Preparedness of Institutions of Higher Learning for Emergency Education in COVID-19 – Pandemic: A Case of Uganda

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Abstract: Uganda reported its first case of COVID-19 on 21st March 2020. As the COVID-19 pandemic escalated, education institutions across the globe made the difficult decision to close all institutions forcing an abrupt shift into online teaching. Several institutions in Uganda undertook online teaching without accreditation from National Council for Higher Education. This study, therefore, assessed the preparedness of the teachers and leaders of Higher Education institutions in Uganda in managing, handling, and implementing emergency Open Delivery e-Learning (ODeL) during the COVID-19 pandemic. An online cross-sectional survey was conducted in 12 institutions of higher learning. Fifty-nine (59) teaching and administrative staff participated in this study. A self-report questionnaire was used for data collection and descriptive statistics were used to analyze both numerical and categorical data. Percentages were used to summarize the data. Forty-seven percent (47%) of the 59 participants had been formally trained in pedagogical online teaching although almost 50% of these lacked the basic infrastructure for online teaching. The teaching staff indicated the difficulty to deliver a regular curriculum using online teaching methods. The study noted that there was resistance from students to study online which was shown through a drop in the number of students that attended online classes. Participants further mentioned that there was a decline in students' performance during the period of online studying. The study makes several recommendations that include; The need for government to come up with a policy on e-learning as a mode of teaching, compulsory pedagogical training in online teaching which should be integrated into the curriculum reviews, and deliberate removal of taxes on education technology such as computers, smartphones and providing free internet to learners and teachers. While the emergency period has slowly passed on, institutions of higher learning in Uganda suffered heavily from the consequences of COVID-19 in managing the emergency teaching process. The study concludes that regardless of the challenges and the unpreparedness of the Institutions of higher learning in Uganda, there was an achievement in managing the emergency period that saw many institutions swiftly invest in technology and staff training for online teaching.

Keywords: Emergency Education, Institutions of Higher Learning, COVID-19, Education in Uganda

1. Introduction

The novel coronavirus (COVID-19) was declared a global pandemic by the Emergency Committee convened by the Director General of the World Health Organization under the International Health Regulations (2005) on 11 March 2020, having spread to over 110 countries and territories [1]. Countries implemented stringent mitigation measures to reduce transmissions and enable their health system to manage the pandemic [2]. WHO recommended countries adopt lock-down measures, ensure social distancing, stay at home, and the practice of hand hygiene to contain the further spread of the virus [3]. These measures delayed community transmission in several African countries but this came at a heavy cost as it disrupted the functioning of the health systems, education institutions, and the economy [4]. As the COVID-19 pandemic escalated, education institutions across the globe made the difficult decision to close all institutions forcing an abrupt shift into online teaching [5, 6]. Private institutions were adversely affected as they were unable to facilitate staff

remuneration and institutional overhead costs [7].

A score of institutions of higher learning which were not prepared or did not make effort to adjust to online teaching/learning, were sold off to investors. The teachers who were striving to keep the standards of living resorted to odd jobs [8].

In Uganda, several institutions undertook online teaching without accreditation from National Council for Higher Education (UNCHE) and implemented the Open Distance E-Learning (ODeL) system. The institutionalization of the ODeL system in most of the education institutions faced resistance from students, teachers and political leaders. Such a situation was even worsened by challenges related to ODeL implementation despite the fact that NCHE was aware of these [9]. As the COVID-19 pandemic period lengthened, the Ministry of Education and Sports (MoES) provided institutional clearance and accreditation to all institutions to conduct teaching and examination on the ODeL [10]. Such a shift in the provision of education services meant that a number of facilitators or enablers including ODeL training for both teachers and learners, internet connectivity and related factors had to be put in place within a short period of time to ensure effective and quality education for learners. Worth noting is that, institutions which adopted the ODEL system had limited or no pedagogical skilling for the teaching staff and the students had no idea of how online learning would happen [9].

It's upon this background, that this study aimed to assess the preparedness of the teachers and leaders of Higher Education institutions in Uganda in managing, handling and implementing emergency ODeL during the COVID-19 pandemic.

The study aimed at:

1) Assessing the preparedness of Institutions of higher learning in implementation of ODEL in emergency education;
2) Examining the preparedness of teachers in implementing ODEL in emergency education.

Exploring ways of how Institutions of higher learning can best prepare for emergency education in future.

2. Methods

2.1. Study Design

An online, cross-sectional survey was conducted in January, February and March 2020 whilst education institutions were closed for physical teaching due to COVID-19.

2.2. Study Setting

The study was conducted in the following institutions: Ernest Cook Ultrasound Research and Education Institute (ECUREI), Bugema University (BU), Uganda Technology and Management University (UTAMU), African Renewal University (ARU), Islamic University in Uganda (IUIU), Kyambogo University (KYU), Makerere University Kampala (MUK), Mountains of the Moon University (MOMU), Uganda Christian University (UCU), Uganda Management Institute (UMI), Kabale University (KU) and Mbarara

University of Science and Technology. These Institutions were selected since they had adopted and integrated e-learning and teaching using the ODEL.

2.2.1. Study Population

The study respondents included 49 lecturers and 10 leaders/managers of institutions of higher learning both private and public, making a total of 59 respondents. Participants were; Vice Chancellors or their deputies (N=10), Heads of departments/ Senior Lecturers (*N=16*), Lecturers (N=24), teaching assistant/assistant lecturers (N=9) from 12 private and public institutions of Higher learning.

2.2.2. Data Collection Procedures

A self-reporting web-based questionnaire was used to enroll participants into the study. The questionnaire was designed using Google Forms (Google LLC, California, United States of America). By convenience sampling, the link was disseminated to lecturers, Institution top management through an emailing list. The link was further shared with a group of eligible participants through WhatsApp messenger (Facebook Inc., California, USA). Data was collected for a period of three months to increase the response rate; which was recorded at 98% beyond the recommended 52.7% [11].

2.2.3. Data Management, Analysis and COVID-19 Safety Precautions

Completed questionnaires were extracted from Google Forms™ and exported to a Microsoft Excel 2016 for cleaning and analysis. Numerical data was summarized as proportions and categorical data presented using frequencies and percentages [12, 13].

The study was conducted following the guidelines by the Ministry of Health and the National COVID-19 Taskforce, Uganda [14, 15]. All study activities were conducted online.

3. Results

3.1. Preparedness of Institutions for Emergency Education During COVID-19

From our survey, it was noted that 47% of the 59 participants had received formal training in pedagogical online teaching, although 48.6% of these lacked basic infrastructure for online teaching. It was further noted that 20% of teaching staff did not have prior knowledge of online teaching. Concerning the length of time taken for lecturers to get accustomed to online teaching system, 59%, 26.5 % and 14.3% mentioned that it took them less than a week, about a week and more than 1 week respectively to get accustomed to online teaching.

3.2. Teachers Experience of Online Teaching During COVID-19 Lockdown

Teaching staff were further asked about how they thought online teaching affected their institutions quality of teaching. 36.7% indicated that delivering the curriculum online was hard whilst 32.7% highlighted that, online teaching was not an effective mode of teaching.

There was a slight decline in students' performance as indicated by 45.2% of teachers, while 4.8% participants emphasized that evaluation of students during the online teaching was poor compared to the conventional physical teaching and evaluation methods.

It was noted by 77% of the participants that there was drop in the number of students during the online teaching as indicated by 77% of the participants. Eighty percent (80%) of the teaching staff preferred the blended approach of teaching that combines both physical and online teaching.

3.3. Challenges Faced by Education Institutions During Online Teaching

Participants were asked about the most challenging part in using online teaching and 43% decried the high cost of internet, 28.8% confessed that students were resistant to online studying, 6.1% said they lacked confidence in online teaching, 6.1% did not think that teaching online was an effective mode of delivery and 6% lacked the basic infrastructure for online teaching such as phone, computers, etc.

Teaching staff were further asked about how they thought online teaching affected their institutions quality of teaching, and 36.7% said the curriculum was hard to deliver on line. 32.7% said that they did not think that online teaching was an effective mode of quality teaching/ delivery. While 16% of the teachers said they were not conversant with online teaching, 14.3% said the students were the ones not conversant with online learning.

In terms of student's performance when students were evaluated online, as compared to when they were taught physically, 45.2% of the teachers confessed that there was a slight decline in students' performance, while 28.6% said the performance was still the same. On the other hand, 21.4% rated students' performance as very good while using online teaching evaluation, compared to when they were taught physically; while 4.8% said the performance of students taught and evaluated online was poor as compared to conventional physical teaching and evaluation methods.

3.4. Participants' Recommendations for Future Emergencies in Education

Participants noted that introducing online learning to adults has challenges of attitude and acceptability. Students should be introduced to online teaching in the lower levels of education so that by the time they come to institutions of higher learning, they are used to online learning. Students and teachers should be encouraged to own gadgets that are necessary for online teaching and learning. In the same measure, lectures should be trained in online teaching and ensure that Institutions of learning adopt e-learning by embracing a blended approach in their curriculum design. The study further noted that institutions of learning should make technology-enabled learning courses, by reviewing the curriculum and designing content delivery methods that can be used in such emergency cases. Even in the absence of lockdowns and emergency cases, the study recommended that blended learning should be adopted at all levels of learning. This way, a hybrid/blended pedagogical approach will make a smooth transition when the need arises. Institutions of learning should not only look at e-learning as an emergency intervention but it should be embraced as a strategy for a favorable learning tool, even for learners who can't afford to be physically present at institutions.

The study noted that some Institutional systems could not handle all classes at the same time and this greatly affected students learning. Therefore, institutions of learning need to improve on their infrastructure by enhancing online learning infrastructure in terms of technological advancement, putting in place policies and protocols for online delivery and building capacity for staff and students. The experience should be a learning point for institutions of higher learning by preparing and investing in technology and tools that sustain teaching and learning regardless of the challenges.

Furthermore, the cost of the internet should be reduced. Students and teachers should be supported with data. In training lectures, there should be resources that ease the implementation of online learning, with supporting protocols and infrastructure. At the entry point, learners should be informed that equipment such as a computer or smartphone are necessary tools for learning and this should be spelt out at admission time. The government should therefore remove taxes on learning equipment and or zero rate them for institutions of learning and students.

The government should prioritize planning, implementation and evaluation of the new approach to learning to develop it further and provide the best quality delivery methods in future. A policy on ODEL as part and parcel of teaching and learning developed by government for institutions of higher learning, advocating for better and low-cost internet connectivity especially in up county areas. These should be budgeted for, as a national expenditure for education institutions. Study respondents further noted that the country's population, beyond education institutions, should embrace technology and modernity and move away from the traditional ways of life. This means the entire economy should be technology friendly for instance having a cashless economy supported by technology.

The study further recommends that the Ministry of Education and Sports and National Council for Higher Education should be responsible for the regulation of online schooling programs as opposed to leaving the programs in the hands of institutions of learning. This will involve supporting policies related to online teaching and learning, embracing related technology at all teaching levels, and supporting taxation policies related to online teaching materials. This should be a country's drive to make technology affordable for all. This in addition includes having a provision for internet that is free and accessible/ affordable for all learners and trainers as a way of supporting and encouraging technology since it has proved highly influential in education in many ways.

Institutions of higher learning should ensure that all teaching staff are equipped and trained in online teaching, to

avoid the challenges of delivering content that students won't grasp or understand as a result of poor online teaching skills.

In case of emergencies, and crisis, all education stakeholders should be involved. For instance, the modes of promotion and alternative teaching of practical courses should be reviewed and incorporated into the decisions made by the ministry of education with consultation from the lowest stakeholder.

The study further recommends a pilot scheme to evaluate the eLearning platform. Evidence of this pilot would help policymakers make informed decisions in online education and therefore invest in this direction. Also, it would be important for the government to include online teaching as a pedagogical skill for all teachers and lecturers to equip them with efficiency in delivery. Train and encourage all stakeholders to acquaint themselves with online teaching platforms so that they are better prepared if faced with similar challenges like the limitations to teaching due to COVID-19.

The study however noted that online teaching was still challenging in the majority of the institutions. There could be a challenge to the credibility of the system in the future especially where learners did not understand what was being taught or were challenged by other factors such as connectivity, inefficient gadgets, etc. It is also worth noting, that several students dropped out of Institutions of higher learning as a result of failure to access the internet, or having the required gadgets to facilitate e- learning. The ministry of education should have quick solutions to accommodate such students because there is going to be a gap in the future as a result of these dropout rates if they are no mitigating solutions in place as soon as possible.

4. Conclusion

While the emergency period has slowly passed on, institutions of higher learning in Uganda suffered heavily the consequences of COVID-19 in managing the emergency teaching process. This study shows how institutions were prepared for emergency teaching and managed the crisis. With the experiences met and challenges faced, the study concludes that regardless of the challenges and the unpreparedness of the Institutions of higher learning in Uganda, there was an achievement in managing the emergency period that saw many institutions swiftly invest in technology and staff training for online teaching. In future, Institutions of higher learning should be able to prepare for an emergency crisis compared to how the two years of lockdown were managed in Uganda.

Acknowledgements

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