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DOI: https://doi.org/10.38140/pie.v41i1.6182

e-ISSN 2519-593X
Perspectives in Education
2023 41(1): 211-227

PUBLISHED:
31 March 2023

RECEIVED:
12 August 2022

ACCEPTED:
14 March 2023

Optimising students' participation during emergency remote teaching in the Covid-19 pandemic

Abstract

This study examined issues related to students' participation and online absenteeism among students at Zimbabwe's universities during COVID-19 induced online teaching and learning. More specifically, the study examined some of the ethical issues related to students' participation and assessment during online learning in selected universities in Zimbabwe. The study also examined some of the strategies that can be adopted to optimize students' participation during online learning to make online learning a more honest and interactive endeavour. To fully understand the challenges related to participation and online absenteeism, the study extrapolated the perspectives of students and academic staff who had adopted online learning since the outbreak of the COVID-19 pandemic. The research was a mixed-methods study, employing a descriptive-analytical approach which utilised three main methods of data collection. Firstly, semi-structured questionnaires distributed electronically among participants in the selected universities were used to collect research data. Secondly, follow-up online focus-group discussions (FGDs) were conducted to elicit participants' views on some of the ethical challenges posed by online learning and possible strategies for dealing with the challenges. Finally, follow-up telephone interviews were also conducted with lecturers with the same objective as the FGDs. The study's population consisted of 110 students and 77 academic staff randomly selected from six universities in Zimbabwe. Two of the selected universities were privately owned and four were public universities. The study showed some of the technological and pedagogical issues regarding students' participation and strategies for optimising students' participation during online learning. The study also shared some of the ethical challenges that arose from the adoption of online teaching and assessment systems and the policy, resource and training interventions needed to make online learning more interactive, while at the same time safeguarding academic integrity. The findings of this study, therefore, have implications for universities, learners and academic staff if online learning programmes are to be successful. Firstly, universities for instance, need to ensure that students and academic staff have the prerequisite technological resources to ensure that optimal active learning takes place. Secondly, to address the shortage of resources, universities should ensure that their libraries migrate from physical to digital libraries. Universities should also ensure that both academic staff and students receive the necessary training to access these digital libraries and the services they offer.

Keywords: *Academic integrity, COVID-19, ethics, online absenteeism, participation*

Published by the UFS
http://journals.ufs.ac.za/index.php/pie

1. Introduction

The COVID-19 pandemic rapidly spread around the world in the last quarter of 2019 which prompted the World Health Organization (WHO) to declare a public health emergency and then declared COVID-19 a global pandemic (WHO, 2019). To reduce the impact of the pandemic, many countries, including Zimbabwe, adopted interventions based on social distancing rules and on stay-at-home lockdowns. These interventions had severe disruptive consequences which, in the education sector, for example, resulted in traditional face-to-face teaching being replaced with online teaching and learning.

According to Leung and Sharma (2020), online learning (also referred to as e-learning) is a type of distance learning that takes place at a distance over the internet and not in the traditional classroom. While online learning was a necessary intervention, it posed some academic integrity challenges related to genuine student' engagement both in terms of class participation and completion of formative and summative assessment tasks. Put differently, when students are part of online classes, it becomes difficult to tell whether they are truly online and engaging with the class. When using Zoom or Google Meet as video-conferencing tools, for instance, students may not be obligated to unmute their audio and video tools during classes, which may result in some students joining the class call just for the sake of class attendance while attending to some other activities unrelated to the class. In addition, when tests and examinations, for instance, are administered and completed online, it is also difficult to tell whether a student has honestly completed the work or if third parties were involved.

In the light of the above background, the study aimed to identify and explore issues related to students' participation during online learning at selected universities in Zimbabwe. Secondly, the study aimed to propose some strategies that could be adopted to optimize students' participation during online learning so as to make online learning a more honest and engaged endeavour.

In education, a strategy or strategies refer to multidimensional and context-specific methods, practices, techniques, procedures and processes that a teacher uses during instruction (Stone & Springer, 2019). Borrowing from Stone and Springer's view, this study proposes technological and methodological strategies which academic staff at universities can adopt to optimise students' participation during online learning.

2. Research objectives

This study sought to explore some of the issues related to students' class participation and completion of assigned work during COVID-19-induced teaching and learning at selected universities in Zimbabwe. To achieve this aim, the study sought to:

a. Examine staff and students' perceptions regarding class participation during online teaching and learning;

b. Examine staff and students' perceptions regarding the completion of formative and summative assessments during online teaching and learning; and

c. Elicit staff and students' views on strategies that could be adopted to optimise students' class participation and completion of assessment tasks without compromising honest as one key aspect of academic integrity.

3. Literature review

To situate the research into its proper context, the researchers reviewed the available literature in terms of four themes as detailed below.

3.1 The Covid-19 pandemic and its impact on universities

The COVID-19 pandemic caused huge disruptions in higher education across the globe since its outbreak in the last quarter of 2019. Of note was the demand that universities shift from face-to-face teaching, learning and assessment to virtual modes.

However, virtual modes of study rely on the use of Information Communication Technology (ICT), online access and devices. In order for online teaching and learning to be successful, universities must put in place the necessary policies, infrastructure, facilities and strategies to support this (Pillay & Erasmus, 2017).

Relevant literature on the COVID-19 pandemic and the disruptions it caused in universities can be grouped into three broad categories. The first is literature prior to the COVID-19 outbreak (Glasby, 2015; Leung & Sharma, 2020). The literature was supportive of the need for HEIs to embrace technology rapidly in teaching practices. However, most HEIs may have viewed this endeavour as expensive (Glasby, 2015). As a result, prior to the outbreak of the pandemic, few universities offered online teaching and learning and many HEIs were not ready to transform their pedagogy practices.

The second is the literature after the outbreak of the COVID-19 pandemic. Such literature explores how universities adapted to online teaching and learning (Bao, 2020; Singh, Watson & Nair, 2022). The available literatures highlight how universities and other levels of education have had to migrate rapidly to online teaching, learning and assessment practices, whether they were prepared or not. Under this category, early literature reveals the challenges related to the preparedness of universities in terms of ICT infrastructure, data support and access for learners and academics and issues related to attitudes towards working from home during lock-down periods (Bao, 2020).

Thirdly, as the world accepts the COVID-19 pandemic as the new normal, available literature concurs that universities will need to continue to support staff in ways appropriate for online teaching practices. Such efforts will, among other things, require quality professional development, adequate resourcing, and provision of technical support. Apart from this, regular communication between academics and students alongside interactive and engaging course design can also support students within the online learning environment (Stone & Springer, 2019).

Albeit to varying extents, universities across the globe that have gone virtual still face challenges regarding the availability of ICT infrastructure, facilities and financing, thus depriving students of equal access to quality education (Mgaiwa & Poncian, 2016). ICT preparedness is generally very low in African universities (Pillay & Erasmus, 2017) including Zimbabwe (Zvavahera & Masimba, 2019). These challenges have been further exacerbated by the widespread and wholesome adoption of virtual teaching and learning by universities in response to the COVID-19 pandemic as a way of observing physical distancing requirements.

Apart from the challenge of adequate ICT infrastructure indicated above, the transformation of education practices from the traditional face-to-face mode to an online mode faced the challenge of prior training and experience in using online teaching tools among instructors in

the developing world. In relation to this challenge among HEIs in Africa, Singh *et al.* (2022) point out that, while academics in Australia and other parts of the developed world had prior experience and training in online/blended delivery, African academics did not have adequate formal training in digital pedagogy. Singh *et al*.'s (2022) study thus established that, while academics in the Australian region used the learning management system (LMS), academics in Africa mainly relied on Zoom and WhatsApp.

3.2 Students' participation and absenteeism during online classes

The literature available on learning during the COVID-19 pandemic generally concurs that the COVID-19 pandemic forced universities around the world to close physical campuses and shift to distance learning (Bao, 2020; Leung & Sharma, 2020). Studies further concur that the shift from the traditional face-to-face classroom to the virtual classroom exposed inequalities between low-income universities and well-resourced universities (Pokhrel & Chhetri, 2021; Bao, 2020). Students from well-resourced universities were able to shift to online teaching and learning faster and more effectively than their counterparts at poorly resourced universities. As resources for online teaching and learning were readily available at well-funded universities, students at such universities were able to participate in online classes without major hindrances. However, the situation was different for students from poor universities, as they lacked the necessary resources for online learning (Zvavahera & Masimba, 2019). This situation is an indication that the socioeconomic divide is wider than just the university resources, but student access varies significantly at each institution.

Given the considerable disruptions to face-to-face teaching and learning caused by the COVID-19 pandemic and the deep inequalities that exist in the education system across many countries, the available literature confirms that students from poor families enrolled at universities missed their online classes, which resulted in a new pattern of absenteeism (Pokhrel & Chhetri, 2021). According to Pokhrel and Chhetri (2021), when viewed in terms of social class, students from low-income families had the most absences compared to middle-class and upper-class families. Even those students from low-income families who attempted to attend online classes, could not participate fully in online classes, as they could not activate all video-conferencing functions of Zoom and Google Meet due to unaffordable data costs. Students often turned off the video function of the video-conferencing tools used for their classes to save data for the next classes. Apart from this, students from low-income families chose to follow their classes asynchronously rather than synchronously. Again, this was a way to save on data costs.

3.3 Academic integrity and ethics during face-to-face and online teaching and learning situations

Integrity and ethics play a pivotal role in prescribing the set of values and rules that define right and wrong behaviour. From an ethical standpoint, values and rules indicate what behaviour is acceptable or unacceptable. Today, academic integrity and ethics scholars (Fishman, 2016; Batane, 2010; Blum, 2009), regard the two as central concepts in academia. More specifically, Fishman (2016) and Batane (2010), concur that academic ethics and integrity encompass many issues to do with associations between individuals, universities and other institutions, and the need to maintain a culture of honesty in all aspects of teaching, learning, assessment, writing and research.

Although a complex term to define, the International Center for Academic Integrity (ICAI, 2014: 102), defines academic integrity as a commitment, even in the face of adversity, to six fundamental values: honesty, trust, fairness, respect, responsibility, and courage. Within the context it is necessary to examine academic integrity and ethics in the face of adversity caused by the COVID-19 pandemic. How have students remained committed to the fundamental values of academic integrity during online teaching, learning and assessment?

Universities make every effort to dissuade dishonesty and ethical conduct is seen as essential in academic life. As such, integrity is particularly critical in academia, and should prevail in all aspects of teaching, curriculum and research (Fishman, 2016). While ethics emphasise a set of values and rules that distinguish between acceptable and unacceptable behaviour, academic integrity focuses on the quality of being honest and having strong moral principles, moral uprightness, fairness and respect. Central to academic integrity is honest and responsible scholarship.

University policies, regulations and expectation globally encourages and demands academic integrity and ethics. Emergency remote teaching and learning during COVID-19 resulted in new challenges to academic integrity and ethics with the proliferation of online delivery and quick shifts in teaching and learning, presenting numerous challenges for most higher education institutions (see for example, Gamage, De Silva & Gunawardhana, 2020; Oxford University, 2020). Most universities have found it extremely difficult to safeguard academic integrity. For example, most universities have not been able to conduct invigilated assessments, which are often considered more secure than non-invigilated assessment. Most universities also do not have the costly mechanisms to check for cheating and fraudulent activities in an online environment.

In short, the above research studies concur that most universities lack the capacity, infrastructure and tools to safeguard assessment security during online assessment, face the challenge of enforcing assessment regulations. This may result in academic dishonesty such as third parties taking the examination, using search engines, textbooks and cheat sheets during examinations (Gamage *et al.*, 2020).

3.4 Strategies for optimising students' participation during online learning situations

The literature available on online teaching during the COVID-19 period confirms that universities that are transitioning to online teaching and learning practices rather than the traditional face-to-face model require various strategies to ensure the success of their e-learning programmes. As alluded to before in the introduction of the study, strategies broadly refer to the various methods, practices, techniques, procedures and processes that academic staff in universities can utilise during online teaching. Academic staff, therefore, need to focus much of their effort on the design and delivery of their curriculum to ensure motivation, engagement and an effective change to learner achievement (Bennett, Maton & Kevin, 2008; Oliver *et al.,* 2014).

The literature further confirms that such transition not only relies on institutional infrastructure, tools and digital literacy. Students also require the resources, motivation and digital literacy to engage with online learning in a meaningful manner (Bennett *et al.,* 2008). Strategies and approaches to online teaching, learning and assessment are multidimensional and context-specific and should therefore not be used in the same way for different students, disciplines and situations (Stone & Springer, 2019).

The rapid changes in the pedagogical approaches will have varying effects on students' abilities to interact with learning in an effective and efficient manner. A number of learning management systems (LMS) such as Blackboard and Moodle are readily used in Australia and can be designed to inculcate in students what is referred to as "transmissive" pedagogies that do not necessarily allow for creativity, critical thinking and social interactivity (Oliver *et al.,* 2014). However, a skilled academic, proficient in online teaching can create teaching and learning opportunities that are creative, innovative, interactive and engaging even in the absence of a fully developed and appropriate LMS system (Pokhrel & Chhetri, 2021).

The importance of maintaining interpersonal communication and interaction between academics and their students has been an important criterion in maintaining quality teaching, learning and assessment, particularly in online delivery (Martin, Budhrani & Wang, 2019; Radu *et al.,* 2020; Rapanta *et al.,* 2020). As such, a number of other digital technologies using video conferencing tools such as Zoom, Microsoft Teams, WhatsApp, Blackboard, and Moodle to name a few, have been used extensively as a method of synchronous, web-based conferencing to keep students engaged through virtual communication (Radu *et al.,* 2020). Some noted advantages of using Zoom have been identified as rapport, convenience, simplicity and user-friendliness (Archibald *et al.,* 2019; Radu *et al.,* 2020; Valet, 2020).

However, regardless of the technologies used, research on learner performance outcomes shows that the instructor's design efforts that address learners' cognitive and social needs rather than simply the technology itself (Oliver *et al.,* 2015) make a positive difference in learning outcomes (Rapanta *et al.,* 2020).

4. Theoretical framework

This study adopted Khan's (2001) e-learning framework to analyse the data collected for this study. The framework also recently used by Singh *et al.* (2022) is appropriate for this study. Khan's eight-dimension e-learning framework provides a comprehensive process which can assist HEIs to successfully migrate to online learning. Khan's framework is based on eight dimensions and sub-dimensions for successful e-learning.

In his framework, Khan demands introspection of HEIs pertaining to the question "What does it take to provide the best and most meaningful flexible learning environment for leaners worldwide?" To answer this question, Khan urges HEIs to consider factors that affect the successful delivery of e-learning at three levels. These levels are the Learner level, the Academic Staff level and Institution level (Lightfoot, 2016).

As regards the institutional dimension, Khan (2001) focuses on issues of administrative affairs, academic affairs and student services. The pedagogical dimension of e-learning refers to teaching and learning. The technological dimension of the framework examines issues of technology infrastructure in e-learning environments. The interface design refers to the overall look and feel of e-learning programmes. The management of e-learning refers to the maintenance of the e-learning environment and distribution of related information. The resource-support dimension of the framework examines the online support and resources provided in the learning environment. The evaluation dimension explores the assessment of learners and the evaluation of the instruction and learning environment. The ethical considerations of e-learning relate to social and cultural diversity. In Figure 1 below, the researchers present Khan's eight-dimensional e-learning framework in diagrammatic form.

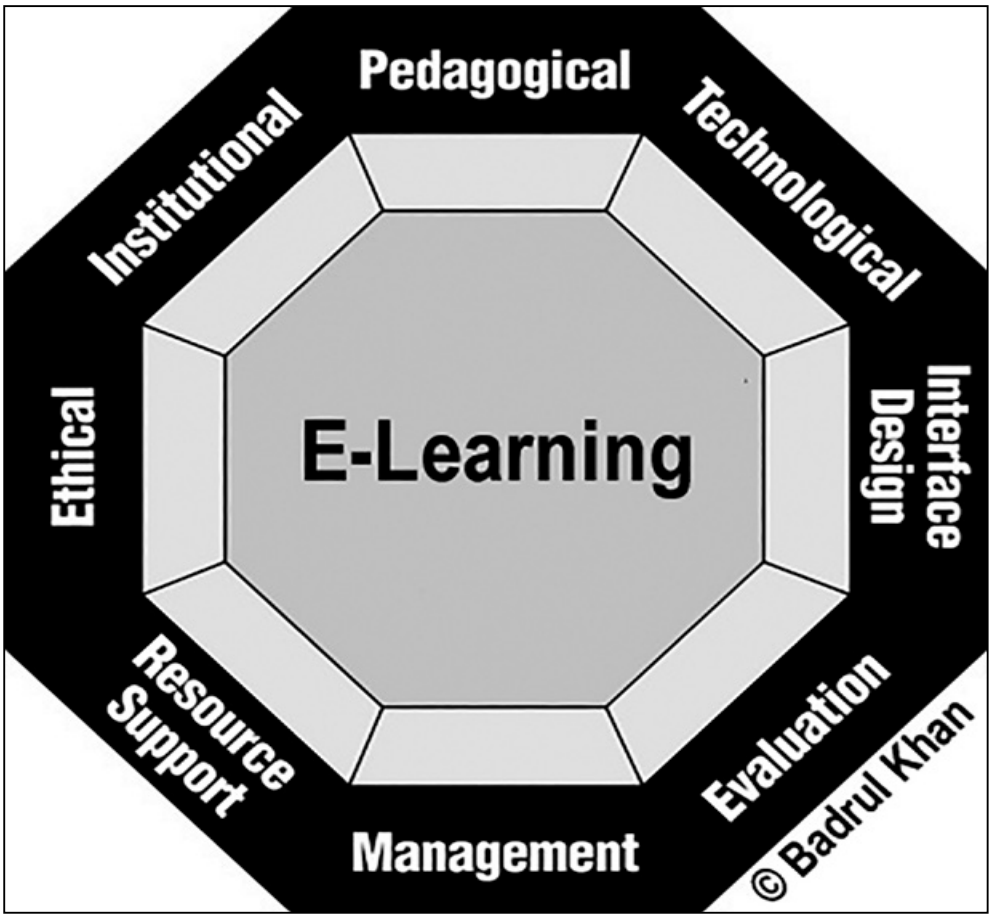

Figure 1: Badrul Khan's Eight-Dimensional e-Learning Framework

While Khan proposes the above eight dimensions that higher education institutions need to consider when evaluating their e-learning environments, for the purposes of this study, the researchers only considered four of Khan's dimensions. The four that were considered were the pedagogical, technological, resource support, evaluation, and ethical dimensions of the framework. By so doing, the researchers were able to delve into an in-depth examination regarding how online programmes were conducted in HEIs in Zimbabwe in view of issues related to learners' participation on the various online teaching and learning platforms and learners' adherence to academic integrity and ethical issues during online teaching and learning.

5. Research methodology

This interpretive study (i) elicited the views of university students and academic staff regarding issues related to students' participation during COVID-19 induced online learning in Zimbabwe, and (ii) elicited students and academic staff's views on strategies for optimising students' participation during online learning. The period investigated stretched from the period the government of Zimbabwe announced the total lockdown in May 2020 until the partial reopening of schools and universities in November 2020.

A qualitative approach was adopted to generate data from participants who were (i) undergraduate and postgraduate university students, and (ii) academic staff during the period of the study. Due to the COVID-19 environment in Zimbabwe at the time of conducting the research, characterised by stay-at-home measures, the researchers collected data remotely. First, self-constructed questionnaires (one for students and another for staff) with open and closed-ended items were distributed electronically using Google forms. The online questionnaire was initially electronically distributed using academic staff and students' social networks. Academic staff and students would in turn further circulate the questionnaire in their networks using the WhatsApp platform and direct emails. A total of 77 academics and 110 students at the six universities who volunteered to participate in the study completed and returned the semi-structured online questionnaire. The online questionnaire took approximately 20 minutes to complete and was anonymous. While the demographic data collected identified the university in terms of its category (private/private), the participant's position (student/academic), and years of experience (in the case of academic staff), all reporting was done anonymously.

The researchers also used two follow-up online focus-group discussions (FGDs) with students and lecturers to further elicit students and lecturers' views on some of the ethical challenges posed by online learning and possible strategies for dealing with the challenges. The FGDs were conducted using Google Meet. The FGD for students comprised 43 students who volunteered to participate in the FGD and lasted about one 60 minutes. The FGD for academic staff had 21 academics drawn from the private and public universities that participated in the study and also lasted for about 90 minutes. In a similar way, seven follow-up telephone interviews were also conducted with lecturers with the same objective.

It is important to note that the both FGDs and the telephone interviews with students and academic staff were conducted a few weeks after the initial thematic analysis and coding of responses from the semi-structured questionnaires for both students and academic staff had begun. This enabled the researchers to develop follow-up questions which then guided the FGDs and the telephone interviews. The questions were based on recurring responses in the semi-structured questionnaires and therefore allowed the researcher to further probe the initial responses in the questionnaires.

6. Findings and discussion

6.1 The demographics

A total of 187 valid questionnaires were returned. Of the valid responses returned, 77 were returned by academic staff and 110 by students. Of the valid questionnaires returned by students, 19% were returned by postgraduate students and 81% by undergraduate students. A total of 37% of these responses were from academic staff and students from private universities and 63% from public universities. Females accounted for 58.6% of the respondents and the remainder were males. This is perhaps because of the increasing number of female students enrolled at Zimbabwean universities compared to male students enrolled at the same institutions.

As regards academic staff hierarchy, academic staff from the lecturer's grade had the highest participation rate, had more than five years' teaching experience in universities, and were permanently employed. Other academic staff who participated in the study included teaching assistants (tutors) and part-time lecturers.

6.2 Participants' perceptions regarding class participation

Firstly, in respect of students and academic staff's general perceptions regarding online learning, the analysis of the data collected showed that due to data resource constraints in Zimbabwe's HEIs, the most common online platform was WhatsApp, followed by Google Meet, and then ZOOM in that order. One private university also used Moodle as a course management system (CMS). During the time the study was conducted, no institution had yet adopted Microsoft Teams and Blackboard as online teaching and learning management system, respectively. Apart from WhatsApp, Google Meet and Zoom, three public universities whose students and academic staff participated in the study also relied on locally developed course management systems namely *Tsime* (which loosely means the well where one can go and drink "academic" water) and *Changamire* (which loosely means champion in learning).

While both students and academic staff acknowledged the disruptions caused by COVID-19 to traditional face-to-face teaching and learning and agreed that online learning was a necessary and useful intervention, they concurred that online teaching and learning were less effective, especially considering that most students, HEIs and academics were not prepared and were inadequately resourced. While this finding confirms the findings by Zvavahera and Masimba (2019) about HEIs in Zimbabwe, studies by Rapanta *et al.* (2020) and Oliver *et al*. (2020) reported opposite results. For this reason, academics at both private and public universities agreed that, due to lack of resources (financial and technological), online learning was a useful temporary intervention during the COVID-19 period which, however, cannot currently function as a replacement of face-to-face learning. Further, as previously reported by Radu *et al.* (2020), academics also agreed that blended learning is a better alternative to 100% online learning.

Although the above views emerged as the dominant views shared by the respondents who participated in this study, a few students from one private university acknowledged the advantages of online learning. Student#47's response was:

> *Online teaching and learning has the advantage that one can learn at their own time and pace, is associated with lower costs on transport, food and accommodation. I see it as more convenient and flexible.*

From the students' responses in the semi-structured questionnaire and also confirmed by their views during their FGD, students across universities and disciplines found online learning a useful means to learn and compensate for time lost when HEIs were closed during the lockdown. Most concurred that, despite the resource constraints they faced, the wide range of online learning platforms provided by their universities were adequate to meet their needs for synchronous and asynchronous learning. Students who lacked resources for synchronous learning would catch up with their learning as material was made available on their WhatsApp platforms, by email and on course management systems such as Moodle, *Tsime* and *Changamire*.

Students also confirmed that their class participation, which was initially very low during the initial phase of the implementation of online learning, improved after their institutions began offering training on the use of the relevant online teaching platforms. This finding corroborates findings from the study by Singh *et al.* (2022), who emphasize the need for continuous training on digital pedagogy for both staff and students. After the various training programmes offered in their institutions, students started to realise that the learning platforms were not as daunting to use as imagined. One student, Student#73's view was that:

> *At first, we were so sceptical about Google Meet. Yes, our scepticism was worsened when our participation on the platform was affected by frequent power outages and loss of connectivity that Zimbabwe faces as a whole. But after some time using the platform, our confidence in using the platform grew and our participating during online discussions on the platform improved. I can now make good presentations and share my PowerPoint slides with others without any hesitations.*

However, students lamented the time limitations for further interactions with other students and their lecturers. Students reported that because online learning platforms depend on data availability and usage, every student's primary concern becomes that of saving data for critical classes only. Instead of having one-on-one meetings with their lecturers or with other students for follow-up discussions, they would rather listen to the class recordings asynchronously after the class has taken place.

Academic staff also confirmed the above response by students during follow-up telephone interviews. One lecturer, InterviewLecturer#3, reported:

> *Our students really miss student to student interactions typical of face-to-face classroom activities and this hurts their learning experience. As lecturers, we know the value of peer interactions as they support optimal active learning among students. It is unfortunate that we do not have adequate for such collaborative activities during our online classes.*

However, to address the above interaction gap between students, Bennett *et al.* (2008) and Oliver *et al.* (2014) urge academics to put in an extra effort in the design and delivery of online curriculum to ensure motivation and engagement of learners.

One question that both the questionnaire for academic staff and students asked regarded whether the students honestly joined class calls and genuinely participated. Most academic staff indicated that they could not dismiss cases of online absenteeism. By this, they meant students who joined the class call for the sake of being marked present; yet they would be busy with something else. They indicated that HEIs do not have the right to police class attendance and participation by demanding that students' videos be turned on, for instance. To minimize on this student behaviour, some lecturers indicated that they sometimes randomly called out students' names to check on attendance and participation but conceded that this strategy only works to some extent. During the FGD for staff, one lecturer, Lecturer#11 responded as follows:

> *Due to personal privacy and data protection issues, and when universities like ours have not provided students with data or gargets to use for online learning, we as lecturers cannot dictate how the learning will proceed.*

During the same FGD for lecturers, one lecturer reported on an incident where student privacy was unintentionally invaded. A student turned on his video by mistake, and the whole class laughed when they noticed he was sleeping on his bed barely dressed and not following the class at all.

Even the students themselves confirmed the challenges related to enforcing class attendance and participation during online learning. During the FGD for students, one student, Student#17's, though being honest about herself, said that:

> *I was following most of my online classes from the boutique I was working when the economy was slowly re-opening to raise income for my upkeep. When the boutique was not busy, I would make an effort to follow the class. But when busy, I would focus on customers. However, when I got home, I would then make an effort to listen to the day's recordings and catch up.*

Lecturers and students alike also agreed that living conditions at home for most families are not always suitable for engagement in online learning activities. Being a developing country, most families in Zimbabwe live in overcrowded homes in townships, slums and rural areas. Such living conditions are not ideal for effective online learning as the environment is prone to distractions from family members and neighbours. This partly explains why most students were not keen on turning on their video buttons. Regarding the issue of environmental distractions at home which affected class participation during online learning, lecturers confirmed that quite a number of times they had to ask their students to mute their microphones because of excessive noise in the background. This is perhaps the reason why Radu *et al.* (2020) posit that continuous communication between lecturers and students is very critical for the success of online learning programmes. In the case of distractions, lecturers constantly need to remind their learners about the importance of their learning environment.

Finally, data collected for the study also confirmed class participation challenges by students with special needs. Such students who would normally receive some kind of assistance from the institutions' Disability Resources Centres (DRCs) during face-to-face teaching contexts, could not receive the assistance they needed during online learning at home.

6.3 Participants' perceptions regarding completion of assessment tasks

Academic staff generally agreed that, in order to make online learning more effective, students were expected to complete more assignments than in face-to-face teaching contexts. They viewed those assessment tasks as an opportunity for students' interaction and engagement, as confirmed in a previous study by Pokhrel and Chhetri (2021). These tasks were meant to allow students more time to practise and interact with their subject matter. When asked about their views regarding students and completion of assigned assignments, Academicstaff#56's response was:

> *In remote teaching contexts, we expect students to complete more assignments than in traditional face-to-face teaching. The assignments fill in the gap for lost contact hours with tutors. However, I'm not sure whether the students complete the students on their own or not. I've wondered how some weak students have all of a sudden started to submit very good pieces of work in some of my courses.*

The doubt lecturers had regarding whether students completed assigned work on their own or not was generally shared by most academic staff across universities and study disciplines, including those in the science, technology, engineering and mathematics disciplines. This finding is also reported in more studies (Gamage *et al,* 2020; Oxford University, 2020). One lecturer, Academicstaff#83's response was:

> *We will see how smart our students have become during the COVID-19 period when we revert to normal face-to-face learning. I have doubts in tests and exams completed at home online.*

While academic staff emphasised the importance of online assignments or tasks, albeit with reservations, as indicated in their views above, students across universities and disciplines viewed online assignments as a flexible and a useful source of individual learning. Student#33 had this to say:

> *Online assignments are flexible and a rich source of learning for students. We have all the time to access and research them. When one is not sure about how to tackle an assignment he/she can check with friends and there is nothing wrong about that. As students, we learn better from each other and from how we manage our work and time …*

What the response above points at are some of the advantages of online assignments. First, the students can collaborate with other students (teamwork), they plan which assignment to work on first (time management) and ensure that they meet deadlines for their assignments (self-discipline). Also, students have more time to access their assignments asynchronously at any time during the day. They can also collaborate with friends. As long as that collaboration is done within the confines of what is acceptable in terms of academic integrity and ethics, assignments completed online present advantages for students. However, if the collaboration amounts to copying, giving undue assistance, paid assistance and any other forms of dishonesty (Gamage *et al.,* 2020), academic staff are justified when they doubt the usefulness of online assignments.

6.4 Participants' views regarding academic integrity and ethics

The study established that universities in Zimbabwe have very clear codes of conduct for students. Although the codes vary from one university to another, all the codes emphasise the most fundamental values, which include honesty, trust, fairness, respect and responsibility, among others. Apart from the codes of conduct, universities that participated in the study also have in place ethics committees that enforce students' code of conduct when conducting research and during assessments. Libraries at the universities that participated in the study also offer support to students pertaining to issues of plagiarism. Students have access to plagiarism detection software and have training on how to use and interpret results from the software. From the study's findings, the commonly used plagiarism detection software in the universities that participated in the study were Turnitin, Ephorus and Urkund.

Lecturers concurred that during conventional face-to-face teaching and learning, they constantly reminded students about the importance of adhering to academic integrity and rules of ethical conduct and about the penalties for breaching the rules. Students' submissions were often checked for plagiarism and the necessary actions were taken. Tests and examinations were taken down under strict examination conditions to curb instances of cheating. However, all this was difficult to enforce in online practice situations. As also reported in the studies by Oxford University (2020) and the University of Greenwich (2020), lecturers further agree that online teaching and learning pose serious challenges regarding safeguarding academic integrity concerns. The reasons they proffer for this varied from academic staff to another.

However, the reasons which emerged the most common were: (1) difficulties associated with invigilation of online examinations; (2) difficulties associated with confirming the identity of the students taking the examination or test; (3) difficulties in determining the levels of collaboration that are acceptable; and (4) difficulties associated with enforcing assessment restrictions. Regarding these challenges, Lecturer#19's view during the FGD with academic staff was:

> *There are higher chances that students will cheat during online assessments than when assessments are classroom or campus-based. I'm sure students have very good chances of referring to their notes and sources during an online examination or test unless they take their assessment under camera. Unfortunately, none of our institutions can afford such technology.*

The above view was shared by the majority of academic staff who participated in the FGD. They concurred that when an assessment is administered online, students are likely to cheat on their assessments. However, lecturers were left baffled when one academic staff seemed to support perceived online cheating by students. He said:

> *If I were a student, and in the absence of remote invigilation technology, I wouldn't see myself failing even the most difficult examination.*

Nevertheless, students had different views regarding academic integrity issues. Some of the students' concerns sounded legitimate and were genuine calls on HEIs to seriously consider ensuring that resources for online learning are made more readily available. This view revolves around the challenge of infrastructure and financing and how they impact equal access and quality of education such as Mgaiwa and Poncian (2016) raise for HEIs that have gone virtual.

During the FGD for students, students from public universities generally raised the issue of inadequate library support for online learning. For instance, one student bemoaned restrictions related to access to information during online learning. In the case of Zimbabwe, only one or two libraries at privately run universities have accessible online library services for students. Under such circumstances, students relied on free digital libraries, but again data constraints meant that only a few students from wealthy families could access such resources. Students from poor backgrounds attending public universities reported that the information deficit caused by lack of support with online resources and inaccessible university libraries put them under pressure and lead them to engage in unethical conduct such as cheating to avoid failing their courses. These acts of unethical conduct by students subsequently raise questions concerning issues related to students' assessment and academics ethics and integrity.

In addition, during discussions with students, different categories of students reported how they were approached by fellow students to do assignments and tests for them. Usually, higher-stream students reported how they were approached by lower-stream students to complete assessments for them. At one private university that has a significant number of international students from non-English speaking countries, local students reported how they were approached by international students to help them complete assessments in such courses as Intensive English, English as Second Language and Communication Skills. International students from the same university also claimed to have assisted local students to complete assessments in their French and Portuguese courses.

Finally, postgraduate students reported that in some of their programmes, they were expected to submit project reports, long essays or dissertations. These were supposed to be accompanied by plagiarism detection reports. The students boasted about how they engaged some information communication technology (ICT) experts (some of whom were ICT students at the same university) to manipulate some plagiarism detection software to extract reports with lower percentages of plagiarism for submission alongside their work.

6.5 Participants' views on strategies to optimise students' class participation and adherence to academic integrity and ethics

Based on the study's findings, both academic staff and students agreed that, for optimal active learning to take place, there was a need to make online classes more interactive so that students could be self-motivated to attend and participate during class activities. There was also general agreement on measures that could be taken to ensure that students adhered to the values of academic integrity even in the face of the challenges posed by COVID-19.

Some of the issues that emerged from the study included the use of more student-centred interactive teaching methodologies rather than the traditional lecturer method, the use of more interactive assessment methods, the use of teaching methods that not only address the learners' technological needs but also their social and cognitive needs, the use of more

interactive technologies, resource support for students, and the introduction of mechanism that could reduce cases of students' cheating, plagiarism, academic fraud and dishonest.

From the students' constituency, the majority of students indicated that they enjoyed classes where lecturers used a variety of teaching methods and activities. They reported how some of their lecturers used weekly quizzes and presentations (as opposed to midterm or final examinations). To increase student-to-student and student-to-lecturer engagement, students also reported how some of their lecturers used breakout rooms (note how breakout rooms meant to increase student-to-student and student-to-lecturer engagement address Khan's pedagogical and technological dimensions, for instance). The class would initially begin as one big class, but then students would break up into smaller group for more intimate interactions on a particular task and perhaps get back together to report their findings to the whole class.

Furthermore, during the students' FGD conducted in terms of the explanation presented in the methodology section above, students from one private university also reported how their lecturers had adopted application-type questions rather than memory questions for their tests and examinations. They said application questions demanded critical thinking from students rather than mere memorisation. Students found the application-type questions and exams to be intellectually provoking and could even be written under open-book conditions; yet they minimised students' cheating. However, some postgraduate students felt that the application-type of questions were more appropriate for higher-level students, as these types of questions demanded higher-order skills that first-year, first-semester undergraduate students may not have developed sufficiently.

Finally, students challenged their institutions to assist students with ICT tools, schemes for the purchase of broadband and use for e-resources in the libraries for better accessibility, as also raised by Pillay and Erasmus (2017). This view was raised within the context of the shortage of online literature for students studying in various programmes. They reported that, if universities did not address this concern, then cases of students' cheating or unethical conduct would be difficult to minimize. Students also called upon their institutions to offer training programmes related to how they could access materials from data bases or digital libraries so that students could navigate the digital information terrain with more ease. The concerns raised by students as presented in this paragraph address Khan's resource support dimension. Khan's e-learning framework (2001) calls upon institutions to provide resources needed for the successful implementation of e-learning programmes.

Although lecturers agreed with most of the views raised by their students, their biggest bone of contention concerned how they could safeguard academic integrity during online teaching and assessment, but without affecting students' morale. With regard to tests and examinations, most lecturers indicated that their wish was to have candidates supervised remotely by online supervisors through the use of advanced security technology.

Unfortunately, most of the lecturers agreed that their institutions were too poor to afford the required technology. Lecturers expressed their worries concerning how they could check the student's environment to see if it was properly set for an online examination, how they could authenticate that bona fide students were taking the examination and how they could verify that there were no materials in the student's environment which students could refer to for information. They also raised similar concerns with take-home assignments and projects completed while at home and submitted online. They expressed the dilemma they had when

they doubted some of their students' work (fairly or unfairly); yet they could not prove it was done with the help of possible third parties.

In view of the challenges regarding the issue of safeguarding academic integrity, lecturers agreed that all their universities could do was to constantly remind students about the values of academic integrity, offer continuous training on academic integrity and ethics and foster a culture of responsibility and honesty among their students.

7. Conclusion

The study showed that although academic staff were committed to ensuring that online learning during the COVID-19 pandemic progressed well, there were concerns regarding access to the digital resources that would have made the learning more interactive and motivate students' participation, while at the same time safeguarding academic integrity concerns.

Through the analysis of participants' views, the study showed some of the technological and pedagogical issues regarding participation during online learning and strategies for optimising students' participation during online learning. The study also shared some of the ethical challenges that arose from the adoption of online teaching and assessment systems and the policy, resource and training interventions needed to make online learning more interactive while at the same time safeguarding academic integrity.

In terms of the four chosen dimensions from Khan's (2001) e-learning framework, the findings of this study have implications for HEIs, learners and academic staff if e-learning programmes are to be successful. Firstly, HEIs need to ensure that learners and academic staff have the prerequisite technological resources to ensure that optimal active learning takes place. One issue that emerged as a huge concern among students was that of digital libraries (Khan's resource support dimension). HEIs should therefore ensure that their libraries migrate from physical to digital libraries. HEIs should also ensure that both academic staff and students receive the necessary training (Khan's technological dimension) to be able to access these digital libraries and the resources and services they offer.

For academic staff, technological and pedagogical implications are clear (Khan's pedagogical and technological dimensions). There is a need that academic staff pay due care when designing online learning curricula, ensuring that the platforms they use and the curricula are as innovative, interactive and engaging as possible and take into consideration the needs of different learners, including those with special needs. Due care should also be taken when it comes to formative and summative assessment. The assessment should limit chances of students' cheating without making demands for expensive online invigilation tools on the already cash-strapped HEIs.

Finally, in terms of Khan's technological and resource support dimensions, learners should be capacitated with the necessary ICT resources and training and continuously motivated to be responsible and honest to the extent that values of responsibility and honest become part and parcel of the culture in HEIs.

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