

# Online Learning in Higher Education during the COVID-19 Pandemic in Sri Lanka

L. Wijewardene  
[lishanthi@sjp.ac.lk](mailto:lishanthi@sjp.ac.lk)

---

## **Abstract**

*The COVID-19 pandemic has closed educational institutes across the world jeopardizing academic calendars. Most educational institutes have shifted to online learning platforms to keep the academic activities going (Muthuprasad, et al., 2021). The transition into online learning and blended learning modes has created pedagogical challenges in relation to teacher education, teaching strategies and the taught curriculum, and, attempting to transform syllabi into a virtual lesson format has been a key challenge (Al-Zaabi, 2021). However, areas such as preparedness, designing and effectiveness of e-learning are still vague, particularly in developing countries such as Sri Lanka, where technical limitations have become hindrances with suitability of devices and bandwidth availability posing serious challenges. Teachers and students in the higher education sector in Sri Lanka have shifted the teaching and learning processes to the online platform, and, post-pandemic, university education is almost entirely conducted through the online system, since it is not possible to conduct face-to-face lectures due to the severity of the spread of the virus and the health guidelines issued by the government of Sri Lanka. This article attempts to focus on the need for online education during this crisis pandemic situation and the problems encountered in using the online mode, in the tertiary education sector in Sri Lanka during the period 2020-2021.*

*In-depth interviews were conducted among 25 randomly selected undergraduates belonging to the state university system in Sri Lanka. These interviews were centred around the opinions of the undergraduates. Whilst some were appreciative of online learning and the opportunities it brought about, many focused on the challenges they faced when engaging in home learning activities during the Covid-19 pandemic. The researcher observed that the students face many challenges, including internet connection problems, health concerns, problems with devices and data, and the use of certain online applications.*

**Keywords:** *Sri Lankan undergraduates, online learning challenges, COVID-19 pandemic*

---

Date of Submission: 25-02-2022

Date of Acceptance: 06-03-2022

---

## **I. Introduction**

The coronavirus disease, which is dubbed as COVID-19, is one of the most critical perennial problems confronting the contemporary world today (Agba, Ocheni, and Agba, 2020). As the COVID-19 pandemic swept through the continents, many countries closed their borders and imposed strict lockdowns to curb the rising infection rates, resulting in the closure of educational institutions and leaving learners out of schools and universities (Onyema *et al.*, 2020). Sri Lanka closed its international airports to commercial flights together with seaports at the beginning of the pandemic in March 2020 and imposed varying degrees of lockdowns and curfews both nationwide and for specific districts/provinces as cases were reported. Designated infectious disease hospitals and quarantine centres were used to house patients and their potential contacts/ repatriated Sri Lankans (Liyaganawardena and Williams, 2021). All government schools and universities in Sri Lanka were closed from March 13, 2020 (Erandi *et al.*, 2020). The COVID-19 pandemic, therefore, threw the lives of learners and teachers into disarray as they were forced to transition overnight to an online system of education. In addition to the uncertainty relating to academic schedules, mode of examinations and evaluation patterns, students were forced to adapt to learning online without the facility of books, laboratories, libraries, computer systems and interactive classrooms (Agarawal and Khara, 2021). The pandemic forced administrators of higher educational sectors, particularly the universities in Sri Lanka, to mobilize students and staff to cope with a new turn of events and come up with constructive and innovative ideas to address those challenges working in collaboration with various stakeholders of universities like academic staff, students, administrative and non-academic staff in the system, bringing about impacts and challenges to the teaching and learning process of the universities both globally and locally during COVID-19 pandemic (Rameez *et al.*, 2020). The pandemic and its requirement of social distancing required education to be delivered online. (Agarawal and Khara, 2021).

Across the globe the educational systems have plummeted due to the COVID-19 pandemic (Wijewardene, 2021) and resulted in educational institutions being closed down to prevent the spread of the virus, and, as a result, academic activities have been disrupted (UNESCO, 2020). Universities in Sri Lanka have had difficulties in grappling with unprecedented dimensions of COVID-19 in order to carry on teaching and learning activities, administrative duties and the new challenge of e-learning (Rameez *et al.*, 2020). Academics have been involved in online teaching and learning, although there have been many difficulties involved in the teaching and learning process via online, due to measures taken to implement the online education system (Rameez *et al.*, 2020). As a result, with the prevailing COVID-19 pandemic, university education is almost entirely done through the online system, since traditional education cannot be continued. Hence, it has become very important to find the best models and learning platforms for online teaching and the problems students are facing in this process. Additionally, checking the possibilities and students' perspectives on moving to an online system are important (Haththotuwa and Rupasinghe, 2021). Following the outbreak of the coronavirus disease (COVID-19), school closures and the sudden shift to online learning have increased the risk of poor children falling behind in their studies; hence, policymakers need to bridge the digital divide, expand opportunities for technical education, and promote quality, equitable, and inclusive education to help the poor and vulnerable escape from the intergenerational poverty trap (Development Asia, 2021). In this scenario, it is imperative that the government should take the responsibility of providing the required equipment to set up an effective e-assessment system, and telecommunication companies need to provide a fast internet connection to the students at a reasonable price (Karunarathne and Wijewardene, 2021).

## **II. Literature Review**

### **The Sri Lankan context**

Sri Lanka's higher education sector faced various challenges due to the closure of all the universities by the government and the suspension of all academic activities on 12th March 2020 (Adaderana, 2020) and a nationwide curfew imposed by the government on 20th March 2020 (Newsfirst, 2020). The closure of the national universities and other higher education institutions affected the teaching and learning activities of students, and university admission, assessment and examination, graduation ceremonies, recruitment and promotion activities were temporarily postponed (Rameez *et al.*, 2020). Failure to continue education in the traditional manner threatened to create a major setback in the education sector of the country (Basilaia, 2020; Plancher *et al.*, 2020), hence universities were compelled to shift to an online mode (Alipio, 2020; Hodges *et al.*, 2020; Azzahra, 2020; Pujilestari, 2020; Nadeak, 2020 ).

This resulted in the work-from-home strategy being adopted, thereby compelling university teachers, students and other staff to continue their academic and administrative activities from their homes with the assistance of technological devices. This brought about a structural change and a transition from the traditional face-to-face lecture delivery mode to the online education mode in the higher education sector in Sri Lanka (Rameez *et al.*, 2020). Hence, the age-old face-to-face teaching and learning process was replaced by online education, a new concept for most of the academics in Sri Lankan universities. Many researches have shown the importance of shifting to an online delivery mode during crisis times, whilst some researches have revealed the complicated issues that arose during the COVID-19 pandemic in delivering knowledge in universities (Goda *et al.*, 2020; Johnson *et al.*, 2020; Mukhtar *et al.*, 2020). Some studies indicated that online learning negatively impacts student learning (Cao *et al.*, 2020; Duraku *et al.*, 2020; Onyema *et al.*, 2020) while other studies disclosed that online learning has a positive impact on student learning (Bojovic *et al.*, 2020; Moreno-Guerrero *et al.*, 2020).

Hodges *et al.* (2020) used the term Emergency Remote Teaching (ERT) to describe the delivery of education during the lockdown circumstances:

“In contrast to experiences that are planned from the beginning and designed to be online, emergency remote teaching (ERT) is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face ... courses and that will return to that format once the crisis or emergency has abated” (Para. 13).

### **ICT tools and connectivity**

Many universities have been reluctant to launch online educational activities, and university teachers and administrators have also encountered complications in undertaking their duties. Teachers, students and other staff who have a lack of skill in modern tools and technology have faced several challenges (Rameez *et al.*, 2020). According to Duraku and Hoxha (2020), e-learning platforms were challenging to most students due to the lack of the technical know-how of technological devices and the limited access to the internet, whereas, when students have suitable devices, such as smartphones, computers, laptops, and iPads, they are motivated to engage in online learning. Likewise, the non-availability of devices, network issues, lack of training, and lack of

interaction due to connectivity issues were seen as major challenges faced during the COVID-19 period on virtual learning and teaching (Arora and Srinivasan, 2020). The main technology-related challenges faced during the pandemic on digital education are lack of good internet, connectivity issues, lack of laptops and microphones (Kaup et al., 2020), whilst, according to Joshi *et al.* (2020), online education platform was a success with the latest configured laptops, microphones, cameras, and proper internet connections with high bandwidth. In a research conducted by Mcmurtrie (2020), the results revealed that in Saudi Arabia, many students do not have suitable gadgets to attend online classes, and they have indicated that there is an absence of internet services around their residential areas. However, Dratcott (2020) stated that, in order to facilitate online learning in Saudi Arabia, many higher education institutions have provided laptops and tablets to students free of charge.

In a bid to encourage and facilitate online learning, the government of Sri Lanka took several measures to reduce the cost incurred to teachers and students engaging in online educational activities, and, universities used their Moodle-based learning management systems, with the government providing the Zoom app through the Lanka Education and Research Network (LEARN) for the continuation of academic activities (Rameez *et al.*, 2020). Some web providers offered free online access to universities, and, online education has presently become a significant part of the educational process of Sri Lankan universities (Rameez *et al.*, 2020).

### **Online learning during COVID-19**

The years 2020 and 2021 have seen a radical shift towards online education (Wijewardene, 2021). In 2020, the World Health Organization identified the Corona Virus Disease (COVID-19) as a pandemic (Dahiya et al., 2021) and, consequently, universities worldwide had to close their campuses and relocate their whole academic programmes online (Denovan et al., 2019). Most universities were not prepared for this transition from classroom to e-learning, as they lacked facilities and plans in the initial beginning (Eysenbach, 2005). The pandemic and the lockdowns have influenced the mind of people everywhere (Dahiya et al., 2021).

Studies have indicated that, whilst some universities welcomed the move from face-to-face lectures to online lectures, many students experience emotional distress and anxiety (Giustino et al., 2020; Goodwin et al., 2016). Dahiya et al., (2021) were of the view that online education provides students with a wonderful approach to broaden their chances and remain ambitious in the increasingly challenging world of education. Hallgren et al. (2020) stated that there are concerns in adapting to online instruction and that most students experienced digital gaps as they do not have expertise in and access to digital technology.

The pandemic pushed several organisations to change their workflow tactics rapidly and incorporate new technologies, and in many situations, these organisations did not have enough time to think about the introduction and integration of the new strategy and the corresponding technology into their existing structure (Dahiya et al., 2021). There were no exceptions to universities all around the world (Dahiya et al., 2021). However, while Lesser and Nienhuis (2020), stated that students prefer to interact face to face with teachers, Bailey et al. (2018) were of the view that there was a lack of trust in online assessment approaches.

### **Methodology and Findings**

This is a qualitative research (Cresswell, 2003; Cresswell, 2005) where in-depth interviews (Gay, Mills, & Airasian, 2012; Miles, Huberman, & Saldana, 2014) were conducted with 25 randomly selected undergraduates belonging to the state university system in Sri Lanka, to find out their views on shifting to online lectures, from the traditional face-to-face lectures. Whilst some students were appreciative of online learning and the opportunities it brought, many focused on the challenges they faced when engaging in learning activities at home, during the COVID-19 pandemic. The findings revealed that students face many challenges, including problems with internet connection, problems with devices and data, and the use of certain online applications, in addition to health concerns. These findings are congruent with the findings of Moorhouse (2020) and Trung et al., (2020).

The findings also revealed that although students expressed a liking to use the university Learning Management System (LMS) and the free Learn-ZOOM versions to follow lectures, there were internet problems in many areas which hampered their online learning. These findings are congruent with the findings in the study done by Rupesinghe and Haththotuwa (2021).

Further, the study discovered that a high percentage of students liked to use these types of online learning in the future after the commencement of the universities via the university LMS and Learn-Zoom free versions. But, the problem with access to the internet due to the lack of internet coverage in certain areas is the main challenge they are faced with. In relation to the internet connection during online learning a majority of the respondents said that the internet connection at home was weak and unstable. Some mentioned that they needed to climb to a higher elevation to get a good internet signal to follow the online lectures. The research by Ariyanti (2020) had similar findings.

Moreover, the findings revealed that students preferred face-to-face lectures as they had the freedom to ask questions about areas that they did not understand. These findings are congruent with the findings of Ariyanti (2020). However, according to Lesser and Nienhuis (2020), there is not much research on how efficiently students can engage with professors and fellow students through a variety of online platforms and the difficulties they encounter.

When asked about whether they had devices to facilitate online learning, many students mentioned that, due to economic hardships, they were unable to spend large amounts on data packages. Additionally, as there were other siblings in the family, there was a shortage of devices in the home. Most students used the smartphone to follow lectures and this device had to be shared amongst siblings who also engaged in online learning. In a recent research, Mukhtar, Javed, Arooj, & Sethi, (2020) also echoed similar sentiments. Cao et al, (2020) found that the digital divide between urban and rural areas is common for students in rural areas and they lack access to ICT. They also indicated that individuals who are financially destitute or living in rural areas often have limited access to digital technology. The regular access to digital technology necessitates on-line training. Students with limited access to digital technology, as well as those who are unfamiliar with them, have difficulty adapting to online education. They concluded that there was a digital divide, but it was worsened by the pandemic. In addition, some students reside in closed neighbourhoods and have trouble attending online classes

When asked about whether there were other challenges that students faced due to online learning, they mentioned that they frequently had headaches and eye-pain due to staring for long periods of time at the devices. Some also said that it was difficult to focus on online lectures and that they were experiencing high levels of stress. Lumley et al (2020) echoed similar sentiments in their research.

All the students preferred the Zoom platform for online learning as it had easy-to-use features, and they mentioned that their lecturers also used this online platform to deliver lectures. All the students were of the view that this platform needs to be improved, as it was difficult to access it during the day due to the heavy demand. Additionally, they mentioned that, as a result of the unstable internet connection experienced by many in their hometowns, they were unable to join and participate in online lectures. In addition, the same access and expertise of digital technology is not available to all students. Even though these discrepancies were present, the COVID-19 epidemic revealed the digital gap (Hallgren et al., 2020).

According to Rupasinghe and Haththotuwa, (2021), the normal everyday teacher-student interaction is missed in virtual classroom settings. Instead, teachers need to rely on using diverse technological strategies to trigger students' motivation. The motivational issue is more vivid in online instruction as students tend to lose interest more rapidly in comparison to the situation in real face-to-face instruction.

### **III. Conclusion**

Sri Lanka is a developing country and it is important to check the feasibility of using E-learning in higher education (Rupasinghe and Haththotuwa, 2021). It is necessary to research the effectiveness and success of online learning and issues that students are faced with through this process (Allo, 2020). Online education has become a timely necessity with the COVID-19 pandemic in Sri Lanka, and it is important to consider the response of university students to online education in measuring its effectiveness (Rupasinghe and Haththotuwa, 2021).

The Sri Lankan education system has been following the traditional method which has continued for a long time. Therefore, when shifting from that traditional system to an e-learning system, it is necessary to research the effectiveness and success of e-learning and issues that students are facing, which will in turn, assist government, universities, and other educational institutes to take decisions, make policies, organize learning, and introduce new degree programs based on the results of researches (Rupasinghe and Haththotuwa, 2021). Thus it is important to conduct further research on how successful it is to use e-learning, which has proved to be of utmost help in the continuation of education, in extreme situations such as the pandemic situation. The time has come to resolve the issues realized by the above findings for the benefit of future online learning and to carry out such educational activities without interruption (Rupasinghe and Haththotuwa, 2021; Elmer et al, 2020). Yet, much in-depth investigation needs to be carried out.

### **Reference**

- [1]. Adaderana. (2020). All universities to be temporarily closed over coronavirus fears. Retrieved from <http://www.adaderana.lk/news/61355/all-universities-to-be-temporarily-closed-over-coronavirus-fears>
- [2]. Agarwal, V. K., and Khara, S. (2021). Student Perception of Online Learning During Covid: Findings From A Indian University. *International Journal of Engineering Technologies and Management Research*, 8(10), 16-32.
- [3]. Agba, A. M. O., Ocheni, S. I., and Agba, M. S. (2020). COVID-19 and the World of Work Dynamics: A Critical Review. *Journal of Educational and Social Research*, 10(5), 119.
- [4]. Alipio, M. (2020). Education during Covid-19 Era: Are Learners in a Less-Economically Developed Country Ready for E-Learning? *SSRN Elec-tronic Journal*. <https://doi.org/10.2139/ssrn.3586311>

- [5]. Allo, M. D. G. (2020). Is online learning good amid Covid-19 Pandemic ? The case of EFL learners. *Jurnal Sinestesia*, 10(1), 1–10.
- [6]. Al-Zaabi, H.K.A. (2021). The impact of COVID-19 on English language teaching in Oman. *International Journal of English Language Teaching*. Vol.9, No.3, pp.14-19
- [7]. Ariyanti, M. (2020). EFL Students' Challenges towards Home Learning Policy During Covid-19 Outbreak. *Indonesian Journal of English Language Teaching and Applied Linguistics* Vol. 5(1).
- [8]. Arora, A.K. and Srinivasan, R. (2020). Impact of pandemic COVID-19 on the teaching-learning process: a study of higher education teachers. *Prabandhan: Indian Journal of Management*, 13(4), 43-56.
- [9]. Azzahra, N. F. (2020). Addressing Distance Learning Barriers in Indonesia Amid the Covid-19 Pandemic. *Policy Brief*, 2.
- [10]. Bailey, A. P., Hetrick, S. E., Rosenbaum, S., Purcell, R., & Parker, A. G. (2018). Treating depression with physical activity in adolescents and young adults: A systematic review and meta-analysis of randomised controlled trials. *Psychological Medicine*, 48(7), 1068-1083. Retrieved from <https://doi.org/10.1017/S0033291717002653>
- [11]. Basilaia, G. (2020). Replacing the Classic Learning Form at Universities as an Immediate Response to the COVID-19 Virus Infection in Georgia. *International Journal for Research in Applied Science and Engineering Technology*, 8(3), 101–108. <https://doi.org/10.22214/ijra-set.2020.3021>
- [12]. Bojovic, Z., Bojovic, P.D., Vujošević, D., and Šuh, J. (2020). Education in times of crisis: rapid transition to distance learning. *Computer Applications in Engineering Education*, 28, 1467–1489.
- [13]. Cao, W., Fanga, 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.
- [14]. *Psychiatry Research*, 287, 112934. Retrieved from <https://doi.org/10.1016/j.psychres.2020.112934>
- [15]. Cresswell, J. (2003). *Research Design, Qualitative, Quantitative, and Mixed Method Approach* (2nd ed.). California: Sage Publications.
- [16]. Cresswell, J. (2005). *Research Design: Qualitative and Quantitative Approaches*. London: Longman.
- [17]. Dahiya, K., Malhotra, N., Bachhwal, V., and Gupta, N. (2021). Online Education in the Time of COVID-19 Crisis. *International Journal of Engineering Technologies and Management Research*, 8(9), 70-77.
- [18]. Denovan, A., Dagnall, N., Dhingra, K., & Grogan, S. (2019). Evaluating the perceived stress scale among UK university students: Implications for stress measurement and management. *Studies in Higher Education*, 44(1), 120-133. [9]
- [19]. Development Asia (2021). The shift to online learning due to COVID-19 has increased the risk of poor children falling further behind in their studies <https://development.asia/insight/closing-digital-divide-sri-lanka-amid-covid-19>
- [20]. Dratcott, A. (2020). Coronavirus drives remote learning's acceptance in the Middle East and beyond latest updates. available at: <https://www.arabnews.com/node/1645091/middle-east>.
- [21]. Duraku, Z.H. and Hoxha, L. (2020). The impact of COVID-19 on education and on the well-being of teachers, parents, and students: challenges related to remote (online) learning and opportunities for advancing the quality of education. Available at: <http://www.researchgate.net/publication/341297812>.
- [22]. Elmer, T., Mephram, K., & Stadfeld, C. (2020). Students under lockdown: Assessing change in students' social networks and mental health during the COVID-19 crisis. *PLoS One*, 15(7), Article e0236337. Retrieved from <https://doi.org/10.1371/journal.pone.0236337>
- [23]. Eysenbach, G. (2005). The law of attrition. *Journal of Medical Internet Research*, 7(1), e11. Retrieved from <https://doi.org/10.2196/jmir.1157> <https://doi.org/10.2196/jmir.7.1.e11>
- [24]. Gay, L. R., Mills, G. E., & Airasian, P. (2012). *Educational Research: Competencies for analysis and applications*. Boston: Pearson.
- [25]. Giustino, V., Parroco, A. M., Gennaro, A., Musumeci, G., Palma, A., & Battaglia, G. (2020). Physical activity levels and related energy expenditure during COVID-19 quarantine among the Sicilian active population: A cross-sectional online survey study. *Sustainability*, 12(11), 4356. [12] Glass, G. V., Peckham, P. D., & Sanders, J. R. (1972). Consequences of failure to meet assumptions underlying the fixed effects analyses of variance and covariance. *Review of Educational Research*, 42(3), 237-288. Retrieved from <https://doi.org/10.3390/su12114356>
- [26]. Goda, O., Mahdy, D., Yosef, M., Amin, H.A., and Ahmed, S. (2020). Students' awareness as an underlying factor for satisfaction and compliance. In: 2020, Science. Open Preprint. DOI: 10.14293/S2199-1006.1.SOR-PPK60BN.v1.
- [27]. Goodwin, J., Behan, L., Kelly, P., McCarthy, K., & Horgan, A. (2016). Help-seeking behaviors and mental well-being of first year undergraduate university students. *Psychiatry Research*, 246, 129-135. Retrieved from <https://doi.org/10.1016/j.psychres.2016.09.015>
- [28]. Hallgren, M., Owen, N., Vancampfort, D., Smith, L., Dunstan, D. W., Andersson, G., et al. (2020). Associations of interruptions to leisure-time sedentary behaviour with symptoms of depression and anxiety. *Translational Psychiatry*, 10(1), 1-8. Retrieved from <https://doi.org/10.1038/s41398-020-0810-1>
- [29]. Hodges, C., Moore, S., Lockee, B., Trust, T., and Bond, A. (2020). The Difference Between Emergency Remote Teaching and Online Learning. *Educause Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- [30]. Johnson, N., Veletsianos, G., and Seaman, J. (2020). U.S. faculty and administrators' experiences and approaches in the early weeks of the COVID-19 pandemic. *Online Learning Journal*, 24(2), 6-21.
- [31]. Joshi, A., Vinay, M., and Bhaskar, P. (2020). Impact of coronavirus pandemic on the Indian education sector: perspectives of teachers on online teaching and assessments. *Interactive Technology and Smart Education*. Available at: <https://doi.org/10.1108/ITSE-06-2020-0087>.
- [32]. Karunarathne, G. D. D. T., and Wijewardene, L. (2021). Online Assessments: Their Importance in Higher Education. *Advances in Social Sciences Research Journal*. Vol.8 Issue 12. pp308-316.
- [33]. Kaup, S., Jain, R., Shivalli, S., Pandey, S., and Kaup, S. (2020). Sustaining academics during COVID-19 pandemic: the role of remote teaching-learning. *Indian Journal of Ophthalmology*, 68(6), 1220.
- [34]. Lesser, I. A., & Nienhuis, C. P. (2020). The impact of COVID-19 on physical activity behavior and well-being of Canadians. *International Journal of Environmental Research and Public Health*, 17(11), 3899. Retrieved from <https://doi.org/10.3390/ijerph17113899>
- [35]. Liyanagunawardena, T.R. and Williams, S.A. (2021). Emergency Remote Education: Experience from Sri Lanka during Covid-19. *Asian Journal of Distance Education*, Volume 16, Issue 1
- [36]. Lumley, T., Diehr, P., Emerson, S., & Chen, L. (2002). The importance of the normality assumption in large public health data sets. *Annual Review of Public Health*, 23(1), 151-169. Retrieved from <https://doi.org/10.1146/annurev.publhealth.23.100901.140546>
- [37]. Mcmurtrie, B.B. (2020). Students without laptops, instructors without internet: how struggling colleges move online during covid-19. Available at: <https://www.chronicle.com/article/StudentsWithout-Laptops/248436>.

- [38]. Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis: A Methods Sourcebooks* (3rd ed.). California: SAGE Publications, Inc.
- [39]. 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*, 00(00), 1–3. <https://doi.org/10.1080/02607476.2020.1755205>
- [40]. Moreno-Guerrero, A.J., Aznar-Díaz, I., Caceres-Reche, P., and Alonso-García, S. (2020). E-learning in the teaching of mathematics: an educational experience in adult high school. *Mathematics*, 8(5), 1-16.
- [41]. Mukhtar, K., Javed, K., Arooj, M., and Sethi, A. (2020). Advantages, limitations and recommendations for online learning during COVID-19 pandemic era. *Pakistan Journal of Medical Sciences*, 36, S27-S31, DOI:<https://doi.org/10.12669/pjms.36.COVID19-S4.2785>.
- [42]. Muthuprasad, T., Aiswarya, S., Aditya, K.S., and Jha, G.K. (2021). Students' perception and preference for online education in India during COVID -19 pandemic. *Social Sciences & Humanities Open*, 3, 100101
- [43]. Nadeak, B. (2020). The Effectiveness of Distance Learning Using Social Media during the Pandemic Period of COVID-19 : A Case in Universitas Kristen Indonesia. 29(7), 1764–1772.
- [44]. Newsfirst. (2020). More than 13,000 curfew violators arrested as Sri Lanka enters nationwide curfew. Retrieved from <https://www.newsfirst.lk/2020/05/17/more-than-13000-curfew-violators-arrested-as-sri-lanka-entersnationwide-curfew/>
- [45]. Onyema, E.M., Alsayed, A.O., and Sen, S. (2020). Impact of coronavirus pandemic on education. *Journal of Education and Practice*, 11(13), 108-121.
- [46]. Plancher, K. D., Shanmugam, J. P., and Petterson, S. C. (2020). The Changing Face of Orthopedic Education: Searching for the New Reality After COVID-19. *Arthroscopy, Sports Medicine, and Rehabilitation*. <https://doi.org/10.1016/j.asmr.2020.04.007>
- [47]. Pujilestari, Y. (2020). Dampak Positif Pembelajaran Online Dalam Sistem Pendidikan Indonesia Pasca Pandemi Covid-19. 'ADALAH, 4(1).
- [48]. Rameez, A., Fowsar, M. A. M. and Lumna, N. (2020). Impact of Covid-19 on Higher Education Sectors in Sri Lanka: A Study based on South Eastern University of Sri Lanka. *Journal of Educational and Social Research*, Vol. 10, No. 6
- [49]. Rupasinghe, R.A.H.M. and Haththotuwa, P.M.P.S. (2021). Adapting to online learning in higher education system during the Covid-19 pandemic: A case study of universities in Sri Lanka. *Sri Lanka Journal of Social Sciences and Humanities*, 1(2), 147-160.
- [50]. Trung, T., Hoang, A. D., Nguyen, T. T., Dinh, V. H., Nguyen, Y. C., & Pham, H. H. (2020). Dataset of Vietnamese student's learning habits during COVID-19. *Data in Brief*, 30, 105682. <https://doi.org/10.1016/j.dib.2020.105682>
- [51]. UNESCO (2021). [www.en.unesco.org/covid19/educationresponse](http://www.en.unesco.org/covid19/educationresponse), viewed 9 June 2021.
- [52]. Wijewardene, L. (2021). The Impact of Covid-19 on Higher Education in Sri Lanka. *IOSR Journal of Humanities and Social Science*, Volume 26, Issue 5, pp 54-59

L. Wijewardene. "Online Learning in Higher Education during the COVID-19 Pandemic in Sri Lanka." *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 12(02), (2022): pp. 01-06.