İSTANBUL UNIVERSITY PRESS

Journal of Economy Culture and Society
JECS 2023; 69 : 122–132
DOI: 10.26650/JECS2023-1367089

Research Article

COVID-19 and Emergency Migration to Remote Teaching in a Public University in the Maldives: Challenges, Solutions, and Lessons Learned

Visama Hassan[1], Dheeba Moosa[2]

[1]Ms, Islamic University of Maldives, Kulliyah of Education, Male City, Maldives
[2]Dr, Islamic University of Maldives, Kulliyah of Education, Male City, Maldives

Corresponding author : Visama Hassan
E-mail : visama.hassan@ium.edu.mv

ABSTRACT

Institutions of higher education worldwide were forced to implement emergency remote teaching (ERT) during the COVID-19 pandemic. This scenario presented several issues for university lecturers and students. This study examines the challenges, experiences, and lessons learned by lecturers at a public university in the Maldives when forced to conduct ERT during the pandemic using an exploratory sequential mixed-method. The respondents most frequently cited unreliable internet connection (83.9%) and internet cost (76.8%), while 75% reported difficulty in motivating students and meeting their varied needs (64.3%). Access to technology (66.1%) and performance assessment (62.5%) were also mentioned. Challenges included internet, technology, student support, learning, and evaluation. The lecturers learned new skills during the pandemic, which was a positive outcome. Lastly, they stressed training, assistance, and the crisis readiness of the university.

Keywords: COVID-19 pandemic, Emergency Remote Teaching, Challenges, Maldives, Higher Education Institution

Submitted : 28.09.2023
Revision Requested : 05.11.2023
Last Revision Received : 20.12.2023
Accepted : 30.12.2023
Published Online : 29.04.2024

Introduction

COVID-19 struck China in November 2019 and spread quickly worldwide, such that the WHO declared it a pandemic on January 30, 2020 (The WHO Just Declared Coronavirus COVID-19 a pandemic, 2020), which brought many affected countries to a standstill. The impact of the pandemic was felt globally in every sector of the country, including education and higher education (Mohmmed et al., 2020).

1. Context

In early March, the pandemic reached the Maldives, a small country composed of 1,192 low-lying islands divided into 26 atolls out of which 200 islands are inhabited. The pandemic forced the country to implement nationwide lockdown due to the announcement of the first community transmission of the disease in Malé, the capital city of Maldives. For this reason, all sectors, including higher education, was forced to momentarily cease operations. This pause included teaching and learning, which have mostly been conducted face-to-face until then. However, Islamic University of Maldives (IUM), one of the two public universities, predicted the lockdown one week before its announcement and began making plans to switch to remote methods. Thus, the school opted to offer 15 undergraduate courses and 14 graduate courses for a total of 29 courses online.

The senior management of the IUM prepared a detailed contingency plan to ease the emergency migration to remote teaching. The plan was then shared with lecturers as they prepared to teach using remote methods. Prior to the lockdown, the lecturers underwent a one day in-person training program for familiarization with online platforms such as Zoom. However, the program was insufficient for preparing the lecturers to switch to remote teaching, because the context was new, unfamiliar, and untested. In addition, migrating the face-to-face courses to online ones within a brief period is a major disruptive change. To shift from the face-to-face to remote teaching mode, detailed lesson notes, trained lecturers, teaching materials, and a technology support team are necessary (Rapanta et al., 2020). It also requires certain pedagogical knowledge related to the design and organization of lessons using technology (Rapanta et al., 2020). The greatest challenge faced by the IUM lecturers was that the majority were unaware or unfamiliar with the technology required for online teaching. In addition, a number of lecturers were reluctant to recognize the importance of detailed lesson notes along with the appropriate use of modern tools to facilitate remote teaching. Therefore, many issues and significant resistance from lecturers and students were reported only a few weeks after the transition to remote teaching.

The literature on emergency remote migration during the pandemic exists. The majority of research focuses on education systems from countries with an established technology-enabled learning environment. The literature from remote less developed countries continues to emerge. The present study attempts to add to the emerging literature, because elucidating the challenges faced by university teachers due to the sudden need to teach synchronously online and from home in isolation is important. The result could assist the university in providing better support and a conducive teaching environment for the lecturers, especially in future crisis situations. People in similar situations worldwide who are struggling to provide good education amid a health crisis may also learn from the IUM experience.

This study intends to identify the problems experienced by lecturers in the IUM, when they need to shift to remote teaching due to the pandemic and to recommend strategies for addressing them. The following research questions guide this study:

1. What are the challenges faced by the lecturers in switching to remote teaching?
2. What are the potential measures for addressing these challenges due to the sudden shift to remote teaching?

Literature Review

1. Online Versus Remote Emergency Teaching (ERT)

Online teaching is a familiar term, but emergency remote teaching (ERT), which emerged during the pandemic, is new to nearly all lecturers in the IUM. Online teaching is defined as learning that occurs through the internet (Rapanta et al., 2020) and involves well-planned teaching and learning (Hodges et al., 2020). Online learning enables students and teachers get to become familiar with one another and allows students to engage with materials through real-world practice, spaced repetition, and real-life scenarios (Schlesselman, 2020).

The systematic planning of online education takes approximately 6–9 months, and it has been previously considered an informal method of teaching and learning. However, it has now taken on a formal role in education and has transformed teaching methods from traditional to modern ones. ERT is a sudden shift in delivery mode due to a crisis (Hodges et al., 2020; Mishra et al., 2020; Thurab-Nkhosi et al., 2021). Furthermore, Hodges et al. (2020) elaborated by stating that "ERT is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances" (p.

17). Similar to many universities across the globe that responded to the disruption to teaching and learning due to the pandemic, the IUM also needed to resort to ERT, which was a chaotic, temporary shift to online teaching.

2. Challenges to Remote Teaching

The challenges related to remote teaching, which are not necessarily limited to crisis situations, are mainly classified into faculty time management and teaching style. For example, Khalil et al. (2020) explored the perspectives of medical students in Saudi Arabia about the shift to ERT and identified the roles of instructors and instructional strategies in content development, the integration of multimedia into content, and considerations for content development. Similarly, the authors emphasized educational impacts, such as content understanding and perception as a negative perspective, whereas time management was identified as a dominant perspective. Lastly, the students reported other challenges such as methodical ones.

Studies in other countries report similar experiences. For instance, a few of the most important challenges faced by lecturers is the lack of internet connectivity, limited access to computers, students with limited computer literacy, and frequent electricity blackouts (Ferri et al., 2020; Mohmmed et al., 2020; Mutisya & Makokha, 2016). In addition, students with access to personal computers were few, while others were dependent on cybercafes and telephones. Another challenge is teaching students from remote areas without internet connections (Stelitano et al., 2020).

The readiness of the staff is another important issue that requires resolution when shifting to remote teaching. The majority of university staff lack the skills to teach using electronic gadgets and lack electronic contents for use in online teaching due to their limited exposure to online teaching (Pokhrel & Chhetri, 2021). For this reason, lecturers face difficulty in evaluating the activities of students and verifying progress and harbor doubt about the integrity of the assignments and exams (Jelińska & Paradowski, 2021). Furthermore, Ferri et al. (2020) mentioned social challenges such as "human interactions between teachers and students, lack of physical space at home, and lack of parental support who are frequently working in the same space" (p. 1) . Although many modern universities in the 21st century own facilities that provide ICT-integrated lessons, the majority of the staff remain unfamiliar with ICT-integrated pedagogy. Against this background, delivering classes from their homes has become a great challenge for lecturers (Hodges et al., 2020). Furthermore, lecturers may be familiar with various online learning platforms, such as Google Meet, Zoom, and Google Classroom. However, this aspect leads to difficulty for students, because lecturers use different platforms for teaching (Turner, 2020). Moreover, pedagogical content knowledge for online lesson delivery is a major challenge for teachers (Rapanta et al., 2020).

3. Measures for Overcoming Challenges to ERT

The literature on ERT is emerging, but studies that propose methods for overcoming the challenges related to ERT are scarce. According to the literature, one of the challenges of lecturers is the lack of ability to integrate the curriculum with technology. Thus, these studies recommend the provision of infrastructure and facilities for digital learning operations, such as access to e-learning resources and education programs (Huang et al., 2020), in addition to training and time as a means for mitigating these challenges.

Kee and Adamu (2020) conducted a case study at Peking University, China, and identified six instructional strategies, which are crucial for the migration to online teaching, namely, preparation for potential emergency problems during online classes, method of content delivery to students, use of voice, having teaching assistants, promotion of active learning, and clearly enunciated speech. The reason for the last strategy is that students only hear the voice of teachers in ERT compared with the face-to-face delivery, which poses advantages such as the use of facial expression and body language. Another strategy refers to the need to involve students using platforms, such as Facebook, with which they may be more familiar, to upload videos for peer discussion and comment. To offer better support, lecturers could provide online advisory sessions and opportunities for students to share their feelings instead of launching into a lesson immediately after going online. Hence, prioritizing communication and dialogue for learning instead of merely transmitting content via the internet is vital (Mohmmed et al., 2020).

Methodology

1. Study Design

This study adopted an exploratory, sequential mixed-method approach conducted in two phases. Phase 1 involved the administration of a close-ended questionnaire that lists the potential challenges faced by lecturers in shifting to ERT. In Phase 2, interviews with selected staff from all faculties and centers were conducted to obtain an improved

understanding of these challenges and their potential solutions, such that remote teaching and learning are effective and a worthwhile experience for lecturers and students.

1.1. Phase 1: Data collection

Phase 1 is the quantitative aspect of the research; data were collected using a close-ended questionnaire prepared using Google Form and administered by sending a link to the participants. Prior to the preparation of the questionnaire, the study conducted a review of the relevant literature with the objective of identifying the common challenges of remote teaching. Out of the challenges identified, the study selected those deemed most relevant to the context of the Maldives. The variables identified in the literature were then used to develop the questionnaire, which was translated with reference to the forward–backward translation protocol in which the English version was first translated into Dhivehi. Afterward, the Dhivehi version was back-translated into English, and the study compared between the original and back-translated English versions to verify if discrepancies occurred in understanding, which were then accordingly amended. To ensure the validity and reliability of the instrument, the questionnaire underwent pilot testing prior to use in the study to avoid confusion in translation and comprehension.

1.2. Phase 2: Data collection

The second phase began once the data collection and analysis for Phase 1 was completed. Based on data derived from the questionnaire, the researchers prepared an interview guide.

1.3. Selection of Respondents

IUM has 40 full-time lecturers and 110 part-time lecturers at various levels, from foundation to PhD across seven faculties and three centers as of June 2020. These include the Vice-Chancellor, Deputy Vice-Chancellors, Deans, and heads of other sections involved in teaching. All full-time lecturers, Deans, and Chancellors of IUM and all part-time lecturers were requested to complete the questionnaire at Phase 1. In our quantitative study at the IUM, we endeavored to survey the entire staff with the intention of utilizing a complete census method for sampling. Nonetheless, only 56 faculty members (37%) responded to the survey. This approach was deemed most practical under the unique challenges posed by the COVID-19 pandemic. Given the relatively small population in Maldives, we assert that this extensive sample is adequate for a comprehensive understanding of the educational experiences that occurred during these extraordinary times.

In Phase 2, the study used purposive sampling to select lecturers for the interview on the basis of the following criteria:

1. continuously taught remotely for at least 14 weeks; and
2. taking a full load (12 h per week).

One lecturer from each faculty and center who met the abovementioned criteria was selected to participate at Phase 2. A total of seven lecturers from the faculties were interviewed. On average, the faculties employ two to three staff. Therefore, one lecturer among them was chosen.

1.4. Data analysis

The study analyzed data from Phase 1 (questionnaire) using Excel. Moreover, data from the seven interviews (Phase 2) were transcribed and coded individually first, then collectively, to determine common themes. Intercoder reliability (ICR) was developed to improve the systematicity, communication, and openness of the coding procedure. To establish ICR, the researchers compared the data to identify overlaps and divergences in the coding frame. Data collected from Phase 1 were compared with those from the interviews in Phase 2.

Findings

1. Quantitative Data

To analyses the dataset, the study generated descriptive statistics for the survey. The data yielded useful insights into the experiences of the lecturers, which could be helpful for the university in assisting and supporting them as they continue to teach in ERT mode. A total of 56 lecturers responded to the survey; the proportions of female and male lecturers were 55% and 45%, respectively.

In terms of prior experience, the data revealed that 53.6% of lecturers had prior experience in online teaching, while 46.4% cited that they had never taught online before.

When asked about the platforms they used for remote teaching, the results revealed that the lecturers use various platforms, but the majority (58.9%) used Moodle followed by Zoom (55.4%) and Google Meet (46.4%). Small percentages used Google Hangout (8.90%), Microsoft Teams (9%), and Viber (10.70%).

Table 1. *Platforms used by the lecturers*

Platform	**Percentage**
Moodle	58.9%
Zoom	55.4%
Google Meet	46.4%
Viber	10.7%
Microsoft Teams	8.9%
Google Hangout	8.9%

To learn more about the issues faced by the lecturers in the remote delivery of instruction, they were given 19 options from which they needed to select the seven most difficult challenges. The most frequently mentioned challenge is related to the internet and technology in which 83.9% mentioned unreliable internet connection closely followed by the cost of the internet (76.8%). Other technological challenges include limited access to technology by students (66.1%) and lecturers (10.7%), issues with modern technology (37.5%), insufficient skills and knowledge of technological devices (26.8%), limited access to digital libraries (28.60%), and lack of awareness of the limitations of online teaching platforms (5.4%).

Table 2. *Challenges faced by lecturers in the remote delivery of instructions*

Challenges	**Percentage**
Unable to address the diverse needs of students	64.3%
Insufficient skills and knowledge of technological devices	26.8%
Unreliable internet connection	83.9%
Internet is costly	76.8%
Parents and children using one laptop at the same time	25.0%
Limited access to digital libraries	28.6%
Motivation and involvement of students	75.0%
Structure of lessons for distance learning	26.8%
Assessment of student performance	62.5%
Distractions at home	48.2%
Heavy workload	33.9%
Formulation of timetables and work schedules	12.5%
Limited access to technology by students	66.1%
Limited access to technology by teachers	10.7%
Lack of support from the management of the university	8.9%
Problems related to modern technology	37.5%
Lack of support from peers	1.8%
Lack of awareness and limitations of teaching platforms	5.4%
Students taking work too lightly	5.4%

In terms of teaching challenges, 75% of the lecturers reported that motivating and involving all students in lessons were difficult, while 64.3% expressed that meeting the diverse needs of students is difficult. The lecturers also highlighted

the structure of lessons for distance learning (26.80%), assessment of student performance (62.50%), and increased workload (33.9%) as significant challenges.

In terms of social challenges related to the need to work from home include distraction in the home of lecturers (48.2%) along with the fact that they needed to share devices with others (their children) at home (25%). Small percentages of teachers cited lack of support from university management (8.90%) and from peers (1.80%) and students taking work too lightly (6.40%).

The final research question focused on potential solutions to these challenges. The lecturers selected five statements from a list of ten; 82.1% emphasized the importance of providing training to transition from face-to-face learning to remote learning, while 73.2% mentioned providing training to develop digital learning. Meanwhile, 74% cited assisting students in developing remote learning skills and providing information on how to best support distance education students. Lastly, 66.1% stressed the importance of successfully completing online digital lessons for students.

Table 3. *Solutions highlighted by the lecturers*

Solutions	**Percentage**
To provide information on best methods to support distance education students	71.4%
Successfully reach online digital lessons (students)	66.1%
To choose the best method to learn from home	48.2%
Provide support to achieve skills for remote learning	71.4%
Provide training in the transition from face-to- face learning to remote learning	82.1%
Provide support to the structure of the current lessons in the remote learning environment	44.6%
Provide training to develop digital learning	73.2%
Provide assistance from IT staff	17.9%
Provide better/cheaper internet access to students	23.2%
Always being prepared	1.8%

2. Qualitative Findings

2.1. Challenges faced by lecturers

The interview participants highlighted several challenges they encountered after being required to switch to ERT due to the COVID-19 pandemic. A number of challenges identified were related to the internet and technology, while others focused on student engagement, the environment, and assessment.

Internet connectivity and cost
At the beginning, students were facing a lot of problems. So they separately message me saying that they are having difficulty in getting the facility and the cost of it and the internet connection. (Lecturer D) The next thing is the slow internet. Actually, in Zoom, you need good internet connection. (Lecturer C) We were told to conduct the class using the Big Blue Button. However, it is difficult to take the class using the Big Blue Button as it is very slow and it is difficult in sharing the screen and even share the slide. Students will always complain of not being able to see the screen and the slide. (Lecturer A)

Technical knowledge of teachers
students and even lecturers need help … and some are not so familiar with the technology. (Lecturer A) The training program was not enough. It was only for one day. It was taken in a very short time. The people who are not familiar will face difficulty. (Lecturer D)

Pedagogy
Student participation and engagement Very difficult to get the participation of the students. They do not respond. Only 2 or 3 from each class respond to the questions. It looks like two students have to respond for each question. Even when you call also most of the time they do not respond. (Lecturer E) I tried my best to keep the students interested in the lessons but it is sad that we are unable to identify if the lessons are interesting or not. (Lecturer C)
Practical Actually this module cannot be taught online [because it requires students to go to the site for practical experience]. (Lecturer F)

Contextual challenges
Home Environment Another experience is the noise around. The noise from outside is a very big problem … here it is like a garage. (Lecturer C) People don't feel we are working at home so no one will be helping in looking after the babies. But if we go to university there will be people to look after the babies. So looking after the babies and doing the work at the same time is very difficult. (Lecturer E) The other thing is, at home, we have to attend to the children... (Lecturer C)
Psychological Impact of COVID-19 In the beginning, students were facing a lot of problems. So they separately message me... at the beginning of this pandemic all were psychologically affected so it became very difficult for them to concentrate on their studies. So at the beginning lot of students complained. (Lecturer B)

2.2. Lessons Learned and Solutions

Although the lecturers identified several difficulties related to the sudden switch to remote mode without adequate preparation, many of them positively perceived this experience. They felt that the pandemic forced them to think in new ways, which they considered was good. They also perceived that the shift was a great opportunity to become acquainted with modern methods of teaching and to familiarize themselves with technology.

> Actually, from experience, my view on online teaching has changed. Before, I didn't believe that this was something that we could do. But now it has changed. Now I will say this is also a good approach to teaching. (Lecturer F)

The pandemic became a lesson for the university and the lecturers on the importance of preparation and devices, which they expressed could enhance teaching and learning.

However, to fully utilize the power of technology, the lecturers mentioned that finding solutions to internet issues and providing training are important initiatives. A few of them requested that the university collaborate with the government and internet providers to reduce internet costs.

> So if university can do something like to make it (data) free at least during the time of the class when using the Big Blue Button may be using a device, if that can be done, it will be very useful to the lecturers and the students. (Lecturer A)

Alternatively, the interviewees mentioned the university can assist in providing data to assist students; particularly; provide data for students. (Lecturer E)

Discussion

The study aimed to identify the challenges encountered by lecturers and their recommended solutions to mitigate these challenges during ERT. According to the quantitative and qualitative data, the most significant challenge was technology and the internet. The literature extensively reports on these challenges in remote teaching during the pandemic (Aboagye et al., 2021; Mutisya & Makokha, 2016; Nyerere, 2020) and online teaching in general prior to the pandemic (Ezra et al., 2021). Many studies discussed access to devices and the internet as key challenges (Bad News

To Dhiraagu And Ooredoo, 2021). Kamal and Illiyan (2021) conducted a study in India to determine the perception of teachers toward online teaching and found that technical obstacles, difficulty in online exams, and assessment are major challenges in online teaching. The key issues, as identified by the current study, however, are the cost and speed of the internet instead of accessibility. In terms of access to technology, the Maldives is far ahead compared with many developing countries and countries in the South Asia region. Nearly everyone, including children, can access mobile devices such as tablets, iPads, and mobile phones.

As disclosed by the participants, the internet cost in the Maldives is among the highest in the South Asia region, such that a general concern emerges from the public regarding this issue (Bad News To Dhiraagu And Ooredoo. Starlink Sharing Could Lower internet Prices, 2021). The main reason for this is the monopoly on telecom services held by only two companies (i.e., Ooredoo and Dhiraagu) in the Maldives. The internet issue (cost and speed) is mainly raised in connection with student complaints instead of lecturers. As such, the lecturers highlighted that they were forced to halt lessons due to the students of students in connecting to the internet. Özüdoğru (2021) also highlighted this issue based on problems faced in relation to distance education during the COVID-19 pandemic. A study conducted by Erwin et al. (2020) in the Philippines also revealed that the cost of the internet is a problem faced by students in universities in the Philippines.

The second key challenge that was most frequently mentioned in the survey and supported by interviews is the lack of familiarity of the lecturers with technology. Kamal and Illiyan (2021) have reported this issue after conducting a study in India to determine the perception of the teachers, which indicates that the majority were not tech-savvy. The gap between the curriculum and practice has become increasingly evident after the COVID-19 lockdown. Lecturers were forced to use technology to teach due to lockdown as schools and universities, which shifted to remote teaching. The findings illustrate that the lecturers were struggling, because they were unfamiliar with technology, although the Maldives National Curriculum Framework, which was introduced in 2015, prioritized the use of ICT in teaching and learning as an important competency that should be applied to the classroom. Other studies on remote teaching also reported the lack of familiarity with technology as a challenge (Erwin et al., 2020; Dev, 2020.; Nyerere, 2020; Turugare Rudhumbu, 2020).

Meanwhile, Kamal and Illiyan (2021) found that interacting with students in online teaching is difficult and that several difficulties exist in student retention. The lecturers in the current study also faced these challenges. The study also identified the lack of knowledge and skills to engage students in a virtual environment in the survey and interviews. The findings of the qualitative interview also revealed that the lecturers struggled to engage students with the lesson, because they were more concerned with whether or not they made the lesson interesting for students. In fact, Hebebci et al. (2020) aimed to ascertain the perspectives of teachers and students on distance education and revealed that interacting with the students was challenging, which was worsened by the difficulty of conducting followup on them. This aspect is related to the fact that the lecturers had to suddenly make the switch without preparation. The lecturers lacked training in the preparation of lesson plans and teaching materials for online learning. Hence, they found the silence and lack of engagement from students extremely frustrating. This scenario was even more challenging for lecturers taking more practical-oriented modules such as Preparations for Funeral and Burial. Notably, the literature has identified various challenges, such as internet connection, the process of online learning; the lack of technology for the design of interesting online learning activities, communicative ability, and interaction; and fostering an effective online learning climate (Rosalina et al., 2020a).

The lecturers also cited contextual challenges. The concerns they raised were unique to the living conditions in Malé, the capital of the Maldives. Malé is one of the most congested cities in the world, and construction is always in progress, such that escaping the noise at home or in the university is impossible. Several lecturers highlighted this aspect, especially in the interviews. In addition, many people in Malé live with extended families that share small spaces, which results in distraction and interference during teaching. This issue was exacerbated by COVID-19, which forced lecturers to work from home due to the lockdown. Only a few studies investigated this challenge in relation to the COVID-19 pandemic (Rosalina et al., 2020).

With the community spread of COVID-19 increasing at the time of the study, many families of the participants had members who needed to be isolated, quarantined, or admitted to the hospital. Not only the lecturers but also the students experienced this scenario. The psychological impact of the need to cope with the illness of family members was identified as a significant challenge that influenced teaching and learning, while Kamal and Illiyan (2021) also identified a great impact on psychological wellbeing due to isolation and quarantine. Thus, becoming tech-savvy is crucial for the lecturers to boost their confidence in remote teaching.

1. Conclusions, Recommendations, and Future Research

This article aimed to elucidate the experiences and issues faced by lecturers in the IUM during the sudden and forced shift to remote teaching during the pandemic.

Many studies, especially those conducted during the pandemic, discussed challenges faced by students and lecturers regarding the internet and technology in which the majority, especially those from the context of developing countries, highlighted the issue of internet access. The present study reveals that instead of access, the major challenges were the speed and cost of the internet. The lecturers highlighted this aspect as a bigger challenge for the students . Moreover, they also pointed to being unable to address the diverse needs of the students and to assess academic performance. The latter is related to the fact that lecturers were unfamiliar with technology and unprepared for the drastic change due to the pandemic. Only a few studies identified living conditions as a challenge. The study flagged the issue of living conditions as a major challenge due to the congested conditions in Malé. Despite the many challenges, the lecturers regarded their experiences in remote teaching in positive terms, that is, they became an opportunity for exploring alternative ways of teaching and learning. However, the lecturers felt that as the COVID-19 situation continues, finding solutions to the internet issue and providing ongoing training for the staff to familiarize them with technology are important initiatives for the university.

The study recommends that efforts be exerted to develop the digital competency of lecturers. University policies can incorporate this aspect as a requirement, such that lecturers are mandated to complete digital upskilling programs as part of professional development. The need also exists to have a long-term strategy in place to ensure that universities can mitigate the impacts of similar situations in the future.

Acknowledgement: We acknolwedge the support, assitance and guidance provided by Professor Veysel Bozkurt.

Ethics Committee Approval: IUM Research Ethics Committee approval was received for the study. Date: 10.09.2020.

Peer-review: Externally peer-reviewed.

Author Contributions: Conception/Design of Study- D.M.; Data Acquisition- D.M., V.H.; Data Analysis/Interpretation- D.M., V.H.; Drafting Manuscript- D.M., V.H.; Critical Revision of Manuscript- D.M., V.H.; Final Approval and Accountability- D.M., V.H.

Conflict of Interest: The authors have no conflict of interest to declare.

Grant Support: The authors declared that this study has received no financial support.

ORCID :

Visama Hassan 0000-0002-7103-4596
Dheeba Moosa 0000-0002-9670-7769

REFERENCES

Aboagye, E., Yawson, J. A., & Appiah, K. N. (2021). COVID-19 and E-Learning: The Challenges of Students in Tertiary Institutions. *Social Education Research*, 1–8. https://doi.org/10.37256/ser.212021422

Bad News To Dhiraagu And Ooredoo. Starlink Sharing Could Lower Internet Prices. (2021). https://maldivesfinest.com/blog/internet-price-starlink-dhiraagu-ooredoo

Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies, 2*(2), 113–115. https://doi.org/10.1002/hbe2.191

Ezra, O., Cohen, A., Bronshtein, A., Gabbay, H., & Baruth, O. (2021). Equity factors during the COVID-19 pandemic: Difficulties in emergency remote teaching (ert) through online learning. *Education and Information Technologies, 26*(6), 7657–7681. https://doi.org/10.1007/s10639-021-10632-x

Ferri, F., Grifoni, P., & Guzzo, T. (2020). Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations. *Societies, 10*(4), 86. https://doi.org/10.3390/soc10040086

Hebebci, M., Bertiz, Y., & Alan, S. (2020). Investigation of Views of Students and Teachers on Distance Education Practices during the Coronavirus (COVID-19) Pandemic. *International Journal of Technology in Education and Science, 4*, 267–282. https://doi.org/10.46328/ijtes.v4i4.113

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, February 27). *The Difference Between Emergency Remote Teaching and Online Learning*. Retreived from https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Huang, R. H., Liu, D. J., Tlili, A., Yang, J. F., & Wang, H. H. (2020). *Handbook on facilitating flexible learning during educational disruption: The Chinese experience in maintaining undisrupted learning in COVID-19 outbreak | Unesco IIEP Learning Portal*. Smart Learning Institute. Retreived from https://learningportal.iiep.unesco.org/en/library/handbook-on-facilitating-flexible-learning-during-educational-disruption-the-chinese

Jelińska, M., & Paradowski, M. B. (2021). Teachers' Perception of Student Coping With Emergency Remote Instruction During the COVID-19 Pandemic: The Relative Impact of Educator Demographics and Professional Adaptation and Adjustment. *Frontiers in Psychology, 12*, 1-15. https://doi.org/10.3389/fpsyg.2021.648443

Kamal, T., & Illiyan, A. (2021). School teachers' perception and challenges towards online teaching during COVID-19 pandemic in India: An econometric analysis. *Asian Association of Open Universities Journal, 16*(3), 311–325. https://doi.org/10.1108/AAOUJ-10-2021-0122

Kebritchi, M., Lipschuetz, A., & Santiague, L. (2017). Issues and Challenges for Teaching Successful Online Courses in Higher Education: A Literature Review. *Journal of Educational Technology Systems, 46*(1), 4–29. https://doi.org/10.1177/0047239516661713

Khalil, R., Mansour, A. E., Fadda, W. A., Almisnid, K., Aldamegh, M., Al-Nafeesah, A., Alkhalifah, A., & Al-Wutayd, O. (2020). The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: A qualitative study exploring medical students' perspectives. *BMC Medical Education, 20*(1), 285. https://doi.org/10.1186/s12909-020-02208-z

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. https://doi.org/10.1016/j.ijedro.2020.100012

Mohmmed, A. O., Khidhir, B. A., Nazeer, A., & Vijayan, V. J. (2020). *Emergency remote teaching during Coronavirus pandemic: The current trend and future directive at Middle East College Oman.* Springerprofessional.De. https://www.springerprofessional.de/en/emergency-remote-teaching-during-coronavirus-pandemic-the-curren/18140818

Mutisya, D. N., & Makokha, G. L. (2016). Challenges affecting adoption of e-learning in public universities in Kenya. *E-Learning and Digital Media, 13*(3–4), 140–157. https://doi.org/10.1177/2042753016672902

Nyerere, J. (2020). Kenya's university students and lecturers face huge challenges moving online. The Conversation. Retreived from http://theconversation.com/kenyas-university-students-and-lecturers-face-huge-challenges-moving-online-136682

Özüdoğru, G. (2021). Problems faced in distance education during Covid-19 Pandemic. *Participatory Educational Research, 8*(4), 321–333. https://doi.org/10.17275/per.21.92.8.4

Pokhrel, S., & Chhetri, R. (2021). A Literature Review on Impact of COVID-19 Pandemic on Teaching and Learning. *Higher Education for the Future, 8*(1), 133–141. https://doi.org/10.1177/2347631120983481

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. https://doi.org/10.1007/s42438-020-00155-y

Rotas, E. E., & Cahapay, M. B. (2020). *Difficulties in Remote Learning: Voices of Philippine University Students in the Wake of COVID-19 Crisis. 15*(2). 147-158. https://doi.org/10.5281/zenodo.4299835

Rosalina, E., Nasrullah, N., & Elyani, E. (2020a). Teacher's Challenges towards Online Learning in Pandemic Era. *LET: Linguistics, Literature and English Teaching Journal, 10*(2), 71-88. https://doi.org/10.18592/let.v10i2.4118

Roy, D. (2020, November 5). *5 problems you can face in online learning and how to deal with them. India Today.* Retrieved from 31 October 2021, from https://www.indiatoday.in/education-today/featurephilia/story/5-problems-you-can-face-in-online-learning-and-how-to-deal-with-them-1738361-2020-11-05

Schlesselman, L. S. (2020). Perspective from a Teaching and Learning Center During Emergency Remote Teaching. *American Journal of Pharmaceutical Education, 84*(8). ajpe8142.https://doi.org/10.5688/ajpe8142

Sia, J.K.M., & Abbas Adamu, A. (2020). Facing the unknown: Pandemic and higher education in Malaysia. *Asian Education and Development Studies, ahead-of-print. 10*(2), 263-275. https://doi.org/10.1108/AEDS-05-2020-0114

Stelitano, L., Doan, S., Woo, A., Diliberti, M. K., Kaufman, J. H., & Henry, D. (2020). The Digital Divide and COVID-19: Teachers' Perceptions of Inequities in Students' Internet Access and Participation in Remote Learning. Retrieved from https://www.rand.org/pubs/research_reports/RRA134-3.html

The WHO Just Declared Coronavirus COVID-19 a Pandemic. (2020, March 11). Time News. Retrieved from https://time.com/5791661/who-coronavirus-pandemic-declaration/

Thurab-Nkhosi, D., Maharaj, C., & Ramadhar, V. (2021). The impact of emergency remote teaching on a blended engineering course: Perspectives and implications for the future. *SN Social Sciences, 1*(7), 159. https://doi.org/10.1007/s43545-021-00172-z

Turugare, M., & Rudhumbu, N. (2020). Integrating technology in teaching and learning in universities in Lesotho: Opportunities and challenges. *Education and Information Technologies, 25*(5). 3593–3612 . https://doi.org/10.1007/s10639-019-10093-3

Vlachopoulos, D. (2020). COVID-19: Threat or Opportunity for Online Education? *Higher Learning Research Communications, 10*(1). https://doi.org/10.18870/hlrc.v10i1.1179

How cite this article

Hassan, V., & Moosa, D. (2024). COVID-19 and emergency migration to remote teaching in a public university in the Maldives: Challenges, solutions, and lessons learned. *Journal of Economy Culture and Society, 69,* 122–132. https://doi.org/10.26650/JECS2023-1367089