TRANSITIONING FROM BLENDED CLASSROOM TO E-LEARNING: CHALLENGES FACED BY LECTURERS AND LEARNERS DURING EMERGENCY INSTITUTIONAL CLOSURE

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Abstract:

Blended learning combines the online delivery of educational content with the best features of classroom interaction and live instruction in such a way as to personalize learning, allow thoughtful instruction and differentiate instruction from student to student. The emergency closure of academic institutions due to the current COVID-19 outbreak has left a lot of desired changes in the academic sector with a lot of institutions desiring to switch to pure eLearning to cope up with the academic calendar. Therefore, this study was aimed at investigating the challenges faced by both teachers and learners while transitioning from the traditional or blended classroom to eLearning. In using Muteesa I Royal University (MRU) as a case study, an online crossectional survey was conducted involving 30 academic staff and 100 students. The sample size was determined using solvin's formula and the sample was taken using purposeful and convenience sampling techniques. Questionnaires and Interviews were used investigate the tools used for online engagement and the challenges that were faced by lecturers and students.

The online environment presented challenges for many academic staff that increasingly required higher levels of technological competency and proficiency on top of their regular academic workload. During the emergency closure, the academic staff found it difficult to quickly transit into the eLearning mode due to inadequate preparation about online presences and this made the entire process time consuming.

Furthermore, they found it difficult to assess the level of student learning in the absence of face-to-face contact. Additionally, the poor attitude of the students towards this new learning approach made the entire processes harder. On the side of the students the most challenging issues included the emergency expenses they were unprepared for, the lack of necessary gadgets, lack of knowledge on the use of some of the online technologies, low motivation rates and the existing digital divide. The paper also presents the strategies that can be used to overcome some of these challenges.

Keywords: Transitioning, Blended Classroom, eLearning, Emergency Institutional Closure

Introduction

According to Ryan(2005) over the years many Universities have been by pandemics, wars and natural disasters like hurricanes and Earthquakes. An example is the Hurricane Katrina that affected many universities in the United States of America leading to their emergency closure (Ryan, 2005). In another scenario, educational development in Palestine was described as a challenging experience due to the Palestinian Israeli conflict and repeated emergencies (Brittish Council, 2006). The council stressed since revenue is the life blood of many Universities, they must ensure continuity of learning during periods when students are displaced by disasters and emergencies. These politically-driven demands clearly demonstrate the need for cutting-edge technology to enhance access to quality education for all students. Therefore, E- Learning has become a necessity rather than a luxury (British Council, 2006). E-Learning not only facilitate communication of information, but expands the quantity of knowledge and skills and enhances the quality of education (Majidi, 2009).

Electronic Learning (E- Learning) is defined as a way of learning that benefits on the support and improvement brought by the computer and by diverse communication techniques (Ozuorcun & Tabak , 2012). It involves the delivery of learning and training through digital resources such as the Internet, audio and visual tapes, satellite broadcasting, computers and

mobile devices. It is interactive in that one can communicate with the instructor and other students in class. Basically, eLearning is training, learning, or education delivered online through a computer or any other digital device without restrictions on geographical boundaries.

According to Oye, Salleh, & Iahad (2012), the different categories of E-Learning include informal and blending learning, network and work-based learning. Blended learning combines several different delivery methods, such as collaboration software, web-based courses and computer communication practices with face-to-face instruction (Oye, Salleh, & Iahad, 2012). That is, it is a learning system that combine face-to-face instruction with computer mediated instruction (Graham, 2016). Integrated learning utilizes the best of classrooms with the best of online learning. The combination may include involvement of different event-based activities such as face-to-face classroom, live eLearning, self-paced learning, synchronous online conference and training, or asynchronous self-pace learning (Graham, 2016).

Littlefield(2018) noted that define synchronous learning involves real time interactions between the learners and the instructor using computing devices (e.g. mobile phones, laptops, etc.) with Internet access. In these environments, students can be anywhere (independent) to learn and interact with instructors and other students (Littlefield, 2018). On the other hand, the students in asynchronous learning cannot get immediate feedback. Furthermore, the learning content is not provided in live classes, but rather on different learning management systems or forums (Singh & Thurman,2019).

At the end of 2019 through to 2020, the Coronavirus Disease (COVID-19) pandemic had rapidly spread worldwide, causing death of many people globally. By June 5th 2020, the outbreak of the COVID-19 pandemic had been confirmed in 210 countries and had infected 6,7317,793 people worldwide and the number of deaths had totaled 393,721 people (Statisca, 2020). In a bid to contain the spread of the pandemic several countries initiated a number of strategies that included temporally closing schools hence affecting the education sector. According to UNESCO (2020) close to 90% of all pre-primary, primary, secondary and tertiary institutions in the world were no longer able to attend physical classrooms. The impact

had been as dramatic and transformative as educational institutions scrambled to put in place workable short-term and long-term solutions for remote teaching and learning particularly in emerging markets where students and academic institutions are facing additional challenges such financing and ICT infrastructure. The pandemic has been a great leveler, giving all education stakeholders in developing countries a better understanding of the current education system and its vulnerabilities and shortcomings. It has underscored how indispensable it is for our population to be digitally literate in order to progress in a world comprised of social distancing, emergency closure of institutions and greater digitization of services. The COVID-19 pandemic has caused educational institutions to challenge the deep-rooted notion of how, where and when to deliver education. Following the logic of the exception-that "extraordinary times call for extraordinary measures"- one common trend in education systems around the world has been to respond to the pandemic with "emergency eLearning" protocols, marking the rapid transition of face-to-face or blended classes to online learning systems (Murphy, 2020).

Muteesa I Royal University since its inception in 2007 has been working with traditional classroom methods where physical classrooms promote lecturer-student physical presence. A few departments for example the Department of Information Technology have tried to integrate blended classrooms. The emergence of the COVID-19 pandemic followed by the closure of all academic institutions in the country, as a control measure had a diverse effect on both lecturer and learners and necessitated the sudden shift to E- Learning platforms. As the rapidly expanding use of eLearning technology has been realized, analyzing the problems of this emerging phenomenon has become a kind of necessity. Understanding and facing these problems is paramount as academic institutions become stronger in the eLearning environment (Rana, Rajiv, & Lal, 2014). Therefore, to implement an E- Learning system, an understanding of the facts, circumstances and challenges of this technology is required. Therefore, this research aims to determine the challenges faced by lecturers and learners during the emergency closure of academic institutions, when learning for students had to still be undertaken.

As Uganda joined countries around the world in shutting down all academic institutions by the 20th of March, 2020, there is need to explore

and understand how these institutions used E- Learning platforms of which institutions like Muteesa I Royal University lecturers experienced a transition while devising online platforms to be able to engage with their learners.

Discussed below are some of the E- Learning tools used during the outbreak of the pandemic: The E- Learning tools that are categorized as curriculum tools, digital library tools and knowledge representation tools (Oye, Salleh, & Iahad, 2012) are explored. In this sectiion we categorize some of the tools used by lecturers and students at MRU during the pandemic based on these three categories.

Web 4.0 Tools

A variety of web 4.0 tools can be used to help learners generate content and interact with peers, such as blogs, wikis, and social networks.

Web log: A blog which is short for web log is a user-generated website where entries are made in journal style and displayed in a reverse chronological order. The term "blog" is a mingling of the words web and log. Blogs provide comments or news on a particular subject although some function as more personal online diaries. The modern blog evolved from the online diary, where people would keep a running account of their personal lives. There were web blogs such as WordPress, Movable Type, blogger or Live Journal, or even regular web hosting services, such as DreamHost. Social bookmarking also emerged as a web-based service to share Internet bookmarks. Social bookmarking sites are a popular way to store, classify, share and search links through the practice of folksonomies techniques on the Internet. In a social bookmarking system, users store lists of Internet resources that they find useful for future use and reference.

Wikis: A wiki is a website that allows visitors to add, remove, edit and change content, without the need for registration. It allows individuals to link any number of pages in order to create a story or a reference point on any topic in any field.

Social Media Networks: Social media networks offer features and

functionalities that can be leveraged to supplement and complement the use of a traditional Learning Management System (LMS). Like many frontline LMS tools, social media platforms support multi-media. However, unlike LMS, the "reach" of social media goes beyond the curated content available on formal teaching networks. Social media platforms being used to reach out to students include: WhatsApp, MSN Messenger, Yahoo Messenger, Facebook, YouTube, Twitter, Instagram and SnapChat. Teachers are using these are social media applications to assign students with specific chapters or content to read and a set of questions are set for the students to respond to. Students have been required to answer the questions and send an image of their answers back to the instructor for assessment. WhatsApp groups have been also used for group discussions.

RSS: RSS (Really Simple Syndication) is a web feed format used to publish frequently updated digital content, such as blogs, news feeds or podcasts, vodcasts etc. Users of RSS content use software programs called "feed readers" or "feed aggregators". To be able to use RSS, the user subscribes to a feed by entering a link to the feed into the reader program. The reader can then check the user's subscribed feeds to see if any of those feeds have any new content from time to time and if so; the content can be retrieved and presented to the user. Podcasting is a fusion of two words: iPod (Apple's popular digital music player) and broadcasting. Podcasts are basically digital audio programs that can be subscribed to and downloaded by listeners using RSS. It can be accessed on an array of digital audio devices, like MP3/4 players, desktop computers, laptops, mobile phones etc.

Instant Messaging: An instant messaging application allows one to communicate with another person over a network in relative privacy. There are many options like Gtalk, Skype, Meetro, ICQ, Yahoo! Messenger, MSN Messenger and AOL for instant messaging. An individual can add associates to a contact list or buddy list, by entering their email address or Messenger ID.

Internet forums: Originally modeled after the real-world paradigm of electronic bulletin boards of the world before Internet was born, internet forums allow users to post a "topic" for others to review. Other users can view the topic and post their comments in a linear fashion, one after the

other. Most forums are public, allowing for anybody to sign up at any time.

Massive Open Online Courses (MOOCs): MOOCs are free online courses available for anyone to enroll. These are managed by well renowned universities around the word eg. Massachusetts Institute of Technology and Harvard University. MOOCs provide an affordable and flexible way to learn new skills, advance one's career and deliver quality educational experiences at a large scale. Some teaching staff at MRU has used MOOCS as sources of content for their classes.

Video Conferencing Software: Some teachers have used video conferencing software through which distance learning sessions have been conducted, as well as other communication channels. This software includes Office 365, Google Meet, Skype, Zoom and others.

Google classroom and Google Suite for Education: Some lecturers used online tools such Google classrooms Google Suite for Education to continue the learning process from home. Google Suite for Education is a collection of Google apps for Education. These include Gmail, Hangouts, Meet, Calendar; Drive for storage; Docs, Sheets, Assignment, Slides, Forms, and Sites for collaboration. Google classroom has been used for classroom activities, loading of notes and videos, uploading and submitting of assignments as well as sharing of student grades. Additionally, several technology-based communication mediums, such as emails and instant messages applications, have made the instructors and administrative staffs' work much more convenient. Much as lecturers have been using these platforms, there a number of challenges that they could be facing as summarized in Table 1 below.

Table 1: Contextual framework illustrating the Challenges that could be faced by lectures and learners transitioning from blended to eLearning

Student	Lecturer
Time	Time
Technological confidence	Motivation
Motivation	Technological competence
Learning style	New teaching style confidence
Age	Under Preparedness
Gender	Course
	Curriculum design
Technology	Pedagogical model
Access	Subject content
Costs	Teaching and learning activities
Software and interface design	Delivery mode
Localization	Localization
	Availability of education resources
Costs	
Access rates	Society
Tuition fees	Role of lecturer and student
Technology	Rules and regulations
Institutional economy and funding	Attitudes on E- leaning and IT
Institution	Support
Training of lecturers and staff	Support of students from the faculty
Knowledge management	Social support of students
	Support from employer
	Support of faculty

The factors in Table 1 above are depicting challenges that were faced by both the learners and lecturers in transitioning to elearning during the emergency closure period. All factors are variables where some level (not always easily specified) was required for success. A case in point is the "learning style" where many students in Muteesa I Royal University

who had been used to traditional class room teaching involving teachers spoon-feeding them with content finding themselves in a situation requiring proactive learning in which them as students were expected to search, manipulate, and analyze study material individually or in groups. In the end, it was noted that a traditional learning style might be detrimental to the success of the eLearning pathway.

The conceptual framework (grounded on Andersson 2007) was created by means of an extensive literature study on facilitating and inhibiting factors for e-learning. The literature review conducted indicated that most studies and models were based on one or a small set of selected factors such as computer anxiety (Brown, Fuller, & Vician, 2006; Muse, 2003), or, as is typical in research on developing countries, a cultural level (Burn & Thongprasert, 2005; Pagram et al. 2006). While each of these factors was established to be relevant, due to this fragmentation of prior research, it was uncertain which of these factors was the most important and what interrelationships existed among the factors. Therefore, there was a need to investigate e-learning cases using the full set of factors. Hence a framework was constructed which groups the factors on key elements: student; Lecturer; course technology and Institutional challenges; Perceptions of society and support. In total the framework includes 28 factors in 6 groups (Figure 1).

The factors in the framework can be leading to either enabling or disabling the transition to E- learning in emergency situations. For instance, high cost of technology is disabling while low cost is enabling. All factors are variables where some level is required for success; too low levels may inhibit the transition to e-learning. Considering an example of "learning style"; many students in developing countries are used to traditional class room teaching where teachers are the sources of all knowledge delivered during lectures. Other's students are oriented to blended learning where some of the learning activities are delivered by the lecturer in class and others activities are completed online. Whereas e-learning models are usually based on student centered learning approaches where students are expected to search, manipulate, and analyze study material individually and in groups. Making a transition in the learning styles proved to be a great challenge to the students.

This set of factors, as presented above, completely covers the research literature up to date. In this paper, the entire set applies to Muteesa I Royal University where the need to investigate which challenges are most important (including why and how) in the use of ICTs and introduction of eLearning courses (a new undertaking for the University).

Methodology

The study adopted a case study research design involving mixed methods of qualitative and quantitative research attributes. The target population was 1000 comprising of students and teaching staff within the Faculty of Science, Technology and Art and design. A sample size of 130 respondents was estimated using solvins formula given by:

$n=N\div(1+Ne2)$

Where n = Number of samples, N = Total population and e = Error tolerance

A confidence level of 95 percent was used (giving a margin error of 0.05)

From the 130 sampled, 100 were students and 30 were teaching staff. These were selected using convenience and purposive sampling techniques. Then an online cross-sectional survey was conducted.

In reviewing the online resources and using the information obtained from similar studies a questionnaire was developed. The content validity of the questionnaire was measured by four experts in the field of Information Technology. The questionnaire was formulated using Google forms and Survey Monkey. The questionnaire was then e-mailed to the selected respondents. Also, interviews were conducted using zoom meetings since face-to-face interaction was not possible due to the COVID-19 lockdown and social distancing guidelines. Data collected was analyzed using SPSS 19.0 in which descriptive statistics (frequency distribution, charts and mean reports) were generated.

Results

From the respondents, 60% of the students' sample population involved

those on a Bachelor's degree program, and 40% on a diploma program. The results shown in Tables 2 to 9 below and charts were the challenges faced by teachers and learners in the process of transitioning from blended classroom learning to online learning during the emergency closure of schools due to the COVID-19 pandemic.

The results are presented based on our conceptual frameworks. We start by presenting the challenges in the subsection of the teachers, course, society and support. Then we move on to the right side of the framework and present the challenges from the perspectives of the students, technology and the institution.

Response of teaching staff when asked about their experiences with online teaching are summarized in table 2 below.

Table 2: Teaching staff's experience with online teaching methods

Experience with online teaching	Number of Respondents	Percentage
Very highly experienced	6	20%
Moderate past experience	15	50%
No experience	9	30%
Total	30	100%

The results from table 2 above indicate that a majority of the teaching staff (50%) possessed moderate experience with online teaching; 30% had no experience while 6% were very highly experienced in online teaching hence they did not face challenges arising from limited experience in handling online teaching.

Table 3: Ownership of computers and/or smartphones

Ownership of computers and /or smartphones	Number of respondents	Percentage%
Yes	29	96.67%
No	01	3.33%
Total	30	100%

From the table 3 above most of the teaching staff (96.67%) owned computers and /or smartphones. This implies that the biggest number of the teaching staff is not challenged when it comes to accessing hardware technologies.

Table 4: Access to required software

Access to required software	Number of respondents	Percentage%
I had access to all the required software with great ease	8	26.67%
I acquired the software with great difficulty	13	43.33%
Completely failed to access the software	9	30.00%
Total	30	100

From the table 4 above it can be noted that majority of the teaching staff (43.33%) managed to acquire the required software with great difficulty. The results also indicated that 30% of the teaching staff failed to access the required software whereas only 26.67% managed to easily access the required software. This clearly implies that the biggest number of the teaching staff (70.33%) had challenges in accessing the required software to enable them effect online teaching. The teaching staff were asked whether they faced challenges in accessing the Internet and their responses are summarized in table 5 below.

Table 5: Table summarizes the level of challenges in accessing the internet

Do you face challenges with the stability of the Internet connectivity	Number of respondents	Percentage%
Yes	21	70%
No	10	30%
Total	30	100%

From the results we deduce that majority of the teaching staff (70%) faced challenges with the stability of their Internet connectivity.

The teaching staff were further asked whether their students had challenges in accessing all the required technologies for online learning. Their responses are summarized in table 6 below.

Table 6: Students' access to the required technologies

My students have challenges in accessing all the required technologies for online learning	Number of respondents	Percentage%
Agree	24	80%
Disagree	6	20%
Total	30	100%

The results indicate that majority of the teaching staff (80%) agreed that their students had faced challenges in accessing all the required technologies for online learning whereas 30% of the teaching staff disagreed to this assertion. Overall, this meant that students' access to technologies was a great challenge as evidenced by the teaching staff in an effort to transition to online learning. Institutions need to test and evaluate their available network bandwidth and increase it if necessary (Huang, Liu, Tlili, Yang, & Wan, 2020). To ensure a reliable network infrastructure that can support millions of students studying at the same time, schools can also mobilize all major telecom service providers to boost Internet connectivity service for online education, especially for the under-served regions (Huang, Liu, Tlili, Yang, & Wan, 2020).

The teaching staffs were asked whether they faced challenges in timely communication with their students. The responses are summarized in table 7 below.

Table 7: Timely Communication with students

There are challenges in timely communication with the students	Number of respondents	Percentage%
Agree	23	76.67%
Disagree	07	23.33%
Total	30	100%

The results indicated that a majority of the teaching staff (76.67%) faced challenges in timely communication with their students whereas 30% did not face any challenges. This revelation was arising from the fact that the University's elearning platform had not been officially rolled out. In a follow-up interview a member of the teaching staff clarified on this issue by stating that:

> *"In my case I have been using Google classroom and WhatsApp groups to reach out to my students. However, I could post an announcement or an assignment and everyone [would] pretend not to have seen it. And when you check on their availability on WhatsApp, you find that they are actually active online. When you post matters outside of class in their private inboxes, they reply in seconds." (Interviewed 24th, May 2020)*

Another respondent from the Department of Engineering stated that:

> *"I have been using WhatsApp, but some students can be offline for a really long time and have even failed to meet deadlines since some of them get to see the assignments after the set deadlines." (Interviewed 28th May 2020)*

The teaching staffs were asked whether they had challenges in using the required technologies. They were also asked whether their students had challenges in using the same and also, if they faced challenges in engaging students from disadvantaged homes. The results are summarized in table 8 below.

Table 8: Technological competence of teachers and students

	Agree	Disagree	Undecided
Teacher had challenges in using the required technology	22	08	00
	73.33%	26.67%	0.00%
Students had challenges in using the technology	26	03	01
	86.67%	10.00%	3.33%
Teacher had challenges engaging students from disadvantaged home	27	01	02
	90.00%	3.33%	6.67%

In the first item where respondents were asked whether they had challenges using the required technology, it can be noted that majority (73.33%) agreed and 26.67% had no challenges. This definitely means that delivery was difficult and delayed since it involved them first learning how to use the technology. In the second item, majority (86.67%) of the teaching staff agreed that their students had challenges in using technology; 10.00% disagreed and 3.33% were undecided. This implies that teaching of students was very challenging since they had to first teach them how to use the technology thus leading to delays. This can be justified by comments from one of the teaching staff during a follow-up interview:

> *"I had decided to use Zoom meetings since I wanted my students to feel my presence. All my students did not know how to use it and I had shared a video with them on how to use it through our WhatsApp group. After [that] I was able to meet only 10% of the classes on Zoom. Then I had to create another video and ask those students who had learnt how to use the technology to help me teach others. At the end of it all an activity I had anticipated to take two days was completed in two weeks" (interviewed, 20th May 2020).*

In the third item, 90.00% of the teaching staff had challenges reaching out to students from especially disadvantaged homes whereas 3.33% did not face these challenges. Also, 6.67% were undecided. This made teaching and learning very difficult since the students could not access the technology nor were they able to handle the associated costs. This can be proven by the remarks made by an ICT lecturer from a follow-up Interview whose excerpt is presented below:

> *"Sixty percent of the courses I teach are practical courses but 80% of the students I teach do not have their own computers and we have always relied on the computers in the lab. I tried to upload YouTube videos in Google classroom; they could access them from their phones but completely failed to get the machines for practice. I received so many calls from them presenting their apologies and I finally had to give up since I completely failed to get away out" (interviewed, 20th May 2020)*

The teaching staff were asked about their own and their students' motivation and attitudes towards teaching and learning. Results are presented in table 9.

Table 9: Motivation

	Very high	Moderate	Low
Lecturer's level of motivation and attitude towards work	8	10	12
	26.67%	33.33%	40%
Students' motivation and attitude towards learning	5	8	17
	16.66%	33.33%	56.67%

The results indicated that majority of the teaching staff 40% had low motivation; 33.33% had moderate levels of motivation while 26.67% had very high levels of motivation coupled with good attitudes towards online teaching. Since the highest number (73.33%) of the teaching staff had low and moderate levels of motivation with poor attitudes towards work, the teaching and learning process was greatly affected.

In the second item, results show that the majority (56.67%) of the teaching staff reported very low attitudes of students towards online learning. 33.33% reported that students had moderate levels of motivation and attitude towards learning. Only 16.66 % of the staff reported high levels of motivation among the students. It is usually very difficult for the teaching staff to handle classes with demotivated students even when the lecturer has a good attitude towards work. This can be supported by remarks from one of the lecturers during a follow-up interview:

> *"I was very willing to work but my students demotivated me. I sent YouTube videos and an assignment via Google classroom. From a class of 50 students, only one student met the deadline and all the others submitted very late. Some even submitted after over 20 days and others completely failed. When I complained through the WhatsApp group, one student told me that he did not feel like studying and that I should just let them enjoy their lockdown". (Interviewed 25th May 2020)*

Testing the course

The teaching staff were asked about the challenges arising from transitioning the mode of course delivery from the traditional approach to a completely online mode. This section had 9 Questions of which the results from the respondents are summarized in table 10.

Table 10: Challenges in Course delivery

	Agree	Disagree
Challenges transforming a curriculum designed for traditional classroom into one for online learning	26	04
	86.67%	13.33%
Challenges in Transforming activities and course material into online content	24	06
	80.00%	20.00%
Challenges in shifting to a completely new pedagogical model	24	06
	80%	20%
Challenges in Assessing student's progress	19	11
	63.33%	36.67%
Challenges in Preparing teaching and learning activities	20	10
	66.67%	33.33%
Increased work load and stress working from home	25	5
	83.33%	16.67%
Time management and organization	17	13
	56.67%	43.33%
Selection of methods of delivery	21	9
	70.00%	30.00%
unavailability of education resources	24	6
	80%	

Our findings (Table 10) show that majority of the teaching staff (86.67%) faced challenges transforming a curriculum designed for traditional classroom use into one for online learning whereas 13.33% did not face these challenges. The courses had to be reconsidered right from the curriculum since most of the learning outcomes were tailored to traditional teaching. We, further noted that 80.00% had challenges

in transforming activities and course material into online content and 20.00% did not meet this challenge (Table 10). This delayed the teaching process and made it more complicated as proved by one of the lecturers from the Department of Engineering:

> *"I had already prepared all my class material and activities anticipating using blended learning. With the abrupt closure of the University, I had no time to make prior preparations to move all my teaching activities and processes online. Engineering being a practical course requires more of demonstration and there is no way I could do this since I stay in Mukono and the machinery was all at [the] campus in Masaka" (Interviewed 29th May 2020).*

Results in table 10 also show that 80% of the teaching staff had challenges shifting to the new pedagogical model with only 20% feeling comfortable with the model. This in one way or the other affected the learning process since lecturers had to first undergo some level of adjustment before effectively delivering the courses. Majority (63.33%) of the teaching staff had challenges in assessing students' progress whereas 36.67% had no challenges at all. Since assessment is a very crucial stage in teaching and learning, this greatly affected the learning process. It was also noted that majority of the teaching staff (66.67%) had challenges in preparing teaching and learning activities with only 33.33% feeling comfortable. This greatly affected the teaching and learning process since a huge amount of time was not used optimally. This is supported by one of the responses from a Lecturer from the Department of Art and Design.

> *"As you know Art is a practical course which requires practical skills which we usually deliver using practical activities and demonstration from our studios at the University. During the lockdown the Academic Registrar had advised us to deliver using WhatsApp and any other online means. At first I tried to record videos from my home but the challenge was that I failed to figure out which learning activities to use since most of my students did not pass most of the required machinery". (Interviewed 27th May 2020)*

Results in table 10 also indicate that 83.33% of the teachers reported increased work load and stress while working from home. Only 16.67% reported that they did not face this challenge. Also 56.6% of the teaching staff faced challenges with regard to time management and organization. This greatly affected their lives and caused delay in the entire teaching process. One of the teachers testified on this matter during one of the Interviews held via Zoom.

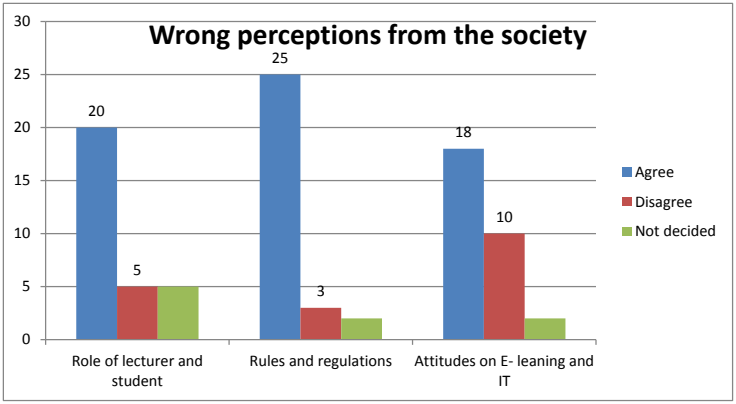
> *"I have really been stressed working at home with all my 4 kids in the house. You try to record a lecture and the kids end up messing it up. They usually make lots of noise and cannot let me concentrate. Even right now this kid is hitting my keyboard I hope you are seeing him and another one is busy peeping he is right there" (Interviewed 27th May 2020).*

On the challenge of selection of methods for delivery, 70.00% agreed that they faced these challenges whereas 30% did not consent to the same (Table 10). It can be noted that most of the teaching staff did not know which methods to use for delivering their lecturers since they were used to the normal classroom lecture method and other traditional classroom-based methods of delivery.

Perception of the Society

There were three questions in this section and their results are presented in the Figure 1 below.

Figure 1: Perceptions from the Society

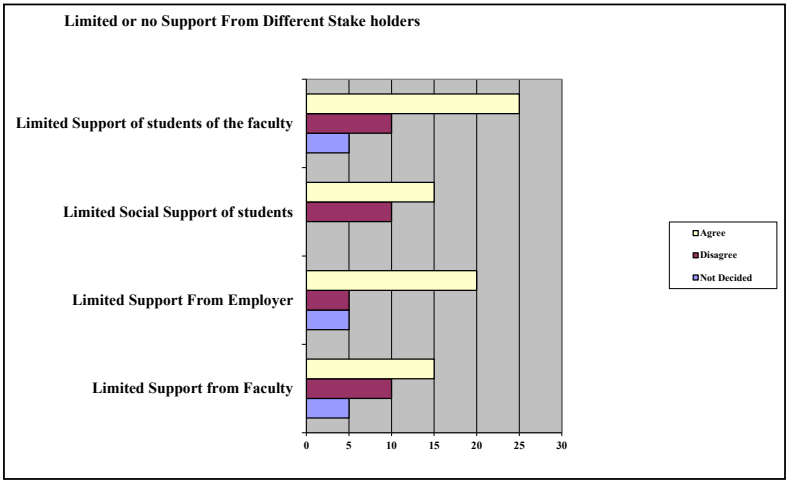


From Figure 1 above it can be noted that majority of the lecturers agreed that they faced challenges arising from wrong perceptions of society on the role of the lecturer and the student in an eLearning environment. They also reported that society has wrong perception of the rules and regulations concerning eLearning as well as wrong attitudes on eLearning and IT in general. This is well elaborated by a member of the teaching staff from the Department of Information Technology:

> *"The society has a wrong perception on the role of the lecturer and the student in eLearning. They believe that most of the work has to be done by the lecturer yet eLearning is more learner centered. Also, we have been limited by the wrong perceptions on the rules and regulations of eLearning. Most people think [that] the way teaching, learning and assessment is done in traditional classrooms should be the same in an eLearning environment. For instance, during one of his speeches the President of Uganda forbade Universities from doing online exams by claiming that there is no way they would do the supervision. Since then, most of my students refused to do their assignments claiming that it is against the Presidential directives". (Interviewed 20th June 2020)*

Support Provided

Figure 2: Challenges in Support

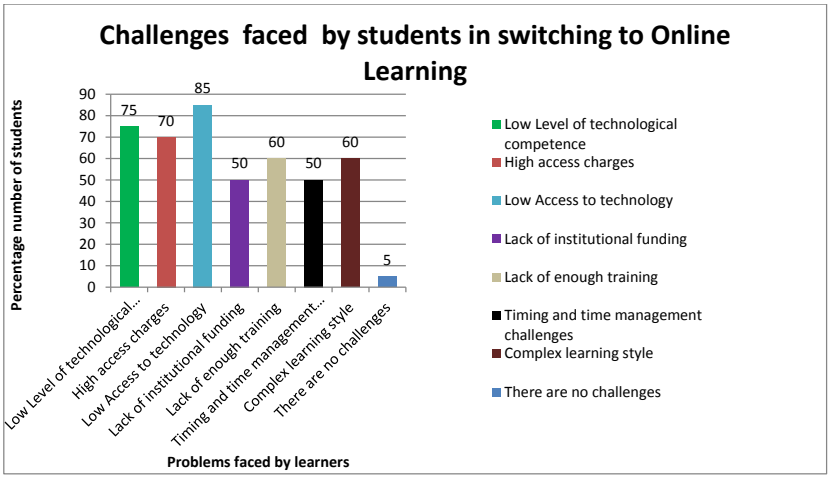


The results from Figure 2 above indicate that majority of the teaching staff faced challenges due to inadequate support from the Faculty (15 teachers); limited support from the employer (20 teachers) and limited support of the students from the Faculty. The Faculty and the University at large provided limited policies and guidelines on how the teaching staff were to conduct eLearning sessions.

Challenges faced by Students

Students were asked about their main challenges in transitioning to online/distance learning. Each student choose up to five options and the results are shown in Figure 3.

Figure 3 Challenges faced in transitioning to e-learning



Discussion, Conclusion and Recommendations

The main purpose of this paper was to identify and analyze major challenges faced by both the teaching staff and learners at Muteesa I Royal University as they transitioned from traditional classroom teaching/learning environments to having blended classrooms and eLearning sessions during the emergency academic institutions' closure due to the COVID-19 global pandemic. This paper advises both research

and practice about those factors that require extensive attention when it comes to designing and deploying eLearning strategies in emergency situations. It is considered important because the delivery of education carries great potential all students but it has to be done with awareness of particular challenges. On the part of the lecturers or teaching staff, seven major challenges were identified that included low technological competences and different access levels of both students and staff; lack of experience in handling online classes, challenges with communication especially where students were concerned; low levels of motivation for both students and lecturers; challenges in course delivery, limited support from the different stake holders and the wrong perceptions held by society on eLearning. On the side of students, the study identified 7 major challenges that included: low access to technology which was the biggest challenge followed by low levels of technological competence and high access charges. Complex learning styles, lack of training, limited institutional funding and, timing and time management challenges rounded off the seven challenges identified by the students.

It should be noted that the challenges arising from low technological competence are as a result of poor Internet bandwidth. This is an issue that Institutions should factor in their planning in order to ensure that reliable network and infrastructure is available to support the different activities being implemented to boost effective teaching and learning. These activities include synchronous cyber teaching using video conferencing, asynchronous cyber learning by accessing or downloading digital learning resources, and collaboration with peers via social software, etc. Institutions need to test and evaluate their available network bandwidth and increase it if necessary (Huang, Liu, Tlili, Yang, & Wan, 2020). To ensure a reliable network infrastructure that can support millions of students studying at the same time, schools can also mobilize all major telecom service providers to boost Internet connectivity service for online education, especially for the under-served regions (Huang, Liu, Tlili, Yang, & Wan, 2020).

To overcome problems in course delivery, during curriculum design, Faculties should make sure that courses are made flexible. Flexible learning allows students to control the sections and the sequence of content according to their desire, pathways of learning, forms of course

orientation, size and scope of the course through modulation of the content (Gordon, 2014). A flexible course will be easy to transition to online learning in any situation. Flexibility is defined as offering choices in the educational environment, as well as customizing a given course to meet the needs of the individual learners (Huang, Liu, Tlili, Yang, & Wan, 2020).

Further aspects to consider are Teaching and Learning activities (TLAs) to choose from. In settings where the educational tradition is very teacher-centered one has to understand that introducing earning involves a huge change and learner-centered learning has to be supported by interactivity, feedback and self-assessment tools such as continuous assessments. The novice learner needs to feel that someone is there (as a substitute for the classroom teacher they miss so much) and for any elearner, no matter how self managing they are, there is need for continuously assessing their personal progress. Teachers should consider organizing learning activities using several instructional approaches, such as lectures with tutorials, independent study, discussions, seminar groups, debates, student-led discovery approaches and educational gamification (Gordon, 2014). For challenges in selecting subject content we recommend that teachers should carefully choose the quality of educational resources to use by referring to well-known national and international repositories, such as Massachusetts Institute of Technology (MIT), Ted Talks and others (Huang, Liu, Tlili, Yang, & Wan, 2020).

Schools should ensure effective support services since these are key to ensuring quality online education. These are of two types: support services for teachers' online teaching and support services for students' online learning (Huang, Liu, Tlili, Yang, & Wan, 2020). Both services can be provided in collaboration with the Government, schools, enterprises, families, society, etc. Schools should invest in improving teachers' online teaching ability as both the synchronous and asynchronous online teaching tools are unfamiliar with most of the teachers. The support for teachers include how to use the synchronous cyber learning software, how to utilize the learning management system, and how to conduct learning activity design, etc. (Huang, Liu, Tlili, Yang, & Wan, 2020). On the side of the students, the effectiveness of support services for learning is reflected in two aspects: the need to promote the students' effective learning and personality development. Effective learning refers to the growth and improvement of students' knowledge, cognition, intelligence

and skills; personality development mainly involves the cultivation of positive attitude towards life, good thinking, basic communication and cooperative skills, the consciousness of rules, integrity, perseverance and innovation. Schools, faculties and teachers should try to ensure that all these skills are nurtured into the students while handling online courses. Students should also be trained on how to use the technologies before they start using them.

Governments, enterprises, and schools (G-E-S) should closely collaborate together to ensure high-quality learning content, diverse learning activities, and effective learning outcomes when students learn online (Huang, Liu, Tlili, Yang, & Wan, 2020). The Ugandan Government should consider collaborating with telecommunication companies and all educational institutions to ensure that all learning platforms can be accessed even when a person does not have Internet bundles. We also recommend that the Government should suspend the Over-The-Top (OTT) tax during emergency situations like this brought on by the COVID-19 pandemic since social networks are majorly used for educational purposes. We also recommend that the Government introduces device loans for students in higher institutions of learning so that students who cannot afford to buy any smart gadgets can take either laptops or smartphones on loans and pay in small installments. This will make the devices accessible hence making learning easy.

We also recommend that School policy makers and governments should re-evaluate online learning and its place in their post-secondary offerings. Institutions which have not valued elearning before need to view the value of this pedagogical shift in learning and make it a permanent feature of their portfolio. This will make cases of emergency closure less challenging as the Institution would be having disaster preparedness plans that ensure eLearning in such cases.

Finally, attitudes on eLearning should be considered. Thus, in many societies information technology is not regarded as a proper tool for delivering education; it is still second best and not perceived to be 'as good as' traditional face-to-face teaching (Anderson,2007). This could become a major obstacle if eLearning is not promoted or introduced in a proper way. By not using the technologies provided there are no benefits

in terms of reaching out to students at a distance or in enabling a more learner-centered pedagogical culture.

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