

# Demystifying Online Modules and Study Guides: Unpacking Preferences of two Universities in Zimbabwe

Thomas Musankuleni Kaputa<sup>1</sup>, Beatrice Bondai Maupa<sup>2</sup> and Pedzisai Goronga<sup>2</sup>

Zimbabwe Open University<sup>1</sup>, University of Zimbabwe<sup>2</sup>

## Abstract

This study explored lecturers' preferences regarding online modules and study guides for Distance Education (DE) in Zimbabwe. It focused on two universities, one campus-based and the other one an open and distance electronic learning (ODEL) institution. The advent of Covid-19 has hastened the use of electronic learning management systems in higher and tertiary education institutions as an antidote for the pandemic. Universities agree that the use of technology is the only way to go in the new normal. The use of online modules or study guides, resisted for some time by campus-based universities, has now become central to the narrative on the best delivery mode for online teaching and learning. This qualitative study adopted a case study design. A sample of eighteen (18) participants drawn from two faculties of education, from the two universities, responded voluntarily to the online questionnaire sent to them through their emails. Thus, eight (8) participants from the campus-based institution and ten (10) from the open and distance institution responded to the online questionnaire. Data collected were analysed thematically. The study established that participants from the two institutions had differing views of which mode of teaching to adopt between online modules and online study guide. Campus-based participants preferred using study guides while participants from the open and distance electronic learning institution opted to use both modes of teaching although they preferred modules more. The study recommends that universities need to use lecturers' preferences, as they are crucial for the success of online teaching and learning. Consultation is fundamental to coming up with a common position informed by lecturers' preferences. In view of the ravaging Covid-19 pandemic, the study further recommends that universities use online modules as they avail to the students more material in one package without using much data than is the case with study guides. For maximum benefit, where resources permit, universities may use both online modules and study guides. The study also recommends further research on university students' preferences of online learning modes since they are the beneficiaries.

**Keywords:** Modules, Study guides, electronic Learning Management Systems, Distance Education, Teaching and Learning mode

## 1. Introduction

The advent of the coronavirus disease (Covid-19) pandemic has hastened the use of electronic learning management systems as an antidote for the pandemic in higher learning institutions. Universities agree that the use of technology is the only way to go in the new normal. The use of online modules or study guides, resisted for some time by some campus-based universities has now become central to the narrative on the best delivery mode for online teaching and learning. The line between Distance Education (DE) and traditional education has

become blurred (Abuhassna and Yahaya, 2018) and this has been hastened by the fourth industrial revolution and the COVID-19 pandemic. Abuhassna and Yahaya (2018) highlight that blended learning is now part of programmes in traditional education. Historically, modules have been the main teaching and learning tool in DE. The transition to electronic use by open and distance learning institutions as they use Moodle by uploading online soft copies of modules has helped. Some have embraced the use of the study guides. Campus-based institutions are also starting to incorporate the two modes in their teaching and learning programmes. However, they are at the crossroads in terms of which mode to use. A module is a set of standardised parts or independent units that focuses on a

particular topic in detail with references and other resources. The printed module enables the student to work throughout the course as they follow the unit allocated to the weeks at a distance from the tutor. A study guide on the other hand summarises the content of the area under study and directs the student to the most appropriate curriculum sections and resources (Mundende, Simui, Chishiba, Mwewa and Namangala, 2016). The student is thus required to consult other materials to augment the study guide materials. The printed module has been used in DE in developed countries (Melton, 2002). The DE institutions in Zimbabwe and South Africa have used printed modules and study guides with success over the years. However, the disruptions in the form of the Fourth Industrial revolution and more recently the corona virus pandemic as cited by Ismail (2020) has seen them reconsidering their positions, as they are experiencing problems in communicating with their students and stakeholders. According to Hamweete (2012), the printed module is relatively affordable although the use of online technologies would be more cost effective. Although the printed study guide enables students to construct their learning, it also has not escaped the fate that has befallen the printed module. The use of both online modules and study guides seems to be the only option under the COVID-19 disruptions. Both the single mode and the campus based university in this study need to decide the best mode to follow if they are to meet the needs of their students. It is against this backdrop that this study sought to unpack the Open and Distance electronic (ODEL) and the campus-based universities' preferences of teaching and learning modes. The study addressed the following major research question: 'Which would be preferable between online modules or study guides for teaching students in DE?'

#### *Sub-Research questions*

- i. Which would be better the online module or study guide for teaching students?
- ii. Why do they prefer it?
- iii. What are the key aspects of their preference?
- iv. How can universities use their preference in online teaching and learning?

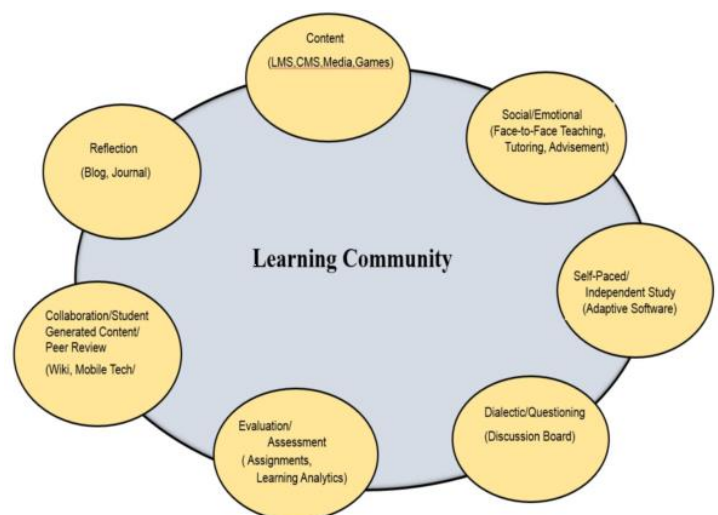
#### *Theoretical and Conceptual framework*

The integrated Multimodal Mode for Online Education (MMOE) theory developed by Picciano (2017) guided this study. This model takes components from various theories to come up with a model for understanding DE as it has evolved. Peters' theory of Industrialisation of Teaching (1988) placed the preparation of study material as the most important part of DE. The materials that can be in the form of modules are resources used to teach distant learners to DE's educational and economic advantage. The scholar also pointed out the use of technology as the driving seat of DE. Long back then, Peters saw both as bridging the distance between the learner and the teacher and as adding value to their communication. The use of technology as a catalyst in the DE process is emphasised by Simonson, Schlosser and Hanson's Theory of Equivalency (1999), which shows that there should be no

difference between a learner in a face-to-face classroom and the one learning at a distance. Telecommunications has a major impact in DE as it ensures that the campus-based activities are also transported to DE through it.

The use of the MMOE Education combines the former theories to come up with an explanation for a complex matter. The use of online modules and online study guides is a new phenomenon in DE. Originally, these hard copy modules or study guides, posted to the students through the postal services, served as the main materials for teaching and learning. The MMOE consist of seven segments that occur around a central learning community. In this research study, the learning community would be the ODeL and the campus-based universities, their students, staff and other stakeholders. The seven segments as shown in figure 1 are the main activities that take place around the learning community. This model can thus explain both purely online and blended activities. This theory helps us to understand what is occurring in the two universities under study since the campus-based university is a face-to-face institution that has since adopted a blended approach to DE. The ODeL has embraced electronic teaching and learning as its mode of operation. However, the dilemma of offering practical programmes places them in a trajectory where they are required to use a blended approach.

Using the MMOE enabled us to better understand the ODeL university's wholly online provision as segments on content on the learning management system (LMS) like Moodle; Self-paced independent study using software; Evaluation/Assessment of assignments and portfolios represent their fully online provision. On the other hand, the campus-based university's blended provision consists of all the components except the Self-paced Independent study using software (Picciano, 2017). The advent of the COVID-19 pandemic has catapulted all universities to embrace DE using technologies. We focused on online modules, study guides in line with Peters' (1988) affirmation that preparation, and materials are the cornerstone of DE. However, the MMOE grounds both as content that should be placed in the LMS, hence its relevance in this study. In the next section, we look at



what the literature says about the identified gaps.

Figure 1: The integrated Multimodal Mode for Online Education (MMOE) theory developed by Picciano (2017)

## 2. Literature Review

*Which would be better the online module or study guide for teaching students?*

In DE, materials in the form of the curriculum have always been the kingpin of the delivery. In a campus-based university, the curriculum is delivered to the student through face-to-face lectures, tutorials and practical. The fourth industrial revolution provided universities with the technology to provide a blended teaching provision for students (Schwab, 2015). Prior to the COVID-19 pandemic, some universities in the world were offering some courses to students online as part of the programme regulations. However, the COVID-19 pandemic with its resultant lockdowns showed that the most critical component of the teaching and learning process was the material. DE institutions that had embraced technology were able to provide students with course material in the form of soft copies of the modules and study guides. Some were able to assess students online. Despite this, universities in the Southern African Region have not been uniform in the provision of materials. In Zimbabwe, the sole ODeL University has offered soft copies of the module on their LMS to students. In South Africa, the largest ODL institution the University of South Africa (UNISA) has offered study guides to its students all over the world.

Due to the COVID-19 pandemic, campus based universities find themselves preparing modules and study guides hastily to give their students in lockdown. Studies in Zimbabwe have shown that the production of a module is a standardisation process that needs time to come up with a quality product (Tanyanyiwa & Mutambanengwe, 2015). Thus, module production starts with a needs assessment to determine the need for the module, and then goes through a process of writing, content reviewing, editing, quality assurance and finally printing. Such a standardised process assures students that they are getting quality education. Material in the module is standardised through quality assurance. Hamweete (2012) states that quality assurance of modules ensures their quality. Studies have shown that students and parents prefer the module as the best mode of DE (Hernando-Malipot, 2020). This study therefore focussed on finding out the two universities' preferences between online modules and online study guide.

The word preference means a greater predilection for one alternative. Thus, human nature has an inclination towards preferences towards certain attributes. These attributes are the ones that make a person prefer something to another. The module is different to the study guide. Although both are used to deliver curriculum to the student, it is each

one's attributes which makes it preferable to an individual. Most preference studies have focussed on students from secondary education to higher education and parents (Hernando-Malipot, 2020). The module or modular learning seemed to have the most preferred mode. The reasons proffered have been the lack of gadgets among the learners to access other sites. Lecturer studies tend to focus on other issues like course delivery methods (O'Quinn & Corry, 2004).

The issue of preferences as we noted focuses on attributes or aspects of the module or study guide. The issue of definitions is at stake here. For an individual to make a preference, they need to know what they are considering to come up with a preference. It is imperative that first we demarcate the two alternatives under contention, and secondly we bring to the fore their key aspects. The alternatives are modules and study guides which are online, termed online modules, and study guides in this study.

Modules or course modules are structured content and activities that are standardised through a process of needs assessment up to quality assurance and printing. This involves a course team approach consisting of experts in the module under development (Tafangombe & Kaputa, 2015). In Zimbabwe, the content must align to the Zimbabwe Council of Higher Education (ZIMCHE) Minimum Body of knowledge (MBK). These were crafted by the ZIMCHE and have become the required minimum knowledge required for any degree in the country. All this is based on the benchmarks of Education 5.0 grounded on Heritage based Philosophy. Programme regulations and complete course regulations guide the writing of the module. Key features of a module are authors and qualifications, content reviewer and qualifications, editor and qualifications, publisher details and an ISBN. The study guide has all the above aspects except the editor and the ISBN.

Both soft versions can be online for the students and lecturers to access. Links to materials to augment the unit are uploaded videos, documents, lecture notes, audios, electronic Readers and Links to sites like You Tube, online library, chat rooms, forums, laboratories. The student must construct the type of knowledge they want according to their acumen and resources. Students with gadgets and data are able to navigate the LMS using the study guide with ease. The COVID-19 pandemic has made the module the most preferred as students are under lockdown and use less data to access it.

It is important that preferences must be made on the best option in delivering quality education to the students. The Equivalency theory (Simonson et al., 1999) aptly describes the role of DE. Those students using both modes must be at par in their acquisition of knowledge, skills and attitudes.

*How universities can use their preference in online teaching and learning*

Most studies have focused on students preferences as opposed to lecturer preferences to online education

(Muthuprasad et al., 2021). However, failure to acknowledge lecturers' preferences may cause programmes not to take off, as they are responsible for preparing the material the modules and study guides that students use. Universities need to ensure that they incorporate lecturers' contributions when developing materials; after all, a Faculty is made of academics. Awareness raising among lecturers on the need for online programmes and what is needed, should be the starting point for ascertaining academics preferences. Such dialogue demystifies the online modules and study guides. Conferences and seminars on the best ways to implement online courses help in developing the best way forward. Positive attitude change enables universities to adopt the new technologies and solve their challenges.

Universities also need to create the technological architecture to support online teaching and learning. The changing of hard copy modules and study guides to soft copies have enabled the so called 'digital immigrants', those who grew up prior to the digital age, has enabled them to migrate to the LMS. The creation of enabling technologies in the form of computer laboratories has helped to remove computer phobia. The same phobia may also reside in some of the lecturers who, given the choice, would rather return to the traditional approaches. COVID-19 has ensured that technology is the new way of teaching and learning.

UNESCO (2020) has been instrumental in initiating capacity-building programmes in many countries and in helping countries that need support to develop their online programmes in the face of the COVID-19 pandemic. Such programmes must be implemented in universities as they help lecturers get the knowledge, skills and positive attitudes towards online programmes. Continued development of staff and students ensures that everyone comes on board to ensure that students benefit. Such capacity building programmes must be informed by research to establish the needs of lecturers. In a similar study in Nigeria, Bakare et al. (2018) found out that lecturers in colleges, polytechnics and universities needed capacity building to enable them operate, upload text (materials) and online teaching. The results of the study also revealed that the same lecturers were 'interested and ready to receive training' Bakare et al. (2018: 8736).

Universities also need to create enabling guidelines to promote the development of materials. E-learning policies enable universities to proffer quality online teaching to their students, which is in line with verified DE theories. Procedure manuals on how to develop online modules and study guides with clearly researched steps to ensure effective teaching and learning need to be clear and in place. There is also need for policy guarantees that a university would be committed to its assurances in it. The creation of centers in line with the policy creates centres of excellence in the development of online modules.

Vanderbilt University in the United States of America (USA) has created a centre for the development of online course modules. The online course modules have features, which allow them to be linked to various internet links. This allows them to be flexible as lecturers are able to update content whenever it is necessary. Universities therefore need to be up to date with knowledge of what an online module is. Hard copy modules uploaded on to the LMS should adopt electronic features that enable lecturers and students to use them effectively. This study therefore sought to illuminate this area.

### 3. Methodology

This study adopted a qualitative approach to explore lecturers' preferences between using online modules and online study guides as modalities for teaching in universities. Qualitative research allows phenomena to be studied in its natural settings or contexts (Mohajan, 2018) thereby producing descriptive and narrative data of the unfolding events (Creswell, 2014). The natural social context offers participants confidence and freedom to share their views and experiences with those who want to learn about them. However, because of the threat of the corona virus, it was not possible to visit participants at their workstations, hence data were collected through an online questionnaire. The characteristics of the phenomenon of interest to the researchers suited the use of qualitative approach. This was contrary to using positivist approaches that employ laws of cause and effect to describe phenomena. Qualitative approach was deemed appropriate because it enabled participants (lecturers) to write freely their extended responses in sharing their views about their preferences for using between online modules and online study guides. Participants responded to an online questionnaire sent to them through their emails. The online questionnaire helped them to express themselves freely

#### *Research Design*

A case study design was employed to study participants' views on their preferences between using online modules and online study guides at two selected universities located in Harare Metropolitan. According to Miles et al. (2014), a case study involves a detailed and intensive analysis of an event, situation, organisation or social unit. It is an in-depth study of a particular situation rather than a fly-past statistical design (Marongwe et al., 2016). Thus, the study employed a case study design, which, according to Harrison et al. (2017), is exploratory, explanatory and descriptive in nature. The case study design provides better insights into the detailed views, perceptions and behaviours of the subjects of interest (Miles et al., 2014) and can be used in many disciplines, hence it was found to be appropriate to provide a roadmap for this study.

#### *Population and sample*



Population refers to a collection of objects, events or individuals having some common characteristics that a researcher is interested in studying (Asiamah et al., 2017). The population of this study comprised all Faculty of Education lecturers from the two participating universities (one Campus-based and another Online Distance Education). To select participants, we utilised email addresses of all members in the Faculties of Education of the participating institutions. Thus, key participants were accessed through their email addresses (Etikan et al., 2016). The selection technique adopted was appropriate in view of the threat of the corona virus which placed limitations on people's movement, hence the use participants' e-mails to collect data online. Eighteen (18) participants, 8 from the campus-based institution and 10 from Open and Distance online institution responded by providing responses to questions sent to them. The study used an online open-ended questionnaire as a method of gathering critical data from participants.

#### *Data Collection Procedure*

In addition to mailing the questionnaire for data collection to all possible respondents, a consent form was also attached. Those who responded to questionnaire also completed the informed consent form. This was important for showing adherence to ethical guidelines when conducting research with human beings. This is in line with Creswell's (2013) advice of soliciting participants' written permission to participate in a study before commencement of data collection. Research with human beings requires their willingness to participate (Leedy & Ormrod, 2015). Social research is based on the major principle of informed consent or assent from participants without deceiving them (Webster et al., 2014). In adherence to COVID 19 standard operating procedures (SOPs) announced by government, data were collected through completing an online questionnaire thereby avoiding face-to-face encounters with participants. After completing the questionnaire, participants mailed back to the researchers their responses using given email addresses. This way, meaningful and sufficient data were generated.

#### *Data Analysis*

Data analysis, which is a process of reducing and making sense of qualitative data, was inductive and followed the thematic approach (Braun & Clarke, 2019). All the researchers were involved in the data analysis process. This involved independently reading and re-reading of transcripts to familiarise with data and identifying units of meaning related to participants' preferences between using online modules and online study guides for teaching (Sebola et al., 2020). This was followed by putting the units of meaning into distinct themes through a rigorous process of theme comparison and discussion amongst the researchers. The resultant emergent themes were then synchronised and synthesised into complete themes, which became the basis for data presentation for this study. The thematic analysis technique was used because it is a simple and flexible method of analysing qualitative

data (Braun & Clarke, 2006). The same scholars advise that it should be the first technique that should be learnt by those aspiring to use any version of thematic analysis in qualitative studies. Through its theoretical freedom, it can provide a rich and detailed yet complex account of data (Braun & Clarke, 2019). In this study, a six-step analysis procedure advocated by Braun and Clarke (2006) was used. The steps are familiarisation, coding, generating themes, reviewing themes, defining and naming themes and writing up. Verbatim statements were also captured in some instances.

#### *Trustworthiness*

Trustworthiness in qualitative research is a measure of the amount of confidence in the data generation process, how meaning has been reached as well as the articulation of methods to ensure the quality of a study (Cohen et al., 2007). To ensure rigor, measures of trustworthiness were employed included credibility, transferability, dependability and confirmability (Thwala, 2018). Use of participants' verbatim statements allowed for transferability of the study to be established. Confirmability was established through an audit trail of the research process and participants' verbatim accounts during data collection.

#### *Ethical considerations*

The researchers adhered to the expected standards of conducting research with human participants, as this was a social science study (Marongwe et al., 2016). Since participants were all adults, informed consent was sought and obtained directly from them by filling and sending completed consent forms online. Through the consent forms, participants were assured that the principles of confidentiality and anonymity were going to be upheld by researchers. The identities of participants and their institutions were not mentioned in the study (Thwala et al., 2021). Consent forms also carried the clause that participation was voluntary and no one was coerced to take part. Those who responded to the online questionnaire did so willingly with an understanding of the purpose of the study.

## **4. Findings**

The presentation of the findings from the two universities follows the research questions in line with the generated themes. The themes are Preferences, Reasons for the preferences, Key aspects of each of the preferences and Usage of the preferences.

*Which would be better, the online module or study guide for teaching students?*

#### *Lecturers' Preferences*

Lectures from the Campus-based University preferred online study guides and those from the ODeL University

preferred the use of both. One lecturer from the latter also preferred what he called a hybrid of the two; ‘I would personally prefer a hybrid (a mix of modules and study guides)’

*Why do they prefer it?*

*Reasons for the preferences*

Campus-based and one ODeL lecturers indicated that they preferred the study guide because it is flexible and less time consuming to prepare. They proffered the following explanations:

*A study guide may instil appropriate academic behaviour in students. That the students are provided with some guidance on the optional sources of information, there can be a zeal to consult the referred sources unlike modules that may provide false comfort. Students need not be blinkered in their search for information. The study guide prevents that.*

One lecturer who preferred the online module remarked: ... with the current economic situation in the country, it is *very hard for a rural student to get data, network and at times electricity for them to download some learning materials and cites that have been summarised in the guide’s content area to be studied. Therefore, this will disturb the whole purpose of assisting the student to have the most appropriate section and sources.*

*What are the key aspects of their preference?*

Key aspects of each of the preferences

Campus- based lecturers cited the following as the key aspects of the study guide.

Box 1: Key aspects of the study guide

- ✓ Encourages student to look for more information.
- ✓ Gives a correct approach and view of education/ knowledge construction
- ✓ Learner contributes to this process as well.
- ✓ Lecturer is facilitator and enabler
- ✓ Takes less time to prepare
- ✓ More flexible
- ✓ Instils appropriate academic behaviour in students
- ✓ Gives guidance on the optional sources of information
- ✓ Gives current information
- ✓ Reduces the amount of information to be learned
- ✓ Improves comprehension of the matter
- ✓ Concepts have no detail
- ✓ It suits the masters student who is academically mature
- ✓ No dependence on information contained in the module

One lecturer from an ODeL University summarised the key aspects by saying:

*Unlike modules, these are dynamic, thus can be changed from time to time with changing concepts in the study area. Guides are easier to make and*

*take shorter period to design and produce, even to adjust. Most importantly, guides are cheaper to make than modules.*

ODeL lecturers preferred online module for the following aspects.

Box 2: Key aspects of the online module

- ✓ It has more content
- ✓ Acts as the teacher/ lecturer to the student in the absence of face-to-face interaction
- ✓ Has further reading references which prove more useful
- ✓ Provides detailed reading materials to the distant learner
- ✓ Suitable for those who have erratic network and cannot access internet
- ✓ Provides accessibility, flexibility and mobility
- ✓ It is re-usable in a programme
- ✓ Detailed and information-rich content
- ✓ Fully addresses the requirements of student clientele
- ✓ Student-friendly and easy to understand
- ✓ Suitable for undergraduates
- ✓ Tutor-friendly (for both full and part-time)
- ✓ Dependence on information contained in the module

*How can Universities use their preference in online teaching and learning?*

Usage of the preferences

The findings showed that lecturers in the ODeL University preferred both online modules and online study guides and those in the Campus-based University prefer online study guides as opposed to online modules. Those in the ODeL University who preferred online modules suggested that their university should use the online modules by:

*Placing them on portals and the student can sacrifice a day or two on network then he/she will download the modules and study wherever the student is.*

*The module can be the student’s tutor wherever they might be situated. They would only seek clarification from the human tutor when they encounter some difficult concepts.*

*Modules should be used for the benefit of undergraduate programmes (especially first and second year) as well as STEM courses.*

*Study guides in the ODeL University should be for,*

*Undergraduate programmes in selected courses, taking into consideration the background knowledge of students and level of difficulty of the course.*

*The study guide would be used to guide Masters’ students on the delimitation of their syllabus.*

One ODeL lecturer summarised it this way:

*My University is in transition from modules to study guides. The study guides are being uploaded on the eLearning platform for students to access them. The assumption is that lecturers and course*

*tutors will be able to adjust and update them accordingly from time to time.*

Lecturers in the Campus-based University suggested that the online module can be made equally flexible and facilitative of learning. They requested clarification of the two as they see their difference as a matter of semantics. They suggested 'holding training workshops on the best ways of coming up with effective study guides'.

## 5. Discussion

*Which would be better the online module or study guide for teaching students?*

Preferences

All lecturers in the campus-based university preferred the study guide as the better mode for delivery. The ODeL lecturers preferred the module but also preferred the study guide for specific courses. The responses indicate the difference between the two universities. The findings align to the MOEE theory by Picciano (2017) whereby those in the campus-based universities prefer a mode, which includes them in the teaching and learning process. Due to experience, those in the ODeL institution prefer a mode that allows student to work independently. The latter choice enables students to access content and learn independently under the covid-19 challenges.

*Why do they prefer it?*

### **Reasons for the preferences**

The findings show lecturers preference for both online modules and study guides as useful to deliver learning materials to the students. The difference between the two institutions is that those in the ODeL University preferred the use of both but at different levels. This is indicative of their experience in the use of both. Lecturers from the campus-based university revealed that they had little experience in the use of both. Some of them were unable to see the difference between the two as they saw the difference as semantic. In this era of COVID-19 disruptions, it is clear that there is need to use these delivery methods to ensure that learning goes on. Distance education has become the norm and the use of technology being the main delivery vehicle. This in line with UNESCO's (2020) mission to enable both developed and developing countries develop DE to meet the effects of the COVID-19 pandemic and perfect their online programmes. Universities therefore need to make choices on the best electronic delivery methods that do not disadvantage their students. Historically, the hard copy module has been the 'lecturer' in the sole ODL University in Zimbabwe. All other Universities have relied on the use of face-to-face delivery in Lecture halls and tutorial rooms. The preferences show that the lecturers from both universities are embracing the new norm. Both opt for the online versions, as they are cost effective. This resonates with Johnson's procedures (2021) for developing online modules at the Vanderbilt University Centre for Teaching

in the USA. The production of hybrid modules as suggested by one ODeL lecturer, which is flexible and interactive, ensures that whatever mode one prefers will benefit the student.

*What are the key aspects of their preference?*

*Key aspects of each of the preferences*

The preferences are premised on two key aspects for online modules and study guides. The online module is the 'lecturer'. It contains all the necessary material and teaches the student as effectively as the face-to-face encounter. This shows that most preferred modules as they had more detail than the study guide did. Material in the module is standardised through a quality assured module development process. This is also in agreement with Tanyanyiwa and Mutambanengwe (2015), Tafangombe and Kaputa (2015) processes of the production of modules to ensure their quality. Once it is on the portal, the student can download it and learn. The study guide was seen as a summary of the material to be taught. It is flexible as it links students to other materials, enabling them to construct knowledge as they learn. These findings show the differences between the two. On one hand, the module is self-contained and on the other hand, the study guide is a summary that links the learner to other subject areas. This finding makes the online module suitable for this COVID-19 era as it uses less data to access and download. It avails to the students more material in one package without using much data. Where a student is able to obtain hard copies of modules can learn effectively without incurring any extra costs. However, it is costly to develop, as it requires rigorous procedures to ensure the quality of the material. This is in line with the allusion by Hamweete (2012) that although they are affordable, use of technologies is more cost effective. The use of online modules and study guides is one way of benefitting from this economy of scale. Knowledge is continually changing, emerging and evolving; therefore, relying on modules may lead students to learn outdated information. Updating the information may need time as one follows the review, revision and writing stages.

*How can Universities use their preference in online teaching and learning?*

*Usage of the preferences*

The findings reveal two ways, first the uploading of online modules to enable students to download them. The students need help whenever they encounter problems. The use of online modules for undergraduate, STEM courses, and study guides for mature postgraduate students should be in cooperated into the procedure manuals. Secondly, the lecturers recommend training on the use of online study guides. This finding is similar to that of Bakareet al. (2018) in Nigeria. This training needs to include online modules, as these are a paramount component of most online programmes in DE. This resonates with Johnson (2021)'s guidelines on developing online modules. This is in line with one lecturer's recommendation for the use of a hybrid module.

## 6. Conclusions and Recommendations

The study made the following conclusions:

- i. Lecturers from the ODeL University preferred online modules for undergraduate students and study guides for postgraduate students.
- ii. ODeL lecturers also preferred a hybrid module that would incorporate positive aspects from both modes.
- iii. Lecturers from the Campus-based University preferred online study guides only.
- iv. The online module is self-contained and requires less data to use.
- v. The online study guide is a summary of the content, flexible and easy to develop.
- vi. Online modules are suitable for undergraduates and STEM subjects.
- vii. Online study guides are suitable for postgraduate students.
- viii. Training is required in both.
- ix. Both online modules and study guides should be uploaded onto the portals.

In view of the conclusions, the study makes the following recommendations:

- i. Universities should use lecturers' preferences, as they are crucial for the success of online teaching and learning. It would be unthinkable to force lecturers to use a mode they are not comfortable with. Consultation is fundamental to coming up with a common position informed by lecturers' preferences.
- ii. Universities should use the online module during this COVID-19 era, as it avails to the students more material in one package without using much data. Given that the COVID-19 pandemic has placed limitations of people movement, modules may be the better option as students are able to study in the comfort of their homes.
- iii. Universities should use both online modules and study guides if resources are available.
- iv. Universities need to capacitate lecturers on the development and use of both. In order to be part of the new normal, training of lecturers would be crucial to respond positively to the new demands.
- v. Universities need to develop guidelines or procedure manuals for both online modules and study guides for teaching and learning.
- vi. Further research must concentrate on university students' preferences since they are the beneficiaries.

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