

Implementing Open Distance and E-Learning in Teacher Training Institutions in Eswatini



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ABSTRACT

Technological advancement and the advent of the internet led higher education institutions to transform from open and distance learning (ODL) to ODeL. The University of South Africa was the first university in Africa to offer distance education since 1946. Its success inspired other African countries like Zimbabwe and Botswana to establish Open and Distance Learning universities. In Eswatini, the Ministry of Education and Training policy of 2018 calls for the introduction of ODL in all existing and new institutions of higher learning. The policy however does not have guidelines on ODL implementation. In the interim Eswatini does not have a fully-fledged open and distance learning university. The study was conducted to explore how teacher training institutions in Eswatini implemented ODeL under the prevailing circumstances. The findings revealed that ODeL was introduced in teacher training institutions as a reactive measure to mitigate the COVID-19 lockdown that restricted students and lecturers from accessing campuses. Institutions were not ready to deliver programmes through the ODeL model. It recommended that institutions should use a blended learning approach while building capacity to gradually introduce ODeL, and train their students and staff on e-learning knowledge and skills. The Ministry of Education and Training should enact a policy with guidelines and a framework for implementing ODeL, and the government should build an open and distance learning university to align with other countries.

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INTRODUCTION

This study explores the implementation of Open Distance and Electronic Learning (ODeL) in Eswatini teacher training institutions. Casey has argued that the history of Distance Education (DE) dates back to the 1700s and 1800s and is divided into the first, second and third ages.¹ Bozkurt asserts that in the first age of DE, the learning content of courses was delivered by mail, and thus it was called correspondence study.² The second age was characterised by visual-auditory DE where learning was delivered live on radios and televisions by teachers. This development introduced interaction in the teaching and learning process as teachers managed to interact with learners unlike in the correspondence model where learners

¹ Denise M Casey, "A Journey to Legitimacy: The Historical Development of Distance Education through Technology," *TechTrends* 52, no. 2 (2008): 45.

² Aras Bozkurt, "From Distance Education to Open and Distance Learning: A Holistic Evaluation of History, Definitions, and Theories," in *Handbook of Research on Learning in the Age of Transhumanism* (IGI Global, 2019), 252–73.

only engaged with information posted to them without any interaction from teachers. The kind of interaction though was one-sided as it was only teacher-centred.

Bozkurt further states that the third age saw the advent of computer-based DE.³ This age marked the beginning of digital knowledge and network society which altered DE. Instead of reaching masses of learners through radio and television, a personal approach to reaching individual learners became possible. The prominence of teacher-centred education diminished and was replaced with learner-centred education. The availability of appropriate technologies allowed for the migration from DE to Open Distance Learning (ODL) which gave learners the flexibility to choose the medium, time and place of learning on their own whether at their home or their workplaces. New learning models such as e-learning led to migration by some institutions to ODeL.

Nyerere, Gravenir and Mse posit that before distance learning was introduced in Africa, most African students pursued OdeL programmes in European and North American institutions.⁴ The University of South Africa (UNISA) in 1946 was the first university in Africa to offer ODL. Other Southern African Development Community (SADC) countries like Zimbabwe and Botswana were motivated by UNISA's success and established ODL universities, Zimbabwe Open University (ZOU) and Botswana Open University (BOU). In the interim Eswatini does not have a fully-fledged open and distance learning university.

In Eswatini the Ministry of Education and Training (MOET) in 2018 enacted an education policy that calls for the introduction of ODL in institutions of higher learning. Objective twelve of the MOET policy calls for the optimisation of access to higher education through the expansion and strengthening of ODL.⁵ The medium-term goal of the higher education strategic framework policy is to offer distance learning in all existing and new Higher Education (HE) institutions to increase enrolment without placing stress on limited campus accommodation. The policy only states that institutions are supposed to introduce ODL without giving policy guidelines. Onwe asserts that though extensive research is available on ODL practice, it mainly focuses on developed industrialised countries, and there is little or no formal research that emphasises policies and practices of ODL in the Sub-Saharan African countries.⁶ ODL programmes in Africa should focus on African philosophy and the practical realities of students' day-to-day lives.⁷

In mid-June 2020 during the COVID-19 lockdown, MOET instructed institutions of higher education to introduce ODeL to mitigate restricted access to campuses by students and lecturers without issuing policy guidelines to support ODeL implementation. Though UNISA has a policy framework that governs the implementation of ODL, Makoe and Gatsha's 2020 Draft Policy Brief SADC-ODeL Response to COVID-19 reveals that in the SADC countries, there are no designed policy frameworks and strategies that support the full implementation of remote learning. The study therefore explores how Eswatini teacher training institutions implemented ODeL under prevailing circumstances of COVID-19 lockdown restrictions, and the lack of MOET policy framework to guide the implementation. Constructivism, connectivism and online collaborative learning theories guided the study. The study seeks to generate answers to the following questions:

1. What is Open Distance and electronic Learning (ODeL)?
2. When was ODeL introduced in Eswatini teacher training institutions and reasons behind its introduction?
3. Which systems are used by Eswatini teacher training institutions to implement OdeL programme?
4. What are the benefits and challenges of implementing ODeL in teacher training institutions?
5. Which strategies can be used to implement ODeL in teacher training institutions?

³ Bozkurt, "From Distance Education to Open and Distance Learning: A Holistic Evaluation of History, Definitions, and Theories."

⁴ Jackline K A Nyerere, Frederick Q Gravenir, and Godfrey S Mse, "Delivery of Open, Distance, and e-Learning in Kenya," *International Review of Research in Open and Distributed Learning* 13, no. 3 (2012): 185–205.

⁵ Eswatini Ministry of Education and Training – MOET, *Education and Training Policy* (Mbabane: Government Printers, 2018).

⁶ Onyemaechi Joseph Onwe, "Policies and Practice of Open and Distance Learning Models in the Sub-Saharan African Countries: A Literature Survey," *Journal of Teacher Perspective* 8, no. 2 (2014).

⁷ Onwe, "Policies and Practice of Open and Distance Learning Models in the Sub-Saharan African Countries: A Literature Survey."

LITERATURE REVIEW

This section conceptualises DE, ODL and ODeL. It further discusses theories that guided the study. Literature related to the topic was reviewed to gain a wider understanding of ODeL.

Distance Education

Holmberg states that Distance Education is a one-way mediated presentation of subject matter during teaching and learning.⁸ Teaching takes place at a certain place where the instructor is located and learning occurs in a different place where the student is located. DE requires a well-defined delivery system with modified teaching techniques, administrative and organisational components and communication modes. UNESCO views Distance Education as an educational process where most teaching is conducted by someone removed in space and time from the learner using a print or electronic medium.⁹

Open and Distance Learning

Ambeth and Saravanakumar assert that ODL focuses on open access to education and training to make individuals and groups of learners free from time and place constraints.¹⁰ It is open and flexible in terms of access, curriculum and other structural elements. In ODL most or all of the teaching is conducted by someone who is away from the learner. Bozkurt says that the ODL policy brought flexibility and removal of barriers to learning.¹¹ Ngubane-Mokiwa says that ODL institutions provide opportunities to mature non-traditional working students who are unable to access higher education in campus-based institutions that offer full-time contact sessions.¹²

Though some scholars use DE and ODL synonymously, it should be noted that ODL leans on the policy framework of open, free and flexible access to education for all without any limiting constraints. For accessibility to everyone, openness calls for the use of technologies that are available to everyone.¹³ Unlike the traditional correspondence mode of DE that was teacher-centred, ODL promotes the learner-centred approach where the learner engages with information under the guidance of the teacher.

Open Distance and Electronic Learning

Arinto says ODeL expands the term ODL to include the use of synchronised and non-synchronised e-learning or online learning methodologies to enable multiple forms of interaction and dialogue that can bridge the distance between learners and teachers.¹⁴ Gadgets such as smartphones and computers that are connected to the internet are used in ODeL.

Online Collaborative Learning Theory (OCL)

Harasim describes OCL as a new theory of learning that focuses on collaborative learning, knowledge building, and internet use as a means of reshaping formal and informal education for the knowledge age.¹⁵ Vygotsky in constructivism believes that learners can learn and build knowledge through collaborating and interacting with others. Interpretivists believe that knowledge is constructed through interacting with people on the ground and getting their views.¹⁶ This means that in constructivism and interpretivism knowledge for problem solutions is constructed by people themselves. For collaborations to be possible, the connectivity theory believes that there should be robust network connections to learning devices and facilities. Like Siemens, Harasim also acknowledged Barabasi's work and views on the importance of

⁸ Börje Holmberg, "Distance Education in Essence," *Oldenburg: Bibliotheks-Und Informationssystem Der Universität Oldenburg*, 2003.

⁹ UNESCO, *Open and Distance Learning: Trends, Policy and Strategy Consideration*. (Paris: UNESCO, 2002).

¹⁰ I Ambeth and N Saravanakumar, "Open and Distance Learning (ODL) Education System: Past, Present and Future-a Study of an Unconventional Education System," *Journal of Xi'an University of Architecture & Technology* 12, no. 3 (2020): 77–87.

¹¹ Bozkurt, "From Distance Education to Open and Distance Learning: A Holistic Evaluation of History, Definitions, and Theories."

¹² Sindile A Ngubane-Mokiwa, "Implications of the University of South Africa's Shift to Open Distance e-Learning on Teacher Education," *Australian Journal of Teacher Education (Online)* 42, no. 9 (2017): 111–24.

¹³ Bozkurt, "From Distance Education to Open and Distance Learning: A Holistic Evaluation of History, Definitions, and Theories."

¹⁴ Patricia Brazil Arinto, "Issues and Challenges in Open and Distance E-Learning: Perspectives from the Philippines," *International Review of Research in Open and Distributed Learning* 17, no. 2 (2016): 162–80.

¹⁵ Linda Harasim, *Learning Theory and Online Technologies* (Taylor & Francis, 2017).

¹⁶ S Modesto Tichapondwa, *Preparing Your Dissertation at a Distance: A Research Guide* (Virtual University for small States of the Commonwealth, 2013).

networks. There is convergence of the three theories that drive the study as they all support learner networking and collaboration.

Benefits of ODeL

SADC views ODeL as providing opportunities that mitigate or remove unnecessary barriers to education access such as finances, social, work and family commitments through the use of an openness policy.¹⁷ Nyerere et al say that ODeL has catered for women in developing countries who deal with various constraints compared to men in terms of resources and time.¹⁸ ODeL has widened opportunities for women and made education more accessible to them. They can study and acquire skills for individual development at an individual pace while simultaneously fulfilling family responsibilities. Through the utilisation of digitalisation, ODeL provides flexible and open learning that is learner-centred that can be self-paced and self-directed as well as teacher-facilitated at a distance. Nyerere et. al., state that ODeL is viewed as a viable cost-effective way of expanding education provision without a costly outlay of infrastructure in Africa where resources are scarce.¹⁹ Arinto notes that technologies used in ODeL offer flexibility in teaching and learning by enabling multiple forms of communication and interaction between teachers and learners.²⁰ It allows for the sharing of e-resources which reduces the costs of producing teaching and learning material. Tanyanyiwa and Madobi state that in e-learning, technology provides opportunities for teacher-to-teacher and student-to-student interface resulting in meaningful learning through collaborative engagement in critical discourses.²¹

Challenges of ODeL

Though ODeL has benefits, it has challenges as well. van Wyk states that during the COVID-19 lockdown, ODeL students faced challenges like expensive data bundles, expiring passwords, poor connectivity, inconsistent discussion forums and slow synchronisation of the system.²² Ouma's study in Uganda revealed that students from rural areas lacked ICT skills and infrastructure.²³ Tanyanyiwa and Madobi's study conducted in Zimbabwe shows that the lack of appropriate technological infrastructure and gadgets retarded the ODeL vision at ZOU.²⁴ They note that some students had malfunctioning laptops, and their cell phones could not connect to the internet. In Eswatini, most learners stay in rural areas where internet connectivity is poor. Tanyanyiwa and Madobi further note that financial constraints and a lack of computer skills in the university are a challenge that prevents the successful implementation of ODeL.²⁵

The lack of ODeL guiding policies in African countries is another major challenge. SADC reveals that in 2020 out of 16 SADC member states, six had adopted dedicated ODL policies while six had draft ODL policies in place, and four countries had not yet adopted any ODL policies.²⁶ This shows that no country in the SADC has enacted an ODeL policy as countries are still in the process of initiating ODL policies. Makoe and Gatsha argue that SADC countries do not have ODeL policies.²⁷ They argue that the absence of policies makes it difficult for member states to effectively respond to unforeseen crises like COVID-19 that necessitate the employment of online teaching and learning. Policies provide rules that inform, guide and support the deployment of open distance and online learning in universities. Without policy frameworks and strategies, governments and institutions cannot strategically plan for the effective

¹⁷ SADC, *Regional Open and Distance Learning Strategic Plan 2022-2030* (Southern African Development Community, 2022).

¹⁸ Nyerere, Gravenir, and Mse, "Delivery of Open, Distance, and e-Learning in Kenya."

¹⁹ Nyerere, Gravenir, and Mse, "Delivery of Open, Distance, and e-Learning in Kenya."

²⁰ Arinto, "Issues and Challenges in Open and Distance E-Learning: Perspectives from the Philippines."

²¹ Vincent Itai Tanyanyiwa and Rejoice Madobi, "Challenges to the Effective Teaching and Learning of Geography through ODeL at the Zimbabwe Open University," *Journal of Learning for Development* 8, no. 2 (2021): 364–82.

²² Micheal M van Wyk, "Academic Support under COVID-19 Lockdown: What Students Think of Online Support e-Tools in an ODeL Course," *Interactive Technology and Smart Education* 18, no. 2 (2021): 137–57.

²³ Richard Ouma, "Transforming University Learner Support in Open and Distance Education: Staff and Students Perceived Challenges and Prospects," *Cogent Education* 6, no. 1 (2019): 1658934.

²⁴ Tanyanyiwa and Madobi, "Challenges to the Effective Teaching and Learning of Geography through ODeL at the Zimbabwe Open University."

²⁵ Tanyanyiwa and Madobi, "Challenges to the Effective Teaching and Learning of Geography through ODeL at the Zimbabwe Open University."

²⁶ SADC, *Regional Open and Distance Learning Strategic Plan 2022-2030*.

²⁷ M. Makoe and G. Gatsha, *Draft Policy Brief SADC-ODEL Response to Covid-19* (Distance Education Association of Southern Africa, 2020).

implementation of distance and online learning. Tanyanyiwa and Madobi posit that the lack of a blended learning policy was one of the challenges that affected the implementation of blended learning at ZOU.²⁸ In Uganda, Ouma notes that the absence of a national policy framework for distance education impedes learner support leading to the supply of sub-standard services.²⁹ Ngakane and Madlela argue that it is necessary for the Ministry of Education and training, regulators and institutions to amend their policies and cater for new realities of blended and online learning.³⁰

Nyerere et. al., study in Kenya established that the provision of ODeL by the University of Nairobi and Kenyatta University faced various challenges that hindered its effective full implementation.³¹ These challenges included inadequate funding, low teaching staff levels and delays in the production of study material. ODeL in the country was also not guided by national policies. This posed challenges in resource mobilisation and quality issues of the programme. The study further noted that ICT integration in Kenya was more recent and on a small scale due to infrastructural and resource constraints. Poor ICT infrastructure is a challenge in Africa despite the African Agenda of 2063 calling on the continent's nations to invest in technology as a driver of education and development.

Strategies for ODeL implementation

The success of ODeL in Africa will be determined by contextual strategies developed through a plethora of research evidence on the continent. Van Wyk suggests that relevant support systems should be made available to all learners in ODeL programmes.³² Tafirenyika states that UNISA provides data-free access to my Unisa and UNISA websites to registered students.³³ Kebaetse, Nkomazana, and Haverkamp say that in medical education at the University of Botswana, tablets and smartphones were allocated to learners and faculty members.³⁴ In addition, the university partnered with Orange Botswana mobile service providers to provide data bundles and internet accessibility to students. These versatile strategies can be emulated by other institutions that offer ODeL. Madlela advises institutions of higher education to train their lecturers, improve their ICT skills, and develop systems in a way that will operate online and offline to cater for learners who do not have access to the internet.³⁵ Institutions can also invest in alternative internet sources like dongles and wireless mobile network service providers to increase internet accessibility to students and lecturers.³⁶

SADC's Regional Open and Distance Learning Strategic Plan 2022-2030 views funding, budgeting and resource mobilisation as essential strategies for the success of open distance learning.³⁷ It also states the necessity of systematic and structured student support. Learner support includes educational and economic support for students especially those from marginalised and disadvantaged communities. In addition, SADC says that MOODLE a free open source is widely used by ODL institutions.³⁸ Institutions that do not have enough funding are encouraged to effectively use open sources. Online classrooms and conference facilities like Microsoft Teams, and ZOOM connect educators and learners and offer forums, chats, live conferencing for an interactive class and sharing of the screen. All these features are offered by Blackboard and Google Suite for Education.³⁹ These platforms make it possible

²⁸ Tanyanyiwa and Madobi, "Challenges to the Effective Teaching and Learning of Geography through ODeL at the Zimbabwe Open University."

²⁹ Ouma, "Transforming University Learner Support in Open and Distance Education: Staff and Students Perceived Challenges and Prospects."

³⁰ B Ngakane and B Madlela, "Effectiveness and Policy Implications of Using WhatsApp to Supervise Research Projects in Open Distance Learning Teacher Training Institutions in Swaziland," *Indiana Journal of Humanities and Social Sciences* 3, no. 3 (2022): 1–10.

³¹ Nyerere, Gravenir, and Mse, "Delivery of Open, Distance, and e-Learning in Kenya."

³² van Wyk, "Academic Support under COVID-19 Lockdown: What Students Think of Online Support e-Tools in an ODeL Course."

³³ Nancy Tafirenyika, "Strategies to Support Sustained Learning in Open Distance and E-Learning in a South African Context" (2020).

³⁴ Masego B Kebaetse, Oathokwa Nkomazana, and Cecil Haverkamp, "Integrating ELearning to Support Medical Education at the New University of Botswana School of Medicine.," *Electronic Journal of E-Learning* 12, no. 1 (2014): 43–51.

³⁵ Benkosi Madlela, "Exploring Educational Technologies Used by Mthwakazi University Rural Satellite Campuses to Implement Distance Teacher Education Programmes," *Interdisciplinary Journal of Education Research* 4 (2022): 75–86.

³⁶ Madlela, "Exploring Educational Technologies Used by Mthwakazi University Rural Satellite Campuses to Implement Distance Teacher Education Programmes."

³⁷ SADC, *Regional Open and Distance Learning Strategic Plan 2022-2030*.

³⁸ SADC, *Regional Open and Distance Learning Strategic Plan 2022-2030*.

³⁹ SADC, *Regional Open and Distance Learning Strategic Plan 2022-2030*.

for lecturers to interact with students, administer assessments and give feedback that enables learners to reflect and improve their performance.

SADC also recommends the use of a Blended Learning Model to cater for the diverse needs of learners.⁴⁰ The blended approach integrates online technologies and traditional face-to-face instructional delivery. Tanyanyiwa and Madobi assert that ZOU adopted a blended approach to meet the needs of learners from diverse environments.⁴¹ ZOU delivers instruction face-to-face and through My Vista LMS where students access e-sources, discussion forums and chartrooms. Though challenges of lack of policy and faculty support are experienced, the blended approach improved learning skills, access to information and opportunities for student collaborations at ZOU.

THEORETICAL FRAMEWORK

The study was guided by the constructivist theory of teaching and learning, connectivity theory and online collaborative learning theory.

Constructivist Theory of Teaching and Learning

Picciano asserts that education theorists like Levy Vygotsky, Jean Piaget and John Dewey focused on constructivism that described teaching and learning as a complex interactive social phenomenon between teachers and students.⁴² Vygotsky viewed learning as problem-solving, and that the social construction of solutions to problems is the basis of a learning process. He described the learning process as the establishment of a zone of proximal development in which the teacher, the learner, and a problem to be solved exist. The teacher provides a social environment in which the learner can construct with others the knowledge necessary to solve the problem.⁴³

In constructivism information and knowledge to solve identified problems is generated by learners through interacting in groups. If lecturers give learners tasks to collaboratively solve in virtual platforms, learners would jointly construct valuable knowledge to solve given tasks. Dewey saw learning as a series of practical social experiences in which learners learn by doing, collaborating, and reflecting with others. This results in the shift from a teacher-centred approach to a learner-centred approach that promotes learner involvement and participation. ODeL leveraging on digital and web-based technologies allows learners to form online study groups through discussion forums to work collaboratively, exchange ideas, reflect and create new knowledge. Madlela has stated that educational technologies expose learners to vast experiences provided by e-books, YouTube videos, web navigation and online education forums that are facilitated by global experts.⁴⁴ Such experiences enable learners to be broadly exposed and to learn new information that is available globally beyond the world of their own. ODeL provides seamless technological platforms that enable learners to interact with their lecturers, colleagues and other scholars globally to broadly construct knowledge without any boundaries.

Connectivism Theory

Picciano says that George Siemens one of the early pioneers of the Massive Open Online Course (MOOC) has been connectivism's major proponent.⁴⁵ Connectivism explains how learning takes place in the digital age through networks. Knowledge is distributed across a connection of networks, and therefore learning consists of the ability to construct and traverse those networks. Picciano argues that internet technology has moved learning from internal individualistic activities to group, community and even crowd activities.⁴⁶ The emergence of the internet and related networks like the World Wide Web has radically transformed education and training in developed and developing countries. The Web offers a worldwide

⁴⁰ SADC, *Regional Open and Distance Learning Strategic Plan 2022-2030*.

⁴¹ Tanyanyiwa and Madobi, "Challenges to the Effective Teaching and Learning of Geography through ODeL at the Zimbabwe Open University."

⁴² Anthony G Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model," in *A Guide to Administering Distance Learning* (Brill, 2021), 79–103.

⁴³ Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model."

⁴⁴ Madlela, "Exploring Educational Technologies Used by Mthwakazi University Rural Satellite Campuses to Implement Distance Teacher Education Programmes."

⁴⁵ Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model."

⁴⁶ Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model."

forum of dynamic courses that can be accessed by students without time and space limitations. These developments are reconfiguring how students learn as new approaches to networked learning are evolving.⁴⁷ The connectivity theory supports ODeL which thrives on the connection of internet networks. Connectivity enables learners to access online courses without any space and time barriers.

Picciano says that George Siemens in developing the connectivity theory acknowledged the work of Alberto Barabasi on the power of networks.⁴⁸ Saravanakumar Siemens noted that connectivism as a theory is driven by the dynamic of information flow. It is appropriate for courses with high enrolments and where learning goals and objectives are to develop and create knowledge rather than to disseminate it.⁴⁹ The notion of knowledge creation resonates well with the constructivist theory which advocates for knowledge construction through learner collaboration and interaction. Connectivity fosters learners' online collaboration and interaction with their peers and lecturers.

Some of Siemens' principles of connectivism are that learning is a process of connecting specialised information sources, learning and knowledge rest in diversity of opinions, learning may reside in non-human appliances, nurturing and maintaining connections is needed to facilitate continual learning Picciano.⁵⁰ Robust network connections facilitate information flow in ODeL.

METHODOLOGY

The study was guided by an interpretivist research philosophy to gather data in the natural setting and to understand the implementation of ODeL deeply in its context in teacher training institutions. This enabled the researchers to use a qualitative research approach which systematically describes and interprets the phenomenon from the participant's point of view to generate new concepts and theories.⁵¹ This approach allowed the researchers to go to the field and gather views directly from participants about the implementation of ODeL in their institution. Information was constructed from people who directly experienced the phenomenon on the ground. A case study design enabled the researchers to focus on three purposively selected teacher training institutions that had started implementing ODeL.

Data was collected from three institutions with the use of interviews with purposively selected three members of management, three Information Technology (IT) officers, and focus group discussions with six lecturers, and six students. McMillan and Schumacher assert that focus group discussions and interviews are effective in gathering detailed information from participants.⁵² Data was analysed in a verbatim and narrative manner. Ethical guidelines were upheld by asking participants to sign consent forms with ethical guidelines. Names of institutions and participants were not disclosed. Instead, code names were used to maintain anonymity and protection of participants' identities.⁵³ Permission to conduct the study was granted by the management of the institutions under study.

FINDINGS AND DISCUSSIONS

The study explored how teacher training institutions in Eswatini implemented ODeL. Three institutions coded as institutions A, B and C participated in the study. Participants included three members of management and three Information Technology officers, who were interviewed, and six lecturers and six students who participated in focus group discussions. Participants were coded using the various designations and code names of their institutions, for example, a Dean from Institution A, a Director from Institution B, lecturer 1 from Institution B, and student 2 from Institution C. From the data analysis and interpretation, the following themes emerged:

- Open distance and electronic learning
- Introduction of ODeL and Policy Framework
- ODeL implementation systems

⁴⁷ Ambeth and Saravanakumar, "Open and Distance Learning (ODL) Education System: Past, Present and Future-a Study of an Unconventional Education System."

⁴⁸ Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model."

⁴⁹ Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model."

⁵⁰ Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model."

⁵¹ Tichapondwa, *Preparing Your Dissertation at a Distance: A Research Guide*.

⁵² J. McMillan and S. Schumacher, *Research in Education Evidence Based Inquiry*, 7th ed. (Harlow: Pearson Education, 2014).

⁵³ McMillan and Schumacher, *Research in Education Evidence Based Inquiry*.

- Benefits of ODeL
- Challenges of ODeL
- Strategies for ODeL implementation

Open distance and electronic learning

Participants' explanations of ODeL reflected that they understood it. The Dean from institution A said:
ODeL is a flexible remote-based learning that allows students to receive instruction in the comfort of their homes through internet-based systems like Moodle or Google Classroom.

In institution B an IT officer said:

ODeL is flexible learning that happens anytime anywhere in the online classroom. Whatever you do in a physical class, in ODeL you do it through laptops, desktops, and smartphones. You need a developed system like Moodle that allows the uploading of learning material and assessments. Participants in the system are lecturers who give students information and assessments, and students who access information and feedback from lecturers.

Lecturer 1 in Institution B said:

ODeL is teaching and learning which does not involve contact. Information is passed to learners using electronic devices and the internet.

In the same Institution, the Director said:

ODeL is learning at your convenience anywhere, anytime. There is no need to come to school.

Student 1 from Institution C said:

ODeL is a platform where the student is able to learn online without having to be in contact with the teacher. It was implemented to make learning accessible to students during these difficult times of COVID-19 lockdown.

The views of participants are supported by Arinto who says that ODeL expands ODL to include the use of e-learning synchronised and non-synchronised methodologies to bridge the distance between learners and teachers.⁵⁴ Participants noted that internet connectivity is vital in ODeL. This is supported by the connectivity theory and the online collaborative learning theory that acknowledges the power of network connections in distance education.⁵⁵

Introduction of ODeL and Policy Framework

Participants said that their institutions introduced ODeL in 2020 during the COVID-19 pandemic lockdown that restricted students and staff from accessing campuses. Lecturer 2 in Institution C said:

In my institution, ODeL was introduced as a reaction to covid-19 lockdown to reduce the effects of the lockdown on the learning of students.

In institution C the HOD said:

ODeL was introduced at the start of the lockdown due to the Covid-19 pandemic beginning in March 2020. It was necessary to go online since face-to-face was impossible.

Student 2 in institution A said:

ODeL was introduced around March/April 2020. It was introduced because of Covid-19. We were unable to come to school by then.

⁵⁴ Arinto, "Issues and Challenges in Open and Distance E-Learning: Perspectives from the Philippines."

⁵⁵ Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model"; Harasim, *Learning Theory and Online Technologies*.

IT officer in institution B said:

ODeL was introduced in March 2020 after the outbreak of the COVID-19 pandemic. The institution however had an ODeL plan though it was not yet implemented. In most cases, decision-makers delay implementing projects.

Participants' narratives showed that the COVID-19 lockdown forced institutions to hastily introduce ODeL. Though institution B had a plan, the IT officer said that the plan was not implemented proactively but reactively to the COVID-19 lockdown. Plans and strategies need to be implemented in a proactive rather than a reactive manner to enhance understanding and promote the creative capabilities of all participants in the organization.⁵⁶

Of the ODeL policy framework in Eswatini, participants concurred that ODeL was not in the MOET 2018 policy.⁵⁷ The Director from Institution B said:

ODeL is not part of MOET policy. The radio and TV lessons that MOET introduced due to COVID-19 are not proper ODeL. So, if they use radio and TV how do they administer assessments? On our part, though we do not have an ODeL policy yet, ODeL is part of our 2018 – 2023 strategic plan.

A HOD from Institution C said:

In our institution, ODeL was fast-tracked due to COVID-19 before it was written in the policy.

An analysis of the MOET 2018 policy showed that the policy instructed already established and new institutions of higher learning to introduce ODL without issuing policy guidelines that could guide institutions to implement the new initiative. SADC and Makoe and Gatsha argue that the SADC region countries do not have ODeL policies.⁵⁸

ODeL Implementation Systems

Institution B participants said that they used the Moodle learning management system. Participants from institution A said that they used Cole Campus while those from institution C said that they used Google Classroom. SADC encourages institutions to use Moodle, Blackboard and Google Suite for education.⁵⁹

Benefits of ODeL

Participants stated that ODeL had notable benefits such as eliminating time and distance constraints. This addressed absenteeism and late coming associated with poor transport network and other factors. Institution A's Dean said:

The introduction of ODeL eliminated transport costs and travelling for long distances to the campus by students and lecturers.

This assertion was also raised by the Director of Institution B who said:

ODeL reduces transport and lunch costs for students. Instead, they can use this money to buy data bundles.

Student 2 from Institution C said:

Through ODeL we are able to learn from home. This reduces the burden of transport costs for us and our parents.

⁵⁶ Lauge Baungaard Rasmussen, "From Reactive to Proactive Approach of Interactive Leadership," in *The Ambivalent Character of Participation: New Tendencies in Worker Participation in Europe* (Peter Lang, 2010), 585–612.

⁵⁷ Eswatini Ministry of Education and Training – MOET, *Education and Training Policy*.

⁵⁸ Makoe and Gatsha, *Draft Policy Brief SADC-ODeL Response to Covid-19*.

⁵⁹ SADC, *Regional Open and Distance Learning Strategic Plan 2022-2030*.

Nyerere, et. al., view ODeL as a cost-effective model for expanding education in Africa where resources are scarce.⁶⁰ In their study participants said that the ODeL mode reduced overcrowding in institutions and enabled students to structure their learning in a flexible self-paced way to accommodate their work and family responsibilities.⁶¹

On quality assurance, the HOD from Institution C said:

As a supervisor, it is easy to monitor what lecturers do online since lectures are recorded for future reference by students. Supervisors can monitor the quality of learning material posted in the system by lecturers. Lecturer absenteeism can be monitored better in the system than in the physical classroom.

Participants said that ODeL promoted student collaborations. Lecturer 2 from Institution B said:

The online system promotes student collaboration and interaction through discussion forums.

Student collaborations are encouraged in constructivism. Picciano says that constructivists like Vygotsky argue that learners construct knowledge jointly through collaborations and interaction with others.⁶² Harasim's online collaborative learning theory focuses on the internet and facilities to provide a learning environment that fosters collaboration and knowledge building.⁶³

Challenges of ODeL

Participants argued that though ODeL came with notable benefits, its implementation in institutions faced serious challenges such as the non-availability of technological resources and a guiding ODeL policy from MOET.

Lecturer 1 from Institution A said:

The major problem that we experienced was the lack of internet in remote areas where most students come from. Some students do not have smartphones that are suitable for online learning.

Student 1 from Institution B said:

Some of us do not have smartphones and internet access. Buying data bundles to access Moodle is more expensive than coming to school for students who stay near the school.

Student 2 from Institution A argued that sometimes the system was down. She said:

Sometimes the system is down or passwords expire. This is frustrating because students end up travelling to the campus at a cost to sort out password problems.

van Wyk's study conducted during the COVID-19 lockdown revealed that students faced challenges of expensive data bundles, expiring passwords, poor connectivity and inconsistent discussion forums.⁶⁴ ODeL cannot function effectively without proper network connections supported by internet accessibility. Picciano states that Simens noted that connectivity, as a theory is driven by the dynamic of information, flow through network connections.⁶⁵ Poor internet connection or lack of internet compromises ODeL as it hinders information flow.

Participants also viewed the technological illiteracy of students and lecturers as another challenge that affected ODeL implementation. The IT officer from Institution B said:

Some lecturers and students were computer illiterate. It took them time to adapt to the system. We took more time supporting them instead of doing other office duties.

⁶⁰ Nyerere, Gravenir, and Mse, "Delivery of Open, Distance, and e-Learning in Kenya."

⁶¹ Nyerere, Gravenir, and Mse, "Delivery of Open, Distance, and e-Learning in Kenya."

⁶² Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model."

⁶³ Harasim, *Learning Theory and Online Technologies*.

⁶⁴ van Wyk, "Academic Support under COVID-19 Lockdown: What Students Think of Online Support e-Tools in an ODeL Course."

⁶⁵ Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model."

The HOD from Institution C said:

Technophobic lecturers resisted the implementation of ODeL because they were not comfortable with using the LMS. ODeL was rushed before preparing lecturers and students through training. Again, most lecturers were not used to working remotely from home. They were supposed to be prepared for this new culture.

Student 2 from Institution B said:

Some students and lecturers struggle with technology. Some lecturers fail to post learning material and assessments on Moodle. Some students still fail to navigate Moodle to access the material. Some students learn better directly from the lecturer in class than from learning virtually since they don't have computers and smartphones.

Ouma's study in Uganda revealed that students from rural areas lacked ICT skills and infrastructure.⁶⁶ Tanyanyiwa and Madobi's study conducted in Zimbabwe shows that the lack of appropriate technology infrastructure and gadgets retarded blended learning vision.⁶⁷ They note that some students had malfunctioning laptops, and their cell phones could not connect to the internet. In Eswatini most learners stay in rural areas where internet connectivity is poor. Lack of skills and technological resources push users such as lecturers and students to resist e-learning.

Lack of ODeL policy guidelines from MOET and institutions were other factors that participants said aggravated the challenges faced during ODeL implementation. The Director of Institution B said:

None availability of ODeL policy from MOET is a problem when it comes to practical ODeL implementation. The Ministry just told institutions to introduce ODeL without issuing guidelines on how ODeL programmes should be accredited and run. There are no policy guidelines on how practical subjects like Home Economics, Agriculture and other practical subjects should be handled.

Teacher 1 from school C said:

The lack of an ODeL policy resulted in serious challenges that caused failure in most institutions. In our institution remuneration for producing online teaching material and online lesson delivery became a problem because there was no policy to refer to. The institution's remuneration policy only covered physical presence in class. The institution failed to come up with a proper remuneration structure for online activities done by lecturers. This demotivated lectures and led them to disengage resulting in the collapse of the whole ODeL project.

Makoe and Gatsha's 2020 Draft Policy Brief SADC-ODeL response to COVID-19 reveals that in the SADC countries, there are no designed policy frameworks and strategies that support the full implementation of remote learning.⁶⁸ This poses serious challenges as institutions have nowhere to refer to for guidance. At Institution A, the challenges also became severe due to poor technological infrastructure within the institution and in communities where learners came from. The Dean from Institution A said:

Though ODeL is a good project, its haphazard implementation under pressure from COVID-19 without guiding policies led to failures and discontinuation of this project in most institutions.

The Dean went on to say:

In our institution, we faced budget constraints to upgrade technological infrastructure and provide technological resources and support to lecturers and students. This led to the failure and discontinuation of ODeL in the institution.

⁶⁶ Ouma, "Transforming University Learner Support in Open and Distance Education: Staff and Students Perceived Challenges and Prospects."

⁶⁷ Tanyanyiwa and Madobi, "Challenges to the Effective Teaching and Learning of Geography through ODeL at the Zimbabwe Open University."

⁶⁸ Makoe and Gatsha, *Draft Policy Brief SADC-ODeL Response to Covid-19*.

Nyerere et. al., assert that the provision of ODeL by the University of Nairobi and Kenyatta University faced inadequate funding that hindered its effective full implementation.⁶⁹ Unlike in Institutions A and C where ODeL implementation failed and was discontinued, at Institution B though challenges were faced, the implementation was successful and the project was continued.

Strategies for effective ODeL implementation

Participants said that ODeL was a necessary innovative project though its implementation faced serious challenges. They suggested strategies for its successful implementation. The Dean from Institution A said:

Instead of going one hundred per cent ODeL, institutions can use a blended approach as a beginning phase while they gain experience and develop capacity for ODeL.

The blended approach was also suggested by teacher 2 from Institution C who said:

To systematically migrate to full ODeL, it could be wise to first adopt a blended approach and deliver lessons face-to-face and online to cater for learners without smartphones, computers and the internet.

Tanyanyiwa and Madobi assert that ZOU adopted blended learning to meet the needs of learners from diverse environments.⁷⁰ Instruction is delivered through *My Vista* LMS and physical face-to-face sessions. Though there were challenges of a lack of policy and faculty support to guide effective implementation, the blended approach at ZOU meets the needs of learners from diverse backgrounds. SADC recommends blended learning to cater for student diversity.⁷¹

Participants suggested that the MOET should enact an ODeL policy with clear implementation guidelines. The Director from Institution B said:

It is difficult to implement ODeL without policy guidance. MOET should develop an ODeL policy that will guide institutions in ODeL implementation.

Ngakane and Madlela argue that MOET should reform its policies to embrace new education initiatives.⁷² Participants also called for the modernisation of ICT infrastructure and the provision of IT resources to students and lecturers. Student 2 from institution A said:

Institutions should give students data bundles. It is difficult to access online learning material without data and connection to the internet. They should also upgrade their IT systems.

The connectivity theory advocates for learning to take place through a connection of networks.⁷³ If students are given data to connect to the internet, they can collaborate online. Connectivity forms a nexus with the constructivist teaching and learning theory and online collaborative learning theory that allow learners to collaborate and interact with others online. Participants suggested training of lecturers and students in ICT. Teacher 2 from Institution A said:

Lecturers and students need to be trained so that they can manage to use technological gadgets and systems.

Madlela advised teacher training institutions to train their lecturers and capacitate them with ICT skills to enable them to participate and embrace contemporary changes in the field of education.⁷⁴

⁶⁹ Nyerere, Gravenir, and Mse, "Delivery of Open, Distance, and e-Learning in Kenya."

⁷⁰ Tanyanyiwa and Madobi, "Challenges to the Effective Teaching and Learning of Geography through ODeL at the Zimbabwe Open University."

⁷¹ SADC, *Regional Open and Distance Learning Strategic Plan 2022-2030*.

⁷² Ngakane and Madlela, "Effectiveness and Policy Implications of Using WhatsApp to Supervise Research Projects in Open Distance Learning Teacher Training Institutions in Swaziland."

⁷³ Ambeth and Saravanakumar, "Open and Distance Learning (ODL) Education System: Past, Present and Future-a Study of an Unconventional Education System."

⁷⁴ Madlela, "Exploring Educational Technologies Used by Mthwakazi University Rural Satellite Campuses to Implement Distance Teacher Education Programmes."

Discussion Summary

Based on the findings of the study and review of literature, it has been established that ODeL was hastily introduced in the Eswatini teacher training institutions. It was introduced as a reactive measure to the COVID-19 lockdown that restricted students' and lecturers' access to campuses. It has also been established that institutions, lecturers and students lacked the technological resources and know-how necessary for the implementation of ODeL. Another finding made was that MOET under pressure from the COVID-19 lockdown instructed institutions to implement ODeL without issuing policy guidelines to guide the implementation process. The Literature reviewed shows that most if not all African countries had not yet developed ODeL policies. The absence of policies thus led to haphazard implementation of ODeL leading to its collapse and discontinuation in most institutions in Eswatini. Out of the three institutions that participated in the study, only one institution managed to successfully implement ODeL, while the other two faced serious challenges and discontinued it.

RECOMMENDATIONS

Based on findings and literature it is recommended that teacher training institutions in Eswatini should introduce a blended learning approach while building technological capacity and knowhow to introduce full-fledged ODeL, MOET and teacher training institutions should enact ODeL policies to guide the implementation of ODeL initiative, institutions should provide lecturers and students technological resources needed in ODeL, institutions should train students and lecturers and equip them with ICT skills, and the government should build an open and distance learning university and align with other SADC countries.

CONCLUSION

The study has concluded that ODeL is an essential teaching and learning model in Eswatini teacher training institutions. Its successful implementation needs policy and strategic readiness in the Ministry of Education and Training and teacher training institutions. The Ministry should enact a policy with clear guidelines on how ODeL should be implemented in the institutions. Based on the Ministry's ODeL policy, institutions should develop their own context-based policies and strategies that support the successful implementation of ODeL. Institutions should not abruptly implement ODeL, rather they should implement it gradually beginning with capacity and infrastructure development, to implementing a blended approach right up to implementing a fully fledged ODeL. All these stages should be gone through gradually and systematically to allow for resource mobilisation, skills development and infrastructure development.

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