

LIVED EXPERIENCES OF OPEN AND DISTANCE LEARNING IN THE CONTEXT OF COVID 19: THE CASE OF BOTSWANA OPEN UNIVERSITY

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Abstract

The emergence of COVID-19 led many institutions and schools to hurriedly seek alternative modes for teaching and learning other than the traditional face-to-face contact mode. In some, if not most cases, the alternative was open and distance learning (ODL). However, the Botswana Open University (BOU) was not totally caught unawares. Based, among others, on the need to enhance society's knowledge of an institutional response to the pandemic, this study explored the model of ODL at BOU, teaching and learning at BOU before COVID-19, the impact of the pandemic on the teaching and learning process and the nature of interventions at BOU during COVID-19. The study also presents observed challenges and mitigation measures. The qualitative method was used with reliance on lived experiences of the authors, desktop research, and examination of institutional documents, policies, and practices of the institution. Although BOU, as the Botswana College of Distance and Open Learning (BOCODOL) used the correspondence model at inception, it has, since the establishment of BOU, developed a robust strategic framework, a strategic plan, an overarching strategy for technology-enhanced teaching and learning, and an e-tutor model. It has also enhanced its regional centres operations and student support in its online engagement with its learners. The selection of a Learning Management System (LMS) is underscored, and the partial use of the Substitution Augmentation Modification Redefinition (SAMR) model has helped in teaching and learning. The article recommends full implementation of all policies and guidelines, the provision of support for students with disabilities, and the formal use of the SAMR model in its operations.

Keywords: COVID-19, open and distance learning, online learning, SAMR model, Botswana Open University

1.0 Background to the study

In 2019 COVID-19 struck, creating a major global socio-economic challenge, and causing considerable health problems around the world. It resulted in substantial damage to people's lives, visions, and dreams, and affected businesses and finances worldwide. As of 14 July 2022, there were 556, 897, 312 confirmed cases and 6,356, 812 deaths universally, and in Africa there were 9, 159, 920 confirmed cases and 173, 795 deaths (World Health Organisation,

(WHO), 2022). As of 15 July 2022, Botswana had 323, 347 infections and 2, 760 deaths (Reuters, 2022). Even those grieving were not spared as people could not mourn the departed properly or send off loved ones with dignity. Schools were abruptly closed, disrupting the learning and teaching of 1.6 billion learners globally (World Bank, 2021). In some cases, empty church sanctuaries and empty football stadiums were used to facilitate learning and teaching. For examples, it was reported that 200 students in fourth and fifth grades used the Telia Parken Stadium in Copenhagen, Denmark, and were expected to use this large avenue for classes for about seven weeks (Lauren, 2020). In other cases, the learners were forced to explore the use of open and distance learning (ODL) to mitigate learning-related issues. Many of these mitigating measures had hefty financial burdens. Angrist, Bergman, Brewster and Matsheng (2020) report that low-income families bore the brunt of these measures the most since they were not as capacitated as high-income families in providing mitigating measures to the challenges caused by the pandemic. The same authors further underscored the power of remote learning with the phone and the simple short message service (SMS) used for improving children's learning.

In a joint publication by the World Bank, United Nations Scientific and Cultural Organisation (UNESCO) and the United Nations Children's Educational Fund (UNICEF), it was observed that learning losses have been high and inequitable (World Bank, UNICEF & UNESCO, 2021). The international organisations further note the unparalleled severe effect that the pandemic had on education, and that the crisis exacerbated inequality in education, and stifled earlier progress made by youth and children. Further, it has also been noted that in some parts of the world, most students with special needs suffered more during the period due to the challenge of receiving needed support (Dickinson, Smith & Yates, 2020). The International Labour Organisation (ILO) further noted that a lot of youth had problems completing their programmes (ILO, 2020).

In Botswana, the core responses of Government came by way of imposing extreme social distancing measures for 28 days from 3-30 April 2020 and this was later extended to 7 May of the same year. A second lockdown phase was instituted from 8-14 May 2020, but a third phase, planned for 13-22 May 2020, was eventually not implemented (Tau & Adekanmbi, 2021). These attempts by the Botswana Government to manage the process of schools' closure and re-opening was fraught with challenges. The closures led to 33, 325 children missing out on early childhood education classes during the early days. Over 300,000 children in primary schools, over 168, 000 in secondary schools, and nearly 50 000 students in tertiary education were affected (UNESCO, 2020). Education in schools and various institutions of learning, including tertiary, was impacted, and the coverage of syllabi was affected, and in some cases, students became idle (Tau & Adekanmbi, 2021). UNICEF (2022) further reported that violence against children was rampant, both at school and at home.

2.0 The context

Botswana Open University (BOU), formerly known as Botswana College of Distance and Open Learning (BOCODOL) founded in 1999, was established in 2017 through an Act of

Parliament. Its main mandate is to provide tertiary education using the avenue of open and distance learning (ODL). BOU has five regional campuses in Kang, Gaborone, Palapye, Francistown, and Maun, and their primary role is to provide BOU students with administrative, academic, library, and counselling support. Through its long-term association with the Commonwealth of Learning and partnerships with several universities and organisations, BOU has been able to have access to a bouquet of course materials. Examples are agreements reached with the Open University of Mauritius and the Virtual University of the Small States of the Commonwealth (VUSSC), among others.

BOU has a strategic framework that charts its envisioned path from 2019 to 2036 as well as a strategic plan that covers the period 2019-2023. These, coupled with the institution's vision, mission, and values, have driven its development and programming agenda. Apart from school equivalency programmes at the pre-tertiary level and its many short courses, BOU has a variety of credit-based programmes at Certificate, Diploma, Degree, Masters, and Post Graduate levels (Botswana Open University, 2020). These include four graduate programmes, eight first degree programmes, three diploma programmes, three credit-based certificate programmes, a few additional certificate programmes and a host of short courses organised through the Centre for Continuing Professional Development (CCPD). Its mission is to "provide quality education, research and community engagement through open and distance learning" (Botswana Open University, 2019, p.1).

Even with BOU's robust ODL policies and plans, its calendar for Semester 2 in the 2019/2020 academic year was affected and had to be extended; physical interactions between tutors, and learners stopped; the admission, selection and registration of the open schooling students could not be done on the earlier determined schedule, and alternative dates were identified for submission of assignments and dissertations. For dissertations, it became difficult to go to the field to gather data needed by students, and as such, supervisors and students explored alternative routes to finding and gathering data, and in many cases, they relied on the extensions given for such dissertations to be submitted at later dates.

With this as background, it becomes necessary to explore lived experiences of open and distance learning at the Botswana Open University during the period of the pandemic.

3.0 Statement of the problem

The disruptive emergence of COVID-19 posed a major teaching and learning challenge in institutions all over the world. Without a planned response to the pandemic, institutional interventions can create more problems for learners. While an ODL response is beneficial and may be well intentioned, the consequences of an intervention that does not meet basic quality requirements is fraught with danger. A teaching and learning response cannot rely on trial and error and must be backed by relevant models, technological plans, and student support. A cursory look at pedagogical interventions when COVID-19 struck showed a rush by most institutions without proper planning. A preliminary search of the literature on what happened during the period does not yet reveal a complete story. It therefore becomes necessary to do a

study of how Botswana Open University responded to the COVID-19 challenge as a way of bridging this gap.

4.0 Objectives and research questions of the study

The main objectives of this study were to a) explore the ODL model used at BOU, b) appraise the state of teaching and learning at BOU before COVID-19, c) explain the impact of COVID-19 on the teaching and learning process, and d) discuss the interventions made at BOU during COVID-19. The study therefore seeks to answer the following questions: a) What type of ODL model is used at BOU? b) What was the state of teaching and learning at BOU before COVID-19? c) How has COVID-19 impacted the teaching and learning process, and d) What kind of interventions were made at BOU during COVID-19?

5.0 Significance of the study

The current study seeks to make a contribution on how institutions should respond to teaching and learning situations in an emergency. It seeks to shed light on how other institutions could learn from the experience of BOU, especially in the kinds of technological interventions made during difficult times. The research could also assist institutions in formulating relevant teaching and learning policies in ODL.

6.0 A theoretical premise

This article is premised to a degree on the submissions of the Technology Acceptance Model (TAM) and the Diffusion of Innovation Model (DIM). Based on the modification of the Theory of Reasoned Action (TRA), the TAM was developed by Davis (1989) and explains how people decide to accept and use modern technologies. Key elements in the TAM are perceived usefulness and perceived ease of use. While perceived usefulness refers to the potential user's belief that a certain system such as Learning Management System (LMS) could improve their action, perceived ease of use refers to the degree the users believe the system they will be using is easy to use (Davis, 1989). According to Davis (1989), as reported by Alharbi and Drew (2014, p.145), "behavioural intention defines the actual use of a given IS system and therefore determines technology acceptance." This is similar to the DIM which aims to explain the way innovations, especially of the technological type, are accepted, adopted, and used. Often innovation adoption may depend on how such is communicated, the degree of persuasion involved, and how it is implemented (Damanpour & Wischnevsky, 2006)

Before COVID-19, BOU used blended learning. BOU staff, tutors and learners were expected to use digital tools during COVID-19. The intention here is to investigate the response to the use of technology as BOU sought to mitigate the effects of COVID-19. With BOU's focus shifting to full online learning during the pandemic, the goal is to present the institution's response to the plague based on lived experiences of the researchers.

7.0 A review of literature

7.1 The focus of the literature review

This literature review focuses on the emergence of COVID-19, the models of ODL, the benefits derivable and the impact of COVID-19 on teaching and learning. It also reviews literature on technologies for promoting teaching and learning.

7.2 ODL benefits and models

Open and distance learning is a term used to describe the teaching and learning in which the teacher and the learner are separated, mostly physically, but also in time. This distance is bridged through a medium or technology, or a range of technologies. ODL is defined as:

the provision of distance education opportunities in ways that seek to mitigate or remove barriers to access, such as finances, prior learning, age, social, work or family commitments, disability, incarceration, or other such barriers. “Open” refers to a commitment that removes any unnecessary barriers to access learning. Distance education refers to teaching and learning that temporarily separates teacher and learner in time and/or place; uses multiple media for delivery of instruction; involves two-way communication and possibly occasional face-to-face meeting for tutorials and learner-learner interaction. Open learning is not the same as distance learning, but both are complementary and hence the two terms are often used together as open and distance learning (Commonwealth of Learning (COL), 2020, p. 4).

Various accounts indicate that ODL originated as correspondence education in the USA in 1728, in Germany in 1856, in Australia and Canada in 1914 and 1919 respectively, in the United Kingdom in 1939, and in many African countries through foreign correspondence colleges and external studies in the early 1900s (Adekanmbi & Boitshwarelo, 2010). Early courses were shorthand, commerce, and later, teacher training. The University of South Africa (UNISA) which started as the University of the Cape of Good Hope in 1873, became UNISA in 1916 and started tertiary distance learning in 1946 (UNISA, 2016). The UK Open University, which UNISA predated, was started in 1969 and has been replicated in many parts of the world. Currently, many open universities exist across the globe to make learning accessible to their students.

ODL allows individuals to receive education, anywhere, anytime, remotely, without the teacher being physically present. This is supported by Letseka and Pitseo (2013) who say that ODL is characterised by flexibility where learning can take place anywhere. For potential adult clients, the fear of an income forgone is removed and learners can access a wide range of learning platforms and an extensive range of content through the world-wide web. The quality of instruction can be enhanced through interactive activities and there is a flexibility of instructional strategy, teaching and learning space. ODL also makes the dream of having a knowledge and learning society possible. ODL programmes, as traditional ODL or internet-enhanced programmes, make the sharing of pedagogical information possible asynchronously and in real time. In situations which make physical access difficult, like the type experienced

when Governments around the globe issued lockdown orders, ODL serves as a mitigation to ensure learning continuity.

Due to multi-personnel involvement in ODL course development, the quality of its materials is often higher than those of conventional systems (Makoe, 2015). Many free online videos on various subjects including technical and engineering ones are on YouTube. ODL thus provides an opportunity to share a large variety of such materials. In conventional teaching, students are generally limited to what the teachers can share within the limited time although students are now also directed to the internet to use added resources available there. Through the platforms availed on the internet, a teacher's role changes from being a purveyor of knowledge to that of a facilitator. While quality is often raised as an issue, many ODL institutions establish strong policies and procedures in developing materials and implementing programmes in order to ensure quality. ODL has been used to teach various disciplines, and its growth has been well reported in the literature (Qayyum & Zawacki-Richter, 2019).

A model refers to the representation of a thing and often indicates the aspects of a phenomenon or how such is done. While some ODL models reflect the administrative arrangements and how an institution is structured, other models highlight how teaching and learning is done. ODL institutional models include single mode institutions which are dedicated for ODL and usually nothing else. Examples of such open universities are the University of South Africa (UNISA), BOU, Zimbabwe Open University, Open University of Tanzania, Open University of Mauritius, and the United Kingdom Open University (Tau & Adekanmbi, 2021). Some institutions use the integrated or mixed mode, for example, the University of Botswana has a Distance Education Department in its Centre for Continuing Education (CCE). Some institutions are franchises, where a university signs an agreement with another university to run some of their programmes under a franchise (Pon & Richie, 2014). Botswana has institutions which run programmes franchised from the University of Derby, University of Sunderland, UNISA and the UK Open University. Some private companies or business entities also run ODL programmes. In others, departments or ministries of various governments organise distance education programmes. The Botswana Open University, then BOCODOL, started as a Correspondence Education Unit of the then Department of Non-Formal Education. Today there are also Massive Open Online Courses (MOOCs). At the inter-governmental level, the Commonwealth Heads of States, in conjunction with the University of Huddersfield, started running the conventional Diploma in Youth in Development Work Programme along ODL lines in 2001 (Adekanmbi & Maundeni, 2008).

On teaching and learning, the correspondence model which relies on print-based materials and physical distribution of the materials to learners was a common practice. Later, the distance education model was used, allowing for a careful mix of print and some levels of technological intervention. Perhaps the closest term that describes this careful mix is blended learning. Arguably, blended learning, a form of distance learning, offers a very good opportunity to maximise ODL (Cleveland-Innes & Wilton, 2018). It allows the combined use of the traditional ODL methods with online learning. In a discipline where practical sessions are required, such practical sessions are planned alongside the distance teaching routes.

According to Lawless (2019), blended learning allows flexibility, pacing, and convenience for the learner; a better understanding of content, peers, and instructors; reduced costs; easier use of web-related technologies; enhanced student tracking capabilities while social learning is also supported and enhanced. But more importantly, the institution running a programme is expected to provide learner support. Generally, distance learning is relatively cheaper to run where high numbers are involved. In economies of scale, the more students there are, the lower the overall cost of running such programmes. This notwithstanding, the blended learning model, which allows for additional face-to-face elements, enables many disciplines to be taught at a distance.

Another model is the online learning model which relies heavily on the use of the internet and the world wide web to deliver learning. This model has been widely reported, and with COVID-19 disruptions, has become pervasive. Rosenberg (2001, p. 28) describes online or e-learning as “the use of internet technologies to deliver a broad array of solutions that enhance knowledge and performance.” Cuesta (2010) provides a detailed explanation of the processes involved in the design and development of online courses. In the online model, Course Management Systems or Learning Management Systems (LMS) are often used to organize content, activities, communication, and assessment in many institutions.

The selection of a good LMS is important when offering online courses. An LMS such as Moodle or Blackboard can incorporate text, asynchronous discussion boards, synchronous utilities such as chat features, desktop and application sharing, self-grading exercises, quizzes, assignments, drop-boxes, and examinations.

7.3 Teaching and learning in ODL

Teaching refers to the organisation of various contingencies, within the purview of identified aims and objectives, with a view to ensuring that learning takes place. While learning in ODL, including online learning, is facilitated by online tutors, sustained learning is usually a result of learners’ deliberate efforts in carrying out activities identified in their instructional materials or online learning engagements (Cleveland-Innes & Wilton, 2018). A prior development of a clear set of learning outcomes provides a roadmap to authentic learning and is vital in an ODL context. In addition to this, the design and development of quality learning materials (Cuesta, 2010; Welch & Reed, 2005) is key, while the provision of learner and administrative support, as well as counselling, all go into making an ODL learning encounter a successful one (Nonyongo, 2002). While institutional providers of ODL make important academic and quality enhancement decisions through Senate, the involvement of external regulatory agencies help to further enhance ODL quality. Registered councils or associations and qualification authorities monitor the quality of qualifications and programmes offered by institutional providers of learning (Bogue & Hall, 2003).

It should be noted that open educational resources (OER) are becoming an addition to the lexicon in ODL. OER are “digitised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research” (Organisation for Economic Cooperation and Development (OECD) 2007, p.10). These resources include

“learning content, software tools to develop, use and distribute content, and implementation resources such as open licences” (OECD, 2007, p.10). The term has become important for a variety of reasons. Thus, the growth of OER helps to enhance access to resources and knowledge in ODL. Many institutions have set up online repositories through which knowledge is shared, and institutions sign up to such and establish policies to promote the use (Moore, Collins & Johnston. 2020). Many materials are now being licensed as open courseware, available for use and reuse around the globe. Schools also benefit from similar resources, especially in contexts where funds are limited.

7.4 Impact of COVID-19 on teaching and learning

The impact of COVID-19 on teaching and learning has been topical in the literature. Apart from school closure, disruptions to teaching and learning, delayed semesters, and related issues reported earlier in this article, COVID-19 has led to a search for alternatives in the way teaching and learning is done. There have been challenges found with remote assessment (Lieberman, Levin & Luna-Bazaldua, 2020) and alternative assessment options have been proposed in many institutional contexts. Some have even suggested that students be allowed to participate in setting their own assessment items as they save time, they enhance practical feedback, their metacognition is improved, there is increased buy-in, and the needed lifelong learning skills are developed (Spencer, 2022). A gravitation towards the use of objective assessments items rather than essays has also been seen, with the added challenge of a lack of adequate skills by tutors and lecturers who are more familiar with the essay type (Priya, Manickam, Rajagopal, Kumar & Balamurugan, 2022).

UNESCO (2022) has discussed the impact on teaching and learning, research, internationalisation, and administration and management, including the financing of higher education. Having said this, a report by the World Bank, UNESCO, and UNICEF (2021) has shown that in spite of its challenges, the pandemic has brought a lot of transformation and innovation into education. Also, with countries adopting learning recovery programmes and a proper assessment of students’ learning levels, they could accelerate learning and “make schools more efficient, equitable, and resilient by building on investment made and lessons learned during the crisis” (World Bank, UNESCO & UNICEF, 2021, p.7).

8.0 Methodology

The methodology used in this study is qualitative. Qualitative research focuses on the way people interpret and use their experiences to understand the social reality of individuals (Haradhan, 2018). This type of research may use journals, classroom observations, open-ended questionnaires, document review, and observations to collect, analyse and interpret data. Gross (2018) indicates that document review refers to a form of qualitative research method that analyses documentary evidence and uses the information to answer the research questions.

The research also used participant observation to gather information. Participant observation is the process of working with a group of people to gain an understanding of the way they live in their community (Blevins, 2017). This means the researcher would learn and gain knowledge as well as have a deeper understanding of the people in that community.

According to Blevins (2017) the researcher usually observes their actions, pattern, speech, norms in order to gain an understanding of the group.

The goal was to produce a contextual paper about ODL at BOU during COVID-19. The research objectives and related research questions provided a basis for the identification of sub-headings in the discussion of the findings. The desk research was appropriate because it enabled the researchers to reflect on their lived experiences, and report on real life situations in their roles as programme coordinator, research coordinator, trainer, and tutor over a period at BOU.

9.0 Discussion

9.1 Alignment of the discussion to research objectives and questions

In line with the objectives and research questions of the investigation, this section presents the findings of the study along the lines of the models of ODL at BOU, the nature of teaching and learning at BOU before COVID-19, the impact of the pandemic on teaching and learning and the interventions made by the University. The section further highlights challenges faced, and the mitigation measures that were provided.

9.2 Models of ODL at the Botswana Open University

As an open university solely dedicated to the promotion of open and distance learning, BOU uses a single and autonomous distance education model which allows it to focus on open and distance learning as its core function. Even as BOCODOL, when the institution operated as a parastatal of government, its choice of an autonomous model of operation was clear in its administrative arrangement. While this helps it to harness its resources into ODL issues such as staffing, materials development and programming, management of its regional centres, and the pursuit of its vision, its choice of a teaching and learning model has gone through a range of phases similar to the transitions experienced by other ODL institutions around the globe.

In its early days as BOCODOL, the institution focused on the use of the correspondence model, which allowed it to use print-based course materials for its teaching and learning, and the corresponding use of physical delivery system to deliver the materials to learners at their dispersed areas of the country. For this, the regional centres have played a major role. However, this model gradually gave way to a distance learning model which relied on the use of not just the distribution of printed course materials, but also audio tapes and compact disc read-only memory (CD-ROMs) which were shared with the learners as supplementary resources to aid teaching and learning. Due to the combination of face-to-face elements and sharing of those course materials, a newer term, blended learning, would rightly describe the model the University was using. Just before the University was established as BOU through an Act of Parliament in 2017, the institution had gone into partnership with the Commonwealth of Learning and in particular some other universities such as the Open University of Mauritius, through a franchise agreement and model, to use the tertiary education programme course materials of the latter and adapt them for BOU students.

While these models have shaped practices at BOU, the development of its strategic framework had led the University to envision the use of an online model which the arrival of

COVID-19 helped to fast-track (Tau & Adekanmbi, 2021). The use of the online model is underscored by the development of a BOU-e-Tutor model which is clear about the online pursuit and practice by BOU as well as an enunciation of the expectations of that model, and its various role players. It would therefore be appropriate to say that while the BOU administrative model recognises its core mission as a dedicated open university with its constituent parts, the online model encapsulates its teaching and learning mission and the franchise model enables it to, through partnerships with other organisations and universities, use and adapt course materials from other institutions in line with practices seen in academic franchises globally (Pon & Richie, 2014).

9.3 Teaching and learning at BOU before COVID-19

Before the advent of COVID-19, the University, based on its vision, strategic framework, and plans, had set itself some vital targets not only to have on its roll at least 25000 students by 2036, but also to make online learning its core mandate by 2023 (Botswana Open University, 2019). BOU also had a blended teaching and learning approach before COVID-19. Enrolment of students was done at the different regional campuses and centres. Students physically went to these places to submit their applications, which were printed documents, including their credentials, assisted by officers at BOU. The students would then have to wait for weeks and sometimes months to get feedback from BOU by returning to these regions and centres to find out if they have been admitted. Once admitted and registered, students would be expected to make payment at the account's office within the centre or campus.

Following registration, students were informed when the semester would begin and were issued with learning materials through their centres. The learning materials were mostly books, worksheets, compact disc read-only memory (CD-ROMs) which packaged all the information students needed to study before tests and examinations. For students in the remote areas, officers would be deployed to these areas to deliver the learning materials to the students. Students were given schedules showing when the classes would be held at the regional campuses or centres where they would be expected to attend. Lecturers and tutors would then travel to these places to conduct tutorials. The tutorials would take a few days to a week after which the officers (tutors and lecturers) would return to their duty stations. Later in the semester, lecturers, with the help of some tutors or supervisors, would conduct support (for research courses) where they would embark on trips around the country and check on students' progress and assist them with their research projects. This process would normally take 14 to 20 days of travelling.

For courses that had examinations, the Unit responsible for this, the Examinations Office, would prepare and package examination papers for all the courses. The Regional Assessment Officers handled the recruitment of invigilators from their pool of tutors and other education personnel. Course coordinators would call for individuals who would physically invigilate the examination process. At BOU, instead of the giving the students' examination scripts to lecturers and tutors for marking independently, there was centralized marking. Thus, the sending of all examination materials including the examination scripts to Gaborone (Headquarters) came at the very start of the marking process. The marking and internal

moderation took place simultaneously at the centralized venue. The marks generated at the end of the marking process together with the continuous assessments collected during the semester would then be used to compute the final results for each course. By the time COVID-19 started, all tutors had already been trained on how to enter marks into the student management system (ITS) through the Lecturer-iEnabler. The regional assessment officers computed their results on the system and the examinations office only guided lecturers on how to access their students' marks from the ITS. Initially, the results were downloaded into excel sheets to allow for easy use. Lecturers and/or course coordinators would then analyse the results and write their course reports for the different approval bodies such as the departmental and school boards, and Senate. Once approved, results were uploaded on the university website where students would view them. The same results also stayed on the ITS as permanent record.

9.4 Interventions made by BOU during COVID-19

As an ODL institution which promotes the idea of flexible educational programming, and in line with similar interventions by ODL institutions across the globe, BOU came up with strategies that helped the institution to continue to teach during the lockdown. To mitigate the effects of COVID-19 and respect the protocols set by Government, a Working from Home Policy was developed by the University and staff were working from home, students were taught and assessed online, and alternative ways were used to support students online. For assessment, instructors used discussion forums, online quizzes, e-portfolio, and students submitted assignments electronically. These interventions were used to enable students to learn and to minimize physical meetings. The University went back to the drawing board and fast forwarded its technology plans. It also set in motion the development of new policies and the activation of a broad range of old policies, plans and guidelines. Its initial blended learning apparatus was re-organised and online learning became the norm across its four main schools through the operations of the five regional campuses.

Among many things, the University set up a range of strategies, policies, and guidelines, with most developed between 2018 and 2020 to help the University achieve its mandate. To this end, the Strategy for Technology-Enhanced Learning, Teaching, and Assessment and Student Support (STELTASS), an enabling e-learning policy to provide teaching and learning to its students was developed. An implementation plan for STELTASS was also later developed to help achieve these laudable aims.

While all the policies shown in Table 1 are important, there is need to highlight a few things about STELTASS, the e-Tutor Model and the Learning Analytics Policy. The implementation of these policies is made possible with Information and Communication Technologies (ICT) systems and Moodle, the LMS adopted by the University. As a learning platform, Moodle is one of the main LMS used worldwide and compares favourably in all major features in the creation of online courses. Its features allow assignment posting, retrieving, and marking. Furthermore, it has other features such as online chats and forums which enable online discussions. This platform enables the monitoring of learner progress.

Table 1: Botswana Open University Academic Policies, Strategies and Guidelines

	Name of Policy	Effective Date
1.	Academic Integrity Policy	1 July 2011
2.	Policy Criteria and Procedures for the Promotion and Appointment of Academic Staff	1 September 2018
3.	Research and Innovation Policy	1 September 2018
4.	Research Ethics Policy	1 September 2018
5.	Quality Policy	1 September 2018
6.	Programmes Development and Review Guidelines	1 June 2019
7.	Academic Programmes Development and Review Policy	1 July 2019
8.	Learning Analytics Policy	1 July 2019
10	BOU Quality Assurance Standards for Blended Learning	26 September, 2019
11.	Strategy for Technology-enhanced Learning, Teaching, Assessment and Student Support (STELTASS)	7 November 2019
12.	Open Educational Resources (OER) Policy	7 November 2019
13	STELTASS Implementation Plan	1 October 2019
14.	University Research and Innovation Fund Guidelines	20 February 2020
15.	Research and Innovation Fund Guidelines	20 February 2020
16.	Senate Code of Conduct	21 February 2020
17.	Internationalisation Policy	12 March 2020
18.	The BOU e-Tutor Model	1 October 2020
19.	Guidelines on parameters for plagiarism software	1 January 2021
20.	Work-based Placement Guidelines	1 July 2018
21	Conference Fund Guidelines	1 April 2019
22	BOU General Academic Regulations	1 August 2020
23	Intellectual Property Policy	5 November 2020
24	Learning Analytics Policy	1 July 2019
25	University Research and Innovation Strategy	7 November 2019
26	Publication Subsidy Criteria and Procedures	17 December 2021

Source: Tau & Adekanmbi (2021); Botswana Open University (2022a)

Related to the STELTASS, the BOU e-Tutor Model was developed as part of the implementation of STELTASS, with teaching and learning expected to happen in the context of the University Moodle platform. All tutors and students are expected to fully utilise Moodle (Botswana Open University, 2022a). A role matrix was added in the e-Tutor Model which highlights who is expected to do what and in what manner, ranging from the Student Affairs and Welfare Unit of the Division of Student Services to the academic Registry, the regions and the Centre for Technology Enhanced Learning and Teaching (CTELT) itself as well as the Division of Corporate Services.

It is important to note the role of CTELT at BOU, whose mandate is to:

- a) Provide training, support to teaching and support staff through professional development opportunities in the form of workshops, seminars, and short courses.
- b) Conduct departmental and individual consultations for integrating innovative digital technologies into the design and development of programmes and courses.

- c) Provide support in the general use of technologies for other activities such as virtual teaching, meetings etc.
- d) Research, develop, test, and evaluate instructional technology applications and frameworks appropriate for the open and distance learning environment.
- e) Develop appropriate procedures, policies and support structures for instructional technology including equipment acquisition, maintenance, integration, and usage.
- f) Create a learning community of competent and confident users of instructional technologies and other technologies
- g) Produce educational and instructional technology media.

(Botswana Open University, 2022b)

Another policy, the Learning Analytics Policy was developed. According to this Policy, learning analytics refers to the

analysis and interpretation of data collected from the University's digital platforms about students and staff for the purposes of enhancing learning and the environments in which it takes place (Botswana Open University, 2022c, p. 5).

This policy is aimed at enhancing quality assurance and improvement, improving retention rates, bringing equity, promoting individualised learning, improving lecturer experience, and predicting performance (Botswana Open University, 2022c). There has been a renewed call by Executive Management for a full implementation of the policy by the schools. Very early into the pursuit of full online programming, programmes such as the Certificate for Distance Education Practitioners, Bachelor of Education in Primary Education and Bachelor of Education in Integrated Early Childhood Development courses were taught online. The tutors used synchronous and asynchronous teaching to deliver content to the learners. For example, Google Meet, Microsoft Teams, Online forum discussion and Google slides were used to teach students. In March 2020, the Department of Educational Management at BOU organised an online workshop for tutors and staff and the Google Meet platform was used. Participants saw one another, interacted in real time (synchronously), asked questions, cracked jokes, used PowerPoint slides, and shared various files in the process. Since then, many of the departments have organised online meetings with their tutors and students in a new culture of online learning. Apart from Google Meet, the attention of staff and students was called to various other platforms such as Zoom, Khan Academy, Blackboard, and Google Classroom.

One of the major ways of retaining students in ODL is through institutional support which encompasses the totality of assistance students receive from the point they register for a programme to the time they complete the same. On student support, Sarkhel (2014, p. 4) notes that it helps “to create an environment that is conducive to distance learning” and transform “an educational programme into a complete educational experience” (Sarkhel, 2014, p. 4). It also motivates students to become independent learners; provides feedback on learning progress and enhances socialization which a lack of physical contact often makes difficult.

Students at BOU are spread across Botswana, and some are in the very remote parts of the country. The support given to them ensures that they can progress and not drop out of the programmes. In BOU's online student support, students are reminded about deadlines, announcements, and other platform features are utilised to ensure students have the best learning experience. Most importantly, students are made to feel a sense of belonging to the learning community or engagement. They are able to access support online through *Myonline* services, *MyLibrary* services, and *Mylearning* portal (Botswana Open University, 2022d). They can apply for a place, register, and pay their school fees online. They have online access to their programme and course delivery schedules, tutorial schedules, student induction package, academic calendar, incident report forms (commonly used during tests and examinations) and can access their end of semester results online.

As students migrated online, the BOU library system enables them to have access to EBSCO-Host, e-Book Central, Primo and the Lib-Guides. Through these, they have access to a lot of e-Resources for their learning which covers the wide range of disciplines and courses that the students undertake at the University. The LibGuides is a library content management system which is specific to certain subject fields, and certain areas of specialisation, and makes navigation through the library database easy. Different library resources and databases were created with guidance and orientation to specific schools, particular programmes, and subjects. In addition, various library officers were assigned to specific schools and programmes. These library officers are usually contacted by students when looking for specific information to guide them in their research and related activities. The officers also conduct virtual sessions, where they allow students to navigate the various databases and access resources of interest to them and their studies. Through this process, many students could work on their own. Notably, the library officers are spread around the different campuses of BOU, and their appointment to different learning programmes was done irrespective of their locations. The appointment was more on their ability to use online platforms to meet and communicate with students. For example, an officer in Maun was appointed to assist students who were doing a programme that is only offered in Gaborone.

BOU students have also been having access to e-counselling services which was an answer when physical meetings were limited or prevented. Foon, Zainudin, Yusop, and Wan (2020) have noted that during COVID-19, many school counsellors were faced with the challenge of providing the service in the way that was most preferred by students. As such, the incorporation of technology was designed to support remote counselling services. This was essential for staff (both full time and part time), who were now forced to work from home due to restrictions resulting from the outbreak. Furthermore, the service was availed to suit ODL students who could not travel to centres to seek assistance from university counsellors on a face-to-face basis.

9.5 Impact of COVID-19 on teaching and learning

The arrival of COVID-19 caused strict restrictions about the face-to-face interaction with learners. As reported earlier, blended learning was completely changed to online teaching and learning. This took a lot of adjustment for all those involved, particularly students. In

February 2022 during one of the researchers' travels around the country, while collecting data for her PhD study, students expressed that they lacked motivation due to the situation of not having face-to-face interaction with their tutors, lecturers, other students, and administration staff. They indicated that this was impacting their learning progress. In the disruptions to teaching and learning, management of the research process and the conduct of selection and registration of students as well as the conduct of examinations were also greatly affected. Before 2020, the uptake of Moodle use at BOU was low, as the university faced a lot of resistance from staff, especially the part-time tutors. The transition from blended learning to a fully online culture was therefore slow due to this initial resistance. BOU used some of its policies that encouraged the use of online interactions between staff, students, and other stakeholders and this also involved student support services. Additional guidelines were developed. From April 2020, face-to-face tutorials were changed to virtual delivery, and the same was done for student and supervisor and lecturer meetings. This affected not only academic operations but also the entire university operations, including many administrative and training activities.

Following these developments, the Centre for Technology-Enhanced Learning and Teaching (CTELT), working with Schools, increased the number of online programmes, and assessment was moved from venue-based assessment to online tests, assignments, and examinations. Tutors and students were faced with compulsory online activities, including virtual tutorials and online assessment. Lecturers were also faced with ensuring that learning materials were available online.

CTELT has also been working to ensure a full integration of Moodle to the Integrated Tertiary Software (ITS) system which is also used at BOU. ITS takes care of the administration issues which include student admission, payments, and registration. This system is entirely a Student Management System where student information or data is kept. Moodle (LMS) on the other hand provides interaction between the students and the lecturer or tutor and the learning materials (content). It is expected that a full integration of both systems will ease the management of the teaching and learning system.

9.6 Notes on the use of SAMR model at BOU

Created by Dr Ruben Puentedura, the goal of the SAMR model is to assist educators to integrate technology when teaching. According to Ledford (2016), the SAMR model can be used by teachers when planning and developing lessons. This would help to enhance teaching and increase technology integration. The model supports and enables teachers to design, develop, and infuse digital learning experiences that use technology. The goal is to transform learning experiences so that they result in higher levels of achievement for students (Schrock, 2013).

The SAMR model has four levels. In substitution, the first level, the tutor uses technology to substitute what could be done without the use of technology (Ledford, 2016). For example, instead of using pen and paper to write notes, they use PowerPoint slides. Tutors also use videos to teach instead of conducting face-to-face teaching. However, when students

submit their assignments electronically, after using PowerPoint slides to write notes, it becomes augmentation, which is the second level. This is because the students have done the work using computers and submitted electronically. At modification, the third level, learning activity changes significantly or becomes different because of the use of technology (Ledford, 2016). According to Renandya (2017), modification stage changes the learning activity in such a way that the task cannot be performed without the use of technology. For example, the tutor may ask students to work in pairs to summarise their art element notes using Google slides. In this case the task is not possible in the traditional classroom scenario (Renandya, 2017). Redefinition, the fourth level, refers to changing the original task to create a new task, something impossible without using technology (Renandya, 2019). For example, redefinition is used when teaching using Zoom or Google Meet, as students are divided into groups using breakout rooms to discuss and then present during virtual meetings. This fourth and the highest level of the SAMR model is seen as transformation because the original task is changed to a new task that was previously impossible without the use of technology. The students now use PowerPoint slides, Google slides, share links and even create their own podcasts. Consider Figure 2.

Figure 2: SAMR model: Integrating technology in music (2022)

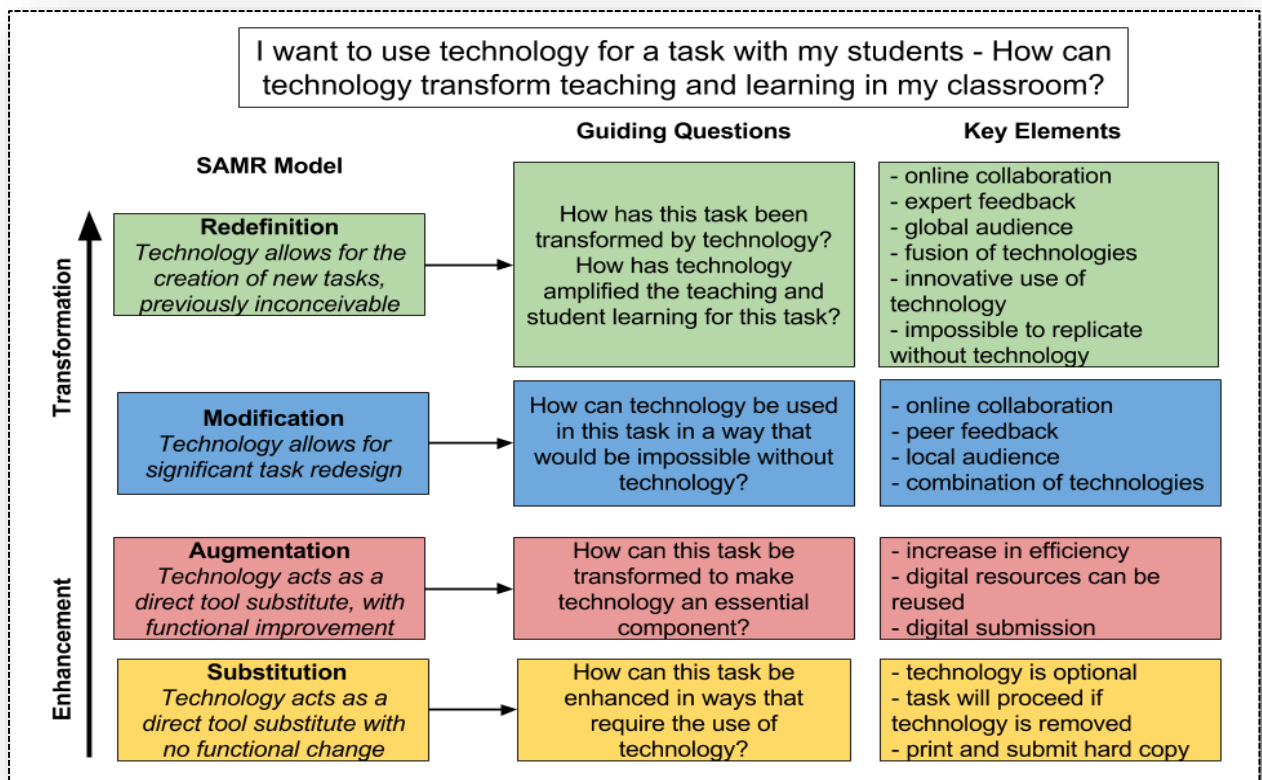


Figure 2, developed by Schrock (2013), cited in Integrating Technology in Music (2022), explains the four levels of the SAMR model. The vertical arrow on the left of the diagram shows that the teacher could start integrating technology using substitution level and then move upwards. When technology is introduced gradually to people, they tend to accept it.

Although the SAMR model has not been formally adopted by BOU, a look at its components and BOU's ongoing practices shows that it is being used to a degree. The SAMR model has assisted BOU in ensuring that the tutors and students realise that it is an easy and useful to use technology and can help them improve their performance. This is seen in the way BOU has integrated technology into teaching and learning during COVID-19. BOU's transition to teaching fully online during COVID-19 has forced the institution to use digital tools. However, tutors and learners were not well conversant with educational technology, therefore BOU, without specially mentioning it, applied the SAMR model to take them on board. They started with simple technological tools such as online forum discussions and moved on to complicated ones such as the use of web-conferencing. In some courses at BOU, technology has been used as substitution, others have used it as augmentation and modification, while yet others have used redefinition level to transform students learning experiences and skills.

9.7 Assessment options and provisions

Assessment has been described as a "process of collecting data for the purpose of making decisions about students or schools" (Salvia, Ysseldyke & Bolt, 2010, p. 4). It is also seen as "the measurement of a learner's performance in terms of knowledge, skills, and attitudes" (COL, 2020, p. 15). In ODL, most assessment tools are also teaching and learning tools.

In ODL, assessment can be done using various digital tools. According to Gibson (1979), affordances of a tool refer to the tasks that users can possibly perform with technologies at their disposal, but a tool may have affordances and also constraints. As an online facilitator, one must know the affordances of the digital tools they would like to use. It may allow the teacher to do some things and not allow them to do others. For example, a teacher may use online forum discussion to teach. However, some topics such as digital story telling may need to be taught using another tool for audio, video, and text. Some of the digital tools available for teaching and learning, with some already being used at BOU are as shown in Table 2.

Table 2: Some digital tools for teaching and learning including those used at BOU

Digital Tools	How the tool is used in teaching and assessment
Wiki	This is a digital tool used in teaching and learning. Teachers can use it to work with others, edit, link to websites, add images and videos, share what they have done with their students (Gregory & Banister-Tyrrell, 2017) and use it for formative assessment.
Chatroom	This is a synchronous type of communication. The students are expected to respond to the posts in real time. This is used at BOU in real-time in the Master of Education in Educational Leadership (MEDEL) programme and the Post Graduate Certificate in Quality Assurance in Education (PGCQAE).
Web-conferencing	Web-conferencing is used for teaching and learning, including the assessment components. It allows one to see, hear and interact with others in real time. Examples include Microsoft Teams, Google Meet,

	and Zoom. While these are used at BOU, Google Meet appears to be more popularly used and is preferred by students.
e-Portfolio	According to Fuglik (2013) e-portfolio is usually used for reflections. This type of communication tool may be composed of content taught in class as evidence to support reflections. At BOU, in the Certificate in Distance Education (CDE) programme, students are expected to choose artefacts or activities done, attach them and then critically reflect on them and submit a portfolio online. The Certificate in Disaster Management (CDM) programme also uses the portfolio.
Blogs	This is an asynchronous online journal that can be used to share content. For example, learners can be given an assignment to elaborate on how principles of authentic learning can be used in assessment (Gregory & Bannister-Tyrrell, 2017). BOU has not been using blogs.
Discussion boards	The discussion boards are used to post information or content such as ideas, or questions that learners would respond to asynchronously. At BOU, discussion forums are organised for the students in various programmes and courses across the University.
Padlet	According to Deni and Zainal (2018) a Padlet is a platform that can be used like a board whereby different types of files can be used. These files may include images, videos, and audio. This has been used in the CDE programme at BOU by one of the researchers.
Answer Garden	This is a brainstorming digital tool that helps educators and learners to display their short answers. It can be used by the teacher to get answers from the class instantly. This is yet to be used at BOU.
Podcast	This is a platform that is used to teach. It is a digital audio file that can be shared by learners or teachers. This is being used in all the programmes at BOU.
Video	Video can be used to demonstrate in practical subjects. According to Bates (2016) video is a good digital tool for teaching and learning as it can offer sound and text as well as moving pictures. At BOU, online tutorials in form of videos are recorded and uploaded on Moodle for all programmes, and videos are also posted for induction purposes.

Adapted from Gregory and Bannister-Tyrrell (2017), Deni and Zainal (2018), Bates (2016) and Fuglik (2013).

The use of multiple-choice questions has been observed in several programmes at BOU following the COVID-19 pandemic. For example, in addition to essay-based assignments, multiple choice questions have been used in tests and examinations in the degree programmes in the various schools. There is a growing debate within the institution on how to ensure that this is done efficiently. Also, the use of proctoring devices to manage examinations in remote centres and as well monitoring the teaching practice exercise has been flagged but due to issues of cost, this has not gone to a consideration stage.

10.0 Some challenges

With the new online system, some students and staff had challenges with internet connectivity, an initial reluctance to participate in online activities was seen, and according to Tau and Adekanmbi (2021), the internalisation plans of the University was affected due to inability to travel at some point. With time and with training by CTELT, many of the students based in remote areas of the country, even with the limited internet connectivity, started attending virtual tutorials, virtual meetings, and workshops. For example, some students in places like Zoroga, some 200 kilometres from Maun, have had to travel to Maun to access the internet. Those with resistance towards the use of technology have also had to embrace the new normal and use technology. General training was carried out and YouTube videos on how to use technologies were availed through Google Meet, thus addressing some of the challenges.

For full time staff, the University at some point bought gadgets (internet routers) to help staff access online activities, using the routers to work from home. Where there were low bandwidth problems, the speed of access as well as actual access to the internet was enhanced. To offset internet connectivity costs could at times be prohibitive, some staff were also given financial support to buy data bundles to work from home. On occasion, the University has ensured that core activities like student online tutorials or other interactive sessions were given priority attention over other activities, internet traffic is reduced, and bandwidth focus is on the priority activities. As earlier reported, a Working from Home Policy was also developed to guide staff and to help avert health related problems and challenges. Also, a reduction in Government subsidies has been seen, with implications for a cutting down on some activities in the University due to lack of budgetary support.

To mitigate the challenge of reduced funding, the University has been exploring third stream income opportunities and Schools and their Departments are also working on ways to manage the funds available for their activities. In September 2022, the School of Education organised a half day workshop which focused on managing scarce financial resources at the School and was attended by Deans of all the Schools and other key stakeholders in the finance department and the Corporate Services division. There are indications that the University would explore more strategies of addressing the current financial challenge which seems to be the lot of other higher education institutions in the country and in other parts of the world.

11.0 Conclusion

ODL emerged in many parts of the world over a century ago and its use across various disciplines has been well documented in the literature (Qayyum & Zawacki-Richter, 2019). As a go-to route for receiving instruction, especially for people disadvantaged by access and related problems, BOU has been using ODL to meet the needs of learners scattered across the country and the SADC region. BOU's strategic framework, strategic plans, its vision and mission have greatly helped in making it achieve its goals. At the beginning, the physical separation of learners and tutors was initially partial—in the use of the correspondence model and with course materials physically distributed to students and physical examinations held. While this gave way to blended learning with some technological input, the emergence of COVID-19 caused the University to move its online plans forward, and a migration to an online

learning model was observed. BOU however continues to also use the franchise model as it still relies, to a degree, on course materials availed by its partner institutions. The development of a Working from Home Policy, now no longer in use, also helped to protect the health of its staff during the days of the pandemic.

Tutoring, training, learning, monitoring of student activities, students' submission of assignments, marking of tests, assignments, and examinations, have all been migrated online and resources have become digitised. The provision of online library, counselling and administrative support to students and tutors has also migrated online at BOU. The use of open educational resources (OER) has also been seen, with ongoing attempts to localise and adapt course materials obtained from partnering institutions, such as the Commonwealth of Learning and the Open University of Mauritius. The impact of COVID-19 reflected in the literature was also felt at BOU, with a slow response by students and staff in accepting the new normal, and the inability by students and staff to fully carry out empirical studies. Perhaps this should be expected as staff and students required both awareness and technical training to accept the new model and a diffusion of innovation. As noted earlier, adopting an innovation would depend on how it is communicated, its degree of persuasion and how it is implemented (Damanpour & Wischnevsky, 2006). The response of CTELT did help to address this challenge through the various training and induction programmes organised for students and staff.

In BOU's intensification of online learning, the various units of the University, the CTELT, Schools, library and regional campuses have played major roles. While some level of success has been seen, especially in the extent to which policy responses have been made, implementing all these policies and policy components may be the next stage of intervention for the University. The authors suggest that BOU could consider further exploration of the SAMR model and make a formal use of it, embedding it purposefully into the way teaching and learning is done. Although there is a call on the University website indicating plans to meet learner's special needs, BOU may need to provide more robust support to students with disabilities, including the needs of those with visual and hearing disabilities.

Hopefully, this paper has not only opened a discussion on how institutions of higher learning can respond to emergencies such as COVID-19 but has also provided some insight into managing teaching and learning encounters of a remote nature.

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