

Original Paper

The Impact of COVID-19 Pandemic on Teaching and Learning Process in Higher Learning Institutions in Tanzania: A Case of Mwanza Region

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Received: May 16, 2022

Accepted: June 2, 2022

Online Published: July 1, 2022

doi:10.22158/grhe.v5n2p9

URL: <http://dx.doi.org/10.22158/grhe.v5n2p9>

Abstract

This study examined the impact of the COVID-19 pandemic on teaching and learning process in higher learning institutions in Mwanza, Tanzania. The study intended to explore the negative impact of this pandemic on higher education, and also to identify the possible measures to overcome the negative impact of this pandemic. The study has adopted a mixed research approach and an explanatory sequential mixed design. It has involved 188 participants, and data was collected using questionnaires and an interview guide. Content and face validity of research instruments were cross-checked by different research experts. Furthermore, the reliability of research instruments was checked using the split-half technique. Finally, the study discovered some negative impacts which are; slowing down the participation and interaction in teaching and learning which has hindered the attainment of teaching and learning goals. The study has put forward some possible measures to overcome the negative impact of this pandemic which are: to strengthen the e-learning infrastructures, construct more classrooms, and employ more teaching staffs. Then the study recommends that the government of Tanzania and all the educational stakeholders should take education as its number one priority and finance it effectively to ensure a profitable educational process during and after the pandemic.

Keywords

COVI-19, pandemic, teaching, learning,

1. Introduction

The education that is provided to learners today, determine the quality of future human resources. This means that if learners receive quality education today, the government should expect to have quality people to work in different developmental sectors in the future and vice versa. In this, every country should make sure that they control everything that might affect the effectiveness of education provision (Lekule, 2014). To that note, the United Nations agreed to ensure quality education and lifelong learning for all by 2030 (Lugonzo, 2020). This is due to the fact that education is the only aspect of human rights that can support the attainment of all the pre-planned developmental goals in a country. Being among the valuable aspect of human rights, teaching and learning have continued to be an area of concern on the global as it is well known that it plays a vital role in facilitating social competence, decision making, problem-solving, and the success of an individual and a particular society (Paschal & Mkulu, 2020). So when education is destructed then everything in the society is also destructed (United Nations [UN], 2020). So even with a short period of educational interruption will have a long impact on the learners' education growth (Samuel, 2020). However, to achieve, the provision of education that is needed to provide with necessary skills to learners, educational institutions need to formulate effective strategies that allow teaching and learning to successfully take place (Paschal, Nyoni & Mkulu, 2020). Although every nation around the globe has shown a recognizable determination to ensure equitable and quality education for all, several challenges are still hindering the efforts (Samuel, 2020). One of the salient examples of the challenges is the onset of the COVID-19 Pandemic which has brought several remarkable changes to all industries including the field of education (UNDP, 2020).

The outbreak of the COVID-19 pandemic has affected all aspects of human beings (Lugonzo, 2020); and according to United Nations (UN) (2020), the education sector is among the aspects of life that have received a huge impact from this pandemic in almost all countries, as it was estimated that the pandemic has affected 94 percent of learners globally and approximately 99 percent of learners in developing countries. In the year 2020, the world has witnessed the cancellation of face-to-face modes of education delivery in different educational institutions in more than 171 countries (Agbele, 2020); Ibrahim, Luzinge, and Kapanda (2020). The closure of all educational institutions has revealed the inequalities that exist in the provision of education worldwide because while some of the institutions were able to shift their education to distance through different e-learning platforms including zoom and Moodle, some were not (Ali, 2020; Alemu, 2018). The institutions were encouraged to adopt distance education. Unfortunately, some institutions were not able to shift to e-learning because of poor technological backgrounds (Radu et al., 2020). African countries were also trying to cope with the international strategies to combat the spread of the coronavirus something that made learners and their instructors be sent back home (Mangisite, 2020). Along with this, the education system in African countries was expected to be more affected (Lone & Ahmad, 2020). For example, Tanzania reported its first person who tested the corona virus positive on 16th March 2020, and from there the virus started to

spread to different regions within the country (Tarimo & Wu, 2020). As a result, the government of Tanzania closed all schools, colleges, and universities on 18, March 2020 to control the spread of the disease (UNDP, 2020). Moreover, different educational institutions were encouraged to adopt an online mode of education delivery to ensure educational continuity because a face-to-face instructional model was not possible (Ibrahim, Luzinge & Kapanda, 2020); The Guardian Reporter (2020); Balandya et al. (2021). However, the shift to online instruction in Tanzanian higher learning institutions did not succeed in most of the institutions as they faced a lot of challenges including poor technological know-how, unstable electricity power, poor internet connections, and a shortage of e-learning equipment (Nkata, 2020; Msigwa, 2020). Organizational management has been affected; teaching pedagogy as well as the curriculum implementation (Mchome et al., 2021; Citizen News, 2020).

The pandemic has become a great problem for higher learning institutions globally (Nkata, 2020). The pandemic has raised many questions to people on the effectiveness of the teaching and learning as it has brought many issues that were not there before, including social distance in education (Paschal & Mkulu, 2020). Being transmitted through air, coronavirus disease has led to the cancellation of physical classes which is followed by the strict imposition of social distancing in all levels of education including the higher learning institutions in Tanzania. To control the spread of the coronavirus, educational institutions were closed temporarily by the government and online classes were emphasized (Johnson, 2020; Citizen News, 2020). However, due to the poor technological background of the Tanzanian education system, teaching and learning in higher education faced a great challenge (Nkata, 2020). It has been little known how the COVID-19 pandemic has affected the teaching and learning process in higher learning institutions in Tanzania, specifically in Mwanza where this research study was conducted (Upoalkpajor & Upoalkpajor, 2020). Then it is from this standing point that this study examined how the outbreak of the COVID 19 pandemic has affected the teaching and learning process in higher learning institutions. The research study was conducted with the hope that its findings will help the educational stakeholders such as teachers, administrators, policymakers and government during their educational planning.

2. Method

2.1 Research Approach and Design

This is a mixed research study that has involved collecting both qualitative and quantitative data (Saunders, 2012). In this study, an explanatory sequential mixed design that involved collecting data from the field two times was adopted (Cresswell, 2014). The approach was selected because it helps to understand better the problem, by involving visiting the study area two times. For instance, collecting qualitative data in the second visit helped the researchers to explore better the topic.

2.2 Population and Sampling Procedures

The sample size of this study was selected from the target population. According to Elfil and Negida (2017), the target population refers to the total individuals whom the researcher draws the sample for the study; while Kothari and Garg (2019) defined a sample size as a manageable number of individuals that a researcher chooses from the target population. The target population of this study was 2375 individuals, and the study involved a sample size of 188 respondents of which 164 were students, 20 teaching staffs and 4 administrators. Teaching staffs and students were sampled using stratified simple random sampling, while administrators were sampled using simple random sampling.

2.3 Instruments for Data Collection

Data was collected using questionnaires and an interview guide. For an effective data collection process, the research instruments were checked for validity and reliability. Validity is the extent to which the research instruments collect accurate data (Saunders, 2012). In this study, content and face validity were cross-checked by different research experts; while the reliability of the research instruments was tested using the split-half technique. Since this is a mixed research study, the trustworthiness of qualitative data was ensured; by involving people of different categories as well as cross-checking the data collected with different research expertise (Hadi & Closs, 2016; Gunawan, 2015).

2.4 Data Collection, Analysis and Presentation Procedures

Data were collected personally by the researchers and it involved two phases. In the first phase, researchers collected quantitative data using questionnaires, while in the second phase, researchers collected qualitative data using an interview guide. Qualitative data were collected in the second phase to help explaining more the quantitative data (Cresswell, 2014). Quantitative data was analyzed in the first phase with a support of a computer program known as the Statistical Package for Social Sciences (SPSS) version 20 and data are presented using frequency distribution tables, graphs and explanations. In line with this, thematic analysis was used to analyze qualitative data, and the data are presented using explanations and the use of direct quotations from the respondents.

3. Results

The results of the study are analyzed based on the objectives that guided the data collection process. Figure 1 and 2, Table 1 and 2, shows the responses from teaching staffs and students about the negative impact of the outbreak of the COVID-19 pandemic on teaching and learning process; as well as the ways forwards to mitigate these impacts. Figure 1 shows that 39 percent of teaching staffs have pointed out that the outbreak of the COVID-19 Pandemic has made the teaching process to be ineffective, while 33 percent have claimed that the pandemic has reduced consultation in education. Parallel to that, 28 percent have claimed that the mode of testing students' academic performance was changed due to this pandemic. On the other hand, table 1 show that 27.4 percent of students have stated that the

pandemic has slowed down participation and interaction in their learning while 47.3 percent have stated that it made them fail to achieve their learning goals. Moreover, 25.3 percent have shown that the presence of this pandemic has made them lose learning morale and hence fail in exams. Besides, figure 2 shows that large numbers of teaching staffs (85 percent) have agreed that there is a need to employ more teaching staffs in different higher learning institutions in Tanzania, whilst 80 percent approved that the curriculum of higher learning institutions should be reviewed and modified. In line with that, 100 percent have established that teaching staffs in higher learning institutions need to be trained on the use of e-learning technology, while a large percent of them have opposed the COVID-19 vaccine to be compulsory in their institutions. Students were also asked to rate the identified ways to mitigate the negative impact of this pandemic on their learning process. It was revealed that 100 percent of students have agreed that e-learning infrastructures need to be strengthened, while 94.6 percent have approved higher learning institutions to construct more classrooms and more outdoor learning areas. Yet again, 96.3 percent have agreed that higher learning institutions in Tanzania need to have emergence funds, while 93.3 have accepted that researchers should conduct more research to discover new techniques for supporting education during the emergency.

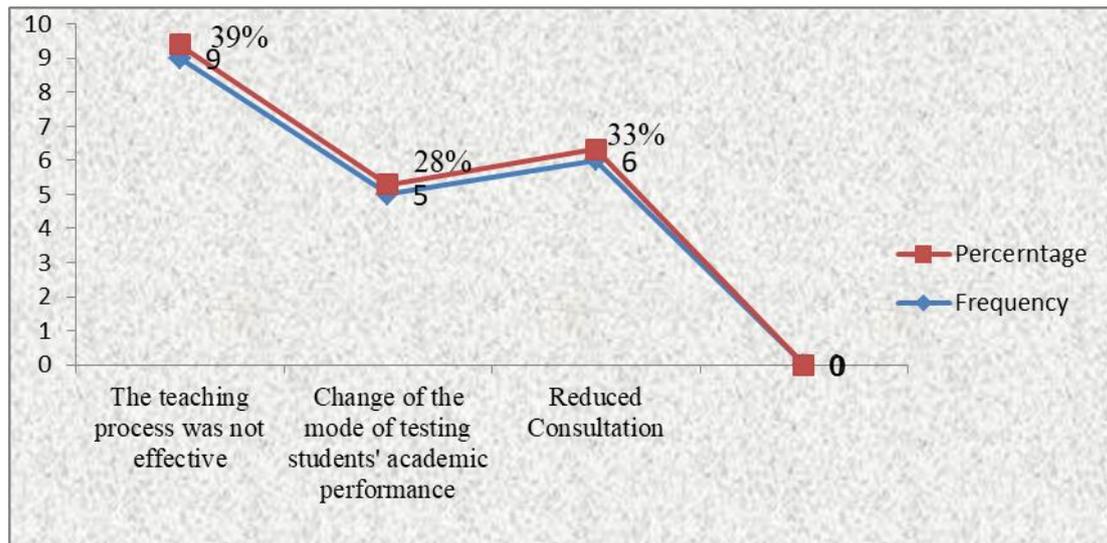
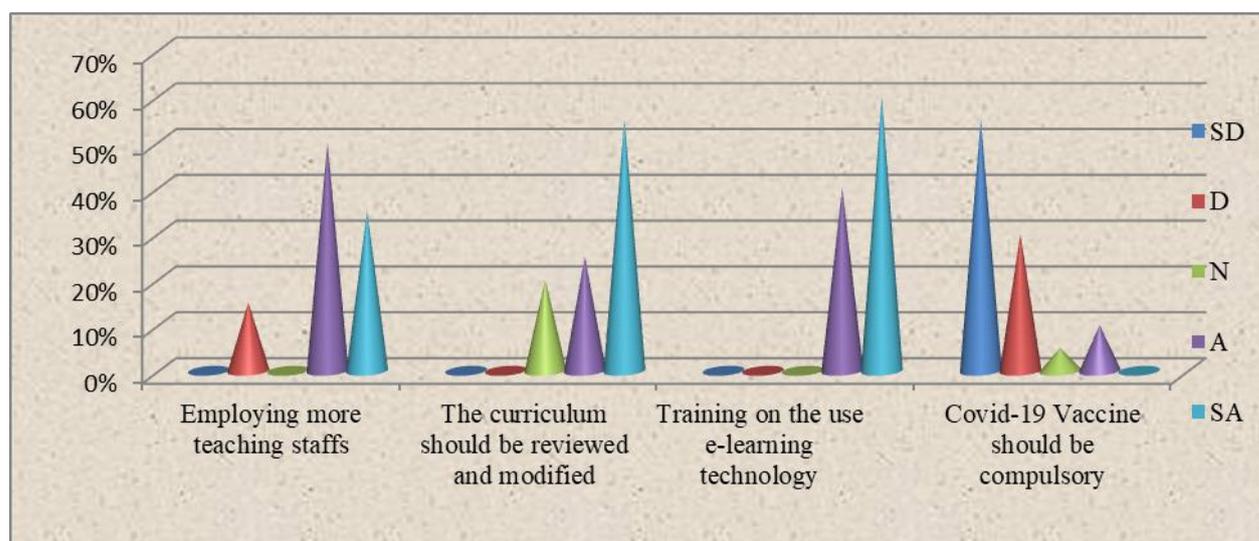


Figure 1. Teaching Staff's Responses on the Negative Impact of COVID-19 Pandemic on Teaching Process

Table 1. Students' Responses on the Negative Impact of COVID-19 Pandemic on their Learning Process

Items	Frequency	Percentage
Slowed down participation and interaction in learning	44	27.4
The learning goals are not achieved	78	47.3
Loss of learning morale	42	25.3

**Figure 2. Teaching Staff's Responses about the recommended Ways to Mitigate the Negative Impact of COVID-19 Pandemic on the Teaching Process**

Key: SD (Strongly Disagree), D (Disagree), N (Neutral), A (Agree), SA (Strongly Agree).

Table 2. Students' Responses about the Suggested Ways to Mitigate the Negative Impact of COVID-19 Pandemic on Their Learning

Items	SD	D	N	A	SA
	F (%)	F (%)	F (%)	F (%)	F (%)
Strengthening the e-learning infrastructures	-	-	-	91(55.5)	73(44.5)
More classrooms and outdoor learning areas	5(3)	3(1.8)	1(0.6)	84(51.2)	71(43.3)
Presence of emergence funds	-	-	6(3.7)	87(53)	71(43.3)
More research should be done	-	3(1.8)	8(4.9)	80(48.8)	73(44.5)

4. Discussion

The outbreak of the COVID-19 pandemic has affected negatively the provision of education in different higher learning institutions but data reveals that there are some of the ways we can do to make remedies as well as to prepare ourselves for the future. The pandemic has made the teaching process to be ineffective. It was discovered that most the higher learning institutions had a challenge of inadequate teaching staff, while at the same time students have been divided into streams to observe the social distance. Because of this, teaching staffs were spending less time teaching so that they can be able to teach several streams. They have explained that for a profitable educational process, they need to have enough time to discuss the course content with students in the classroom but this has become difficult during the pandemic.

On this issue, one interviewee has commented that:

Every institution has its pre-planned teaching goals but the COVID-19 pandemic has affected negatively the attainment of these goals. This is because teaching staffs had no time to discuss things deeply with students because of the heavy workload that has become a result of dividing students into streams and also fear of being infected. So it is clear that during the COVID-19 pandemic, students were not learning effectively. (Interviewee Y, August 2021).

From this standing point, it was also revealed that even students fail to achieve their learning goals because teaching staffs were teaching partially. So together with this, all the COVID-19 precaution measures inadequate classrooms and outdoor learning areas, students reported a loss of their learning morale and then end up getting low GPAs. This result concurs with what was discovered in the United States by Son, Hegde, Smith, Wang and Sasangohar (2020) who observed that the pandemic has lowered the learning morale of students because of worries about their health, educational performance and course practice. The fear and worries have affected learners negatively as they were not able to settle and do their studies effectively. Consequently, every higher learning institution must have a professional counselor, whose work will be to talk with students and advise them on the importance of being patient during any education emergence like this pandemic to make them study well.

One interviewee was quoted commenting that:

Some of the teaching staffs have reported poor performance of students in exams which means that students were not getting what they were supposed to get because of inadequate teaching staffs, few classrooms, and inadequate outdoor learning areas. Some of our students were doing their private studies under the trees a place which is not good for learning, so we are trying to make sure that more classrooms are constructed and more teaching staffs are employed to solve this problem currently and in the future (Interviewee X, August 2021).

Another interviewee was quoted adding that;

We have inadequate teaching staff and classrooms but as an institution, we can't just wake up in the morning and plan to add more resources because we are using the government budget. Therefore, we are calling on the government of Tanzania to help add more classrooms and more teaching staffs to our institution (Interviewee W, August 2021).

When asked about this, one interviewee was quoted pointing out that:

As an administrator, I have come across several challenges during this period; my advice is that all higher learning institutions should direct their funds to support education, including classroom construction. Again, the government of Tanzania and all other education stakeholders should support classroom constructions and outdoor learning areas in different higher learning institutions, purposely to support the effectiveness of education during the pandemic and in future (Interviewee Z, September 2021).

Administrators in higher learning institutions were all eagerly to employ more teaching staffs during the pandemic, constructing more classrooms, as well as to establish an e-learning instructional methodology but it was discovered that inadequate funds were a great challenge. This data supports a study by Lekule and Kalokora (2019) who have also established that most higher learning institutions in Tanzania have a challenge of inadequate funds, teaching staffs, as well as the lecture rooms. This result implies that during the pandemic, the institutions struggled a lot to support the continuation of education because money was highly needed, instructors were highly needed, as well as the classrooms; things that are very scarce in these institutions. In that case, a large number of students (96.3 Percent) have suggested that in every educational organization, planning for unexpected future problems is the best strategy, especially in the matter of finance. Students have explained that during the pandemic, hand washing types of equipment were not enough, classrooms were not enough, and also teaching staffs were not enough but their institutions could not add more quickly. Then the presence of emergence funds in all higher learning institutions is a must not an option.

One interviewee was quoted commenting that:

The outbreak of the COVID 19 pandemic has taught us a lesson that we need to have emergency funds. This is because everything has happened abruptly and we were not prepared to add more teaching staff, or more classrooms, and we were not planning to buy hand washing types of equipment and hand sanitizers. For sure, changes are happening every day so every higher learning institution should have emergency funds to be able to deal with future unexpected educational problems (Interviewee Z, September 2021).

It was also discovered that the COVID-19 pandemic has reduced interaction between teaching staff and students. The respondents have explained that the issue of keeping social distance because of fear of being infected has made the teaching staffs isolate themselves in their offices and students' consultation was reduced. Also, students have reported an absence of participation and interaction in learning.

Normally, students in higher learning institutions need to interact with one another so that they can learn effectively; so lack of interaction has affected their academic and will also affect their job performance. Similar to this conclusion, Mengisite (2020); Areba (2020) have also found out that the outbreak of the COVID 19 pandemic has created isolation and inequalities among learners. The COVID 19 lockdown has separated educational instructors from their students, as well as students from their peers. So generally speaking, participation and interaction between learners and their instructors as well as between learners themselves were destructed. The authors have also discovered that the pandemic has posed a sense of separation and segregation in the provision of education among students and teaching staffs because no one was ready to come close to the other because of the fear to be infected. Although a large number of teaching staffs (85 percent) have disagreed to make COVID-19 vaccine compulsory, the vaccine seems to be helpful because if provided, it will help to reduce worries; and hence allows effective interaction in teaching and learning.

This strategy was explored more in an interview with administrators where one interviewee was quoted explaining that:

I think the COVID-19 vaccine for all people within the higher learning institutions and the whole country could be the best strategy to avoid tension among people. I think you also visit the internet where people share bad news about this vaccine, but I think the vaccine might be the best strategy to ensure that students and teaching staff perform their duties comfortably (Interviewee Y, August 2021).

Moreover, it should be understood that the major modes of assessing the student's academic achievements in higher learning institutions in Tanzania is through individual work (s) and group work (s), but the study has found out that the outbreak of this pandemic has made the mode of assessment involve only individual assignments because group assignments were not possible due to fear of being infected. Yes, teaching staffs were blaming that individual assignments gave them a heavy workload but the problem for the Tanzanian education system is poor technological background because, with strong technology, group assignments can be conducted on e-learning platforms like zoom. This implies that there is a need to strengthen technological infrastructures as reported by the research participants like strong internet connections, availability of e-learning infrastructures, and strong electricity supply to support the implementation of education technology. Besides, educational technology needs people who are skilled and knowledgeable enough about the Information and Communication Technology. Therefore, it was suggested that teaching staffs and students need to be trained on the use of e-learning technology. For this to succeed, teaching staffs have recommended that the curriculum in higher learning institutions should be reviewed and modified to fit with the changes that are happening every day. The outbreak of the COVID-19 pandemic has revealed that the curriculum of the higher learning institutions in Tanzania was prepared only for offline instructions. Therefore, there is a need of reviewing it and modifying it so that it can be taught for offline and online

instructions. This will help to ensure that the instructional process can continue even during the abrupt closure of the educational institutions in future. A study conducted in India by Sahu (2020) has also discovered that, although the teaching staffs were trying to adopt an e-learning methodology, they faced a great challenge on how to convert the contents that were prepared to be taught offline to fit on an online instruction. It was also hard for them to monitor exams online and be sure of whether students were honest. All these happened because they were not prepared for online instruction before. These findings concur with what was also discovered by Toquero (2020) who has also suggested that higher learning institutions should review and modify their curriculum to include health and environmental courses for all levels so that they can help to widen the students' knowledge about environmental policies and hygiene practices.

One interviewee was quoted asserting that:

We are working hard to integrate ICT into our education provision but we don't have such kind of curriculum. Our curriculum was prepared for offline instruction but because of the changes that are happening in our daily life like the outbreak of the COVID-19 pandemic, the curriculum planners should think about reviewing and modifying the curriculum and let it allow offline and online instruction (Interviewee Z, September 2021).

When asked about their plans to strengthen the technological infrastructures, one interviewee was quoted saying:

We are trying our best to insist our students to learn some of the things online, we encourage our teaching staffs to try integrating e-learning in their teaching process but the challenge is poor technological background. We cannot solve this by ourselves, but we call on the government of Tanzania and all other educational stakeholders to support our work by strengthening the technological infrastructures including strong power supply, strong internet, as well as supplying some e-learning equipment to students (Interviewee Y, August 2021).

Similarly, Ali (2020) has also established that to ensure the best educational provision during and after the pandemic, every government in each country should strengthen its technological infrastructures. Higher learning institutions must ensure the availability of e-learning types of equipment to the institutions, the instructors as well as the students. The author has also added that for the following academic years, e-learning equipment must be a requirement for each student's entry so that everyone has either a laptop or tablet for online instruction. These results imply that strengthening technological infrastructures is the best strategy to ensure an effective learning process for students, and therefore, administrators should work hard to implement this strategy. Looking on these observations, UNESCO (2020) has established that administrators in higher learning institutions should promote international collaboration so that the institutions can learn from each other, about what has or has not worked in other institutions during the pandemic. This can be ensured through sharing of educational resources, knowledge and technological innovations in education. In this, educational administrators should not

work on their own but involve different educational stakeholders for input, within and from outside their institutions. In general, some countries have succeeded to provide online education effectively during the pandemic. So higher learning institutions should sponsor some of their teaching staffs to go to these countries and learn this skill.

From this discussion, it is clear that teaching staffs and students encountered a lot of challenges when looking on the best way in which education can be provided during the pandemic. Thus educational professionals are encouraged to conduct different educational researches to discover new instructional techniques for effective educational provision currently and in the future. In an interview, administrators were asked whether they are doing any research to discover new techniques for providing education during and after the pandemic.

One interviewee was quoted commenting that:

We are reading different published research papers on the internet to discover what has worked in other countries so that we can try adopting the strategies. Our students and teaching staff are also researching how effective education can be provided during this pandemic, and we are sure the results will support us (Interviewee W, August 2021).

Based on the findings of this study, the outbreak of the COVID-19 pandemic has affected negatively the higher learning institutions, although there must be some positive impacts. Then the study recommends that another study be conducted to discover the positive impacts of this pandemic in different educational institutions. In line with this, the adoption of online teaching methodology was seen as a possible strategy for higher learning institutions to prepare themselves to deal with unexpected educational closures in the future. Based on this outcome, this study recommends another research be conducted on how the higher learning institutions are prepared for the use of e-learning technology. Lastly, the government of Tanzania should take education as its number one priority and finance it effectively, which will include financing classroom constructions, employing enough teaching staffs, strengthening the technological infrastructures, as well as providing loans to all students in higher learning institutions.

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