtual and remote laboratories augment self-learning and interactions: Development, deployment and assessments with direct and online feedback* (No. e26715v1). *PeerJ Preprints*. <https://doi.org/10.7287/peerj.preprints.26715>.
- [5] WHO Director-General's remarks at the media briefing on 2019-nCoV on 11 February 2020: <https://www.who.int/dg/speeches/detail/who-director-general-s-remarks-at-the-media-briefing-on-2019-ncov-on-11-february-2020>.
- [6] Working and learning online during a pandemic 2020: <https://www.pearson.com/news-and-research/working-learning-online-during-pandemic.html>.
- [7] United Nations: Digital technology in education can impair the right to education and widen inequalities – New UN report warns <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=20129&LangID=E>.