Overcoming the Odds: Online Learning Experiences from Open University of Tanzania's Regional Centre Rural-based Students

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Abstract

This paper reports the findings of a qualitative study that has explored rural students' experiences with online learning in Tanzania. The study used purposive sampling to select twenty-five participants. It employed a phenomenological design, primarily using semi-structured interviews coupled with document review, to obtain data on students' lived experiences. The data was then subjected to thematic analysis to generate study findings which show that rural students used the Moodle system to support their online learning. Moreover, they had Zoom meetings, discussion forums and WhatsApp as recourse to the Moodle system. According to the findings, the students faced challenges such as poor access to the Internet, prohibitive costs of learning infrastructure, and limited technical skills. Furthermore, these students faced inflexible schedules and limited access to assistive technologies. As a result, they complemented their study processes with downloaded materials, printed learning materials, regional centre physical visits and university graduates' additional support. The study concludes that the complex nature of the rural environment marked by limited infrastructural and technological development makes studying through ODL doubly daunting for rural-based students. The paper, therefore, recommends instituting transformative strategies aimed to enhance the quality of rural students' lived experiences of ODL online learning.

Introduction

Online learning is increasingly gaining popularity in facilitating teaching and learning in higher learning institutions (Palvia *et al*., 2018). This system provides learning opportunities in diverse rural and urban contexts by removing time and spatial barriers, thus widening participation in learning for many Open and Distance Learning (ODL) students. In recent decades, students have been using synchronous (real-time) and asynchronous (delayed-offline) learning modes to support their online learning. This dual strategy permits students to interact with course tutors, instructors, and peers. Students also access learning resources, tutor support, information materials, tutorials, assignments, examination results and constructive feedback through this strategy (Hogan, 2011; Mtebe & Raphael, 2017, Skordis-Worrall *et al*., 2015). Consequently, these features have influenced most higher learning institutions to tap into the potentials associated with online learning (Palvia *et al*., 2018; Mtebe *et al*., 2021; Tarus, 2015).

Online learning plays a crucial role in enhancing access to education. In consequence, universities in developed and developing countries have taken deliberate initiatives to introduce it. Institutions such as the University of South Africa shifted to ODL in 2004 (Mbatha & Naidoo, 2010) and this further opened access to higher education for many marginalised and peripheral communities (Lembani *et al*., 2020). Similarly, the University of Nairobi adopted e-learning in 2004 to widen access to education to many students in various localities (Kibuku *et*

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al., 2020; Tarus, 2015). Similarly, the Open University of Tanzania (OUT) has adopted online learning into its teaching and learning activities and provision of academic support to students in various locations. Particularly, OUT has been using Moodle and Zoom meetings to strengthen online learning since 2016 (Ally & Mwankusye, 2017; OUT, 2020). However, since online systems' operations depend primarily on access to and availability of electricity and internet services (Mtebe & Raphael, 2017; Rotas & Cahapay, 2020), the quality of rural students' online learning experiences remains an area of research curiosity.

To add some perspective to this, students in urban areas reportedly have a significantly different educational experience to those in peri-urban and rural areas (Lembani et al., 2020). In fact, preceding studies (e.g., Mahai, 2014; Mutatana, 2019; Ramos *et al*., 2011) indicate that students in developing regions such as rural Tanzania experience poor access to ICT support, financial challenges, communication issues, physical distances barriers, electricity challenges, inflexible schedules, and limited access to physical resources. Other areas contend with infrastructural challenges such poor access to electricity and internet services (Musingafi *et al*., 2015; Mutatana, 2019). Specifically, longstanding internet-related problems include low bandwidth, poor access and high costs of services, frequent power cuts, and load shedding (Gamdi & Samarji, 2016; Chaka *et al*., 2020; Mutatana, 2019; Rotas & Cahapay, 2020). As a result, rural areas do not generally enjoy the same privileges as their urban counterparts on equal footing, particularly in resource-poor contexts of developing countries (Mahai, 2012). This uneven and inequitable operational environment raises questions about the efficacy of online learning in rural areas, particularly in Africa. In response, this study has been carried out to look at online learning practices in rural Tanzania to generate knowledge on the subject particularised to the local context. Towards this end, the study explored rural students' lived experiences with online learning at one of the regional centres of the Open University of Tanzania and recommend measures for improving practice. To achieve this purpose, the study sought answers to the following questions:

1. How do students' study through online learning in rural-based areas?
2. What challenges do students encounter when engaging with online learning mode in rural areas?

Literature review

Students' Online Learning Approaches

Online learning is one of the innovations available worldwide via the Internet (Depover & Orivel, 2013; Hogan, 2011). Students' learning is done either in a live mode (synchronous) or delayed mode (asynchronous). Generally, live modes such as Moodle, Zoom, Skype and WhatsApp (Chaka, *et al*., 2020; Mtebe *et al*., 2021; Oye *et al*., 2012) and asynchronous modes such as e-mails, discussion forums and bulletin board systems (Oye *et al*., 2012) support online learning. Between the two modes, live mode is known to provide experiences that are likened to face-to-face learning in a physical space with regards to interactions and sharing of ideas. This mode also creates and enhances collegiality in addition to improving collaboration and a sense of belonging. Students' access to relevant digital devices such as laptops, desktop computers and smartphones is a prerequisite for effective engagement in online contexts (Hogan, 2011; Mtebe *et al*., 2021).

Besides, the digital devices are essential in enabling students to access online lectures, assignments, reading lists, simulations, tweets, slides and short videos (Mtebe & Raphael, 2017; Skordis-Worrall *et al*., 2015). The devices also support project teams, peer tutoring,

journal clubs, discussions, debates and online tutorials (Hogan, 2011; Van Rosmalen *et al.*, 2008). These activities are essential in developing students' affective and cognitive domains by stimulating interactions and collaborations, which are essential features in a learning environment. They also maintain social and academic relationships crucial for fostering academic success and retention. In fact, proper access to good infrastructure is essential in nurturing effective communication to ensure the success of online learning (Chaka *et al.*, 2020; Mahai, 2020; 2022).

Students' online learning challenges

For many decades, online learning practices have been difficult for students in developing countries. The issue of low-level surrounding the region's science and technology threaten to undermine the effectiveness and efficiency of online learning systems. In this regard, studies from Zimbabwe (Mutatana, 2019) and the Philippines (Gocotano *et al.*, 2021; Rotas & Cahapay, 2020) found that poor access to internet services and unstable electricity supply limit students' access to learning resources in their locations. Problems such as low bandwidth and load shedding, coupled with frequent power cuts, are prevalent in many developing countries. Furthermore, lack of essential infrastructure to properly support students' online learning undermines their academic progress and retention.

Debates in literature also posit that some students lack relevant technical skills essential in online learning (Gamdi & Samarji, 2016; Gillett-Swan, 2017; Tarus, 2015). It is argued that students lack the capacity to engage in online learning discussions because of poor skills needed to apply digital tools (Mahai, 2022). Other studies (Mutatana, 2019; Mtebe *et al.*, 2021) have reflected on general digital illiteracy among students, which restricts interactions, searching for materials, doing assignments, getting constructive feedback and being part of digital communities. In any case, students need to acquire skills needed in digital learning contexts. Such skills include those needed to use computers, smartphones and laptops in addition to applying software applications (Mahai, 2022; Mtebe *et al.*, 2021; Rotas & Cahapay, 2020). In other words, students that have limited skills of this nature are unlikely to have the capacity to freely engage in discussion forums, Zoom meetings and Moodle system.

Students also contend with exorbitant costs of internet bundles, limited access to tutor support and inadequate time for learning (Musingafi *et al.*, 2015; Mutatana, 2019; Khan *et al.*, 2019; Zuhairi *et al.*, 2020). Indeed, students need tutor support in content mastery, and getting feedback on assignments and tutorials (Mahai, 2020; Segoe, 2014). The absence of such support can derail students' academic progress since not all students can learn without tutor support. Further challenges are associated with administrative issues such as registration, admission and examination procedures (Mahai, 2020; Gillett-Swan, 2017; Musingafi *et al.*, 2015; Mutatana, 2019; Zuhairi *et al.*, 2020). These aspects often delay students' completion of studies and sometimes tend to force them to dropout.

Other empirical studies conducted in Africa (e.g., Ramos *et al.*, 2011; Mahai, 2014; Mutatana, 2019) and outside (e.g., Gocotano *et al.*, 2021; Rotas & Cahapay, 2020) provide ample knowledge on challenges students face with regards to online learning. A study conducted in Mozambique and Cape Verde by Ramos *et al.* (2011) revealed that students based in rural areas experienced poor access to ICT support, poor communication, and unavailability of reliable electricity. The study called for the integration of radio broadcasting, face-to-face tutor support, and printed learning materials to improve students' learning experiences. Exploring learning experiences of students at the Open University of Tanzania, Mahai (2014)

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found that many of them experienced geographical and financial challenges, and limited access to academic support. This highlighted the need to establish study centres near students' residential areas to facilitate access to tutor support and learning resources. However, the study focused on rural physical contexts hence it had limited information on online practices as it was conducted before the full inception of OUT online learning in 2016 (Ally & Mwankusye, 2017).

Similarly, a study of the Zimbabwe Open University by Mutatana (2019) focused on students' experiences and challenges in rural Zimbabwe community. It identified students' challenges as lack of physical resources, inflexible study schedules, and financial and cultural hurdles. The study mainly used open-ended questions and, hence, hardly generated in-depth findings on students' experiences. Instead, semi-structured interviews and open-ended questions could have gathered in-depth information from students. Although findings of a number of studies suggest that online learning is in use in various settings (Chaka *et al.*, 2020; Mtebe & Raphael, 2017; Mtebe *et al.*, 2021; Skordis-Worrall *et al.*, 2015), limited exploration has been done on how students in rural areas experience online learning. Nonetheless, most of the studies have confirmed the existence of technological challenges (Gamdi & Samarji, 2016; Musingafi *et al.*, 2015, Mutatana, 2019). Other studies focused on general barriers to learning in rural areas such as physical and administrative (Mahai, 2014; Musingafi *et al.*, 2015; Mutatana, 2019; Zuhairi *et al.*, 2020). Some of the studies' use of structured questionnaires with closed-ended questions left a methodological gap because such a method hardly permits the collection of in-depth information. In contrast, this study provides insights into rural students' lived experiences of online learning from a selected OUT regional centre in Tanzania.

Methodology

This qualitative study employed a phenomenology research design because of the need to determine students' study approaches and challenges encountered in their online learning. As such, the study has exploited the strengths of qualitative research, which include its ability to focus on exploring individuals' feelings, perspectives, and lived experiences from a natural context (Creswell, 2014). The study was conducted at OUT's Katavi regional centre. The centre, which started in 2012, is situated in a recently established administrative region of Katavi. The selected centre was also new relative to other centres such as Mbeya and Mtwara, which were established in the 1990s (OUT, 2008; 2015). The remoteness of the regional centre from OUT headquarters and its nature (being characterised by rural agricultural features and low development of infrastructure), made it suitable for the study. Overall, the region is also marked as poor in socio-economic development (World Bank, 2020).

The study used purposive sampling to select twenty-five participants (22 students from rural areas in Katavi region and 3 tutors from its regional centre). The study area's location was generally characterised by poor electricity supply, limited internet access, poor roads, limited finances, and over-dependency on agriculture. Study participants were accessed through their emails and mobile phone numbers obtained from the regional centre. The inclusion of active students by avoiding engagement of inactive and ODL dropouts (Aydin *et al.*, 2019) served as criteria for purposive sampling. As such, the study only included students that participated in the 2020/2021 examinations conducted through Zoom and physical space. Inclusion of tutors was based on their roles as academic advisors, facilitators, and counsellors (Segoe, 2014). These respondents provided data that complemented what was learned from OUT students.

The study obtained a research permit from the Open University of Tanzania and sought consent from participants. Above all, confidentiality and anonymity were strictly observed in the study, including using numbers to protect participants' identities. To collect data, the study

used semi-structured interviews and documentary reviews. Semi-structured interviews enabled the study to obtain in-depth information from participants and their study context. Data was collected through phone interviews (20) and WhatsApp video calls (5). The study ensured the privacy and security of data to protect study participants (Bouwman *et.al*., 2013). The interviews supported the generation of information on the students' study processes and their challenges. Documentary reviews, on the other hand, looked at empirical and, theoretical studies, and specific OUT documents, which included facts and figures, quality assurance policy, the prospectus (OUT, 2020) and OUT's 2018/19-2022/23 strategic plan (OUT, 2018). These documents supplemented the information obtained using interviews. The qualitative data generated in this study were subjected to thematic analysis. Written and an audio-recorded data were transcribed, coded and categorised into themes and sub-themes. They were then presented through verbatim quotations and interpreted accordingly to obtain relevant meaning. The long engagement with interviews, data transcriptions and searching for patterns influenced the choice of thematic analysis (Nowell *et al*., 2017).

Study Results

The findings of this study have been divided into two main sub-sections based on the research questions. As shown earlier, the first research question was about rural area students' study approaches while the second was about challenges the students face during their studies. Generally, the information generated through interviews on approaches shows that students studied using both online and offline study resources.

Online Learning Study Approaches

The study has found that rural-based students engage in online learning through Moodle, social media platforms, and Zoom. This engagement enables them to access learning materials and study activities. Interview sessions with students revealed the use of Moodle as one of them explained:

> *I use my student's account to access online learning materials and tutors' notes. I also get my assignments and feedback through online platforms. But one needs to pay tuition fees to access all the services available in Moodle (Student 22).*

Another student reported that *"we all learn through online platforms. We do registrations of courses and access learning materials and learning support from tutors through Moodle" (Student 1).* These results show that Moodle plays a vital role in enabling students to learn within their environment. The system enables the students to study, interact, and access tutor support and other vital learning services. Interviews with tutors confirmed the students' access to online tutor support and learning materials in the form of PDF, Word, audio recordings and, at times, short video clips. Students also used online discussion forums that broadened their understanding of the subject matter. Documentary review also confirmed that OUT used Moodle to improve interactivity, provision of learning resources, and handling of administrative issues (OUT, 2020). Accordingly, the findings show that students used social media platforms, particularly WhatsApp, to add value to their studies. The study has found that two types of WhatsApp groups were used by students in the area: Tutors-based and students-based. Tutors-based groups were used for academic guidance, feedback, and sharing assignments and course content. On the other hand, the students-based groups dealt with a mixture of social and academic matters. During the interviews, one of the students narrated that:

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> *We have our WhatsApp group and people are free to post questions and get support from group members. Sometimes, people share assignment questions and ask for clarifications, particularly when somebody fails to understand the demands of a question. People also share social issues and they get support (Student 19).*

Similar information emerged from another student who said:

> *I have been participating in a WhatsApp group, which was created by our Kiswahili tutor. The group is interactive and the teacher sends questions and encourages lively discussions. Students are also invited to ask questions and comment. I enjoy the sessions (Student 21).*

Implicitly, WhatsApp groups formed for that purpose provided the students with an opportunity for fostering interactions, collaborations and sharing of social and academic issues. This collaborative effort added value to learning experiences in addition to reducing cases of isolation in the online context. Moreover, the groups kept students up-to-date, active and informative. The results also indicate that students used zoom to access live subject lectures from tutors. Zoom meetings were organised by tutors at least once a month. Relevant links were created and sent to the students to facilitate their participation. On this, one student said:

> *I attended an online course in ICT. This was done via zoom. The teacher used demonstration to teach a particular content matter during sessions. I learned a lot from the sessions. Frankly, if a student participates in live lectures, most of the course difficulties are sorted out by the teachers. But you need to have adequate and promising internet bundle (Student, 20).*

This statement attests to how tutors can use the virtual world to support students' studies and masterly of subject contents. Specifically, Zoom meetings enabled face-to-face interactions that usually capture students' attention and enhance their understanding of content. This was noted to be quiet critical for knowledge sharing and better familiarisation. Furthermore, tutors revealed that students based in rural areas visited the OUT regional centres to access ICT facilities and internet services. One of the tutors posited that their regional centre had internet services and a computer room which provided good learning environment.

The tutor confirmed the availability of infrastructure to support students' learning at these regional centres. Yet, regional centres like this are generally urban-based, located far from many of their rural students. Consequently, although the students were encouraged to visit the centre, many could not do so due to the long distances involved.

Non- Online Learning Study Approaches

It also emerged that students in the rural areas also resorted to offline study process to support their learning. This involved using tutors from regional centres, graduates from universities and other experts such as advanced secondary teachers to offset the limitations imposed by poor access to online resources and learning modes. Additionally, the students photocopied, downloaded and printed out hard copies of materials to ensure they supplemented what they missed out from ODL online mode of learning because of various hindering factors. In this regard, one student said:

> *I usually contact one of my friends who completed their studies at the OUT. She helps me to grasp some of the difficult modules. She is helpful as she has knowledge and she also went through the same system. This gives us strength to continue with studies otherwise learning independent of tutor support is not easy (Student 17)).*

This statement underscores the value of having graduates that can clarify and ironing out difficulties students face in their learning. In other words, there is value in engaging competent graduates to support rural students. However, to be effective, this needs special arrangements. The study findings also show that students benefited from tutor support available at the regional centre. On this, one of the students reported that:

> *When I face difficulties in understanding assignment questions and content in my modules, I visit the regional centre and get clarification from tutors. I always enjoy the help from tutors at the regional centre (Student 5).*

In other words, students appreciated and were satisfied with the help that they received from tutors. The statement also signifies the role the tutors play in enhancing the students' academic development. However, the location of regional centres in urban areas requires rural students to travel long distances. As such, only a few accessed such support hence highlighting the need to strengthen online learning. As seen earlier, students also photocopied, printed and downloaded materials to use at their homes. On this, some of the students explained that:

> *I prefer downloading materials, saving them on a flash disk or my laptop. I sometimes print or photocopy materials which I get from friends. It is much easier to use printed copies in our areas than reading them online (Student 22).*

> *It is difficult for me to study the materials sent through online platforms or those share in a discussion forum as we have problems of internet. So, I only download and use them on a computer or laptop (Student 3).*

These statements demonstrate that access to internet is a challenge for students in the study area. These students' limited utilisation of fully online services forces them to rely on offline study practices.

Challenges Students in Rural Locations Experienced

The second research question sought to determine the online learning challenges faced by rural-based students served by the Open University of Tanzania regional centre under review. On this, the study has found that rural-based students faced numerous challenges including poor and uneven distribution of internet services. Some had limited bandwidth, which made them fail to download large files let alone effectively participate in online academic activities. Some students in rural remote areas lacked access to internet services hence forced to travel to nearby town centres to get such services. Responding to the question, one of the students stated:

> *We don't have internet services in our area. It is very hard for me to study online. I neither participate in Zoom lectures nor in discussion forums. In fact, we have*

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> *communication problems. You can imagine that I ought to be close to Lake Tanganyika to get network signals (Student 2).*

Another student proffered:

> *Can you imagine I once failed to sit for oral examinations conducted via Zoom last year? I tried to connect but I experienced great miscommunication. I was then told to visit the regional centre and plan to do a written examination from there. It is discouraging but we are managing (Student 15).*

Students affirmed poor access to internet services and the damage it caused to their studies. The problem made them fail to effectively harness the potentials associated with online learning including interaction and collaboration with peers, participation in discussions, provision of feedback, an availability of tutor guidance. The study has also found that most students used mobile phones to study while a few had desktop computers or laptops. The costs of buying these devices made some students fail to possess them. As a result, a significant dependency on friends and, for some, on office mates was noted. This highly minimises the luxury of studying at one's own pace. On this, one student said:

> *I am struggling with my studies as the university changed its mode. For the past three years of my studies, I have used downloaded materials and textbooks for learning. All the examinations were in written form. But the university is now using the Zoom system for examinations and even teaching. I need to have a computer or laptop to connect to. But I don't have one. (Student 11).*

Another student said:

> *I use my mobile phone for learning but it has a small screen. I wish I had a larger screen to show large-sized words because this affects my learning. I also cannot download big files on my phone because it has a small storage capacity. I sometimes wait until I get time to visit the regional centre to access my files. (Student 9).*

The quality of learning devices seemed to challenge the students' online learning processes especially because they lack user-friendliness that can support their learning. This is obvious considering that effective participation in online learning is dependent on ownership of learning devices that afford students the flexibility of learning at their own pace and in spaces of their convenience. Limited access to learning devices implies limited capacity to effectively engage in discussion forums, attend live lectures, and timely write and submit assignments. The study also shows that lack of skills that support full engagement in online learning is the other factor affecting online learning for rural students. This was evident in responses received from students that participated in the study. For instance, one student shared the following:

> *I struggle so much using online learning systems. I do not have the knowledge to operate the system. We were given an induction seminar when we started our studies but one needs time to practice and master the system. The issue is that we need to discuss, download materials, access examination results, and submit assignments through the system. So, knowledge is an issue of concern here (Student 5).*

This statement illustrates how rural students fail to fully benefit from the potential of online learning due to lack of technical skills. This is more likely affecting the students' academic development. The student's tone has signs of desperation resulting from failure to effectively use the available learning technology; an understandable result since mastery of technical skills needed to engage in online learning is a must for their success. Moreover, interviews with the students also revealed that learning in an online context was costly. Students had to buy internet bundles and essential learning devices such as laptops and mobile phones to proceed with their studies smoothly. Internet services are essential for the students' access to learning resources, tutor support, and accomplishment of assignments. As such, students in places where internet was poor or inaccessible incurred costs of travelling and purchasing internet bundles. Students explained the issue of costs as follows:

> *I stayed for a long time without participating in group discussions and Zoom lectures as I did not have a smartphone and laptop. But I also needed an internet bundle to engage in online meetings and discussions. It is indeed expensive (Student 22).*

> *I have problems with internet at my place. If I need to study, I must download and print materials so that I can use them at my convenience. I bear the internet and printing costs (Student 1).*

To engage in and sustain learning in an online context, students must have the financial capacity to cope with infrastructural challenges. These testimonies suggest the possibilities of students having limited participation in online activities. Indeed, an assurance that the enrolled students would access learning devices to support their learning is critical at this stage. The findings also indicate that some students experienced challenges related to documentation management. Some students reported about assignment management and the delayed recording of grades. For instance, a third-year student said:

> *I have issues with two online assignments, which I did last year. Up to now, I have not received any grade. I have made some follow-ups on the same and there are no promising answers. I will not be allowed to sit for my final examinations unless I get results for those assignments (Student 13).*

A similar case also emerged from another student who had sat for a Zoom examination and her results were not uploaded. As a result, the student repeated the exam. Such a situation could have been avoided in an efficient recording system. Delays in documenting students' records discourage and demotivates students' participation in learning. Interviews with students also revealed the challenge pertaining to inflexible schedules. This was mention in relation to the fixed Zoom sessions the university introduced and tutors' specific schedules for assignment submissions. Students complained about the rigidity of some tutors who did not accommodate their social and economic responsibilities which sometimes limited their effective participation in the scheduled tasks. One of the students said:

> *I submitted my assignment late but the teacher was so inflexible that my apology was unacceptable. I tried to explain my issue as I had family problems but the response was not positive. It was until I received support from one of the teachers at the regional centre who understood my case (Student 15).*

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Another student said that she had called one of the tutors over one weekend to request for more time before assignment submission due to unavoidable circumstances. To her disappointment, she was told to observe and stick to the set submission dates. Lack of flexibility in learning signals tutors' failure to recognise the needs of adult learners and the ODL principles that govern the online learning practices. Inflexible practices tended to hinder the students' participation in distance learning. Apparently, the findings suggest limitations in customer care. Essentially, it is important to consider that the students enrolled at OUT are mostly adults with responsibilities. They needed flexible schedules to accommodate their impending needs. Meanwhile, time management skills and discipline are imperative in supporting students' management of their studies.

Discussion

The development and advancement of technology in the world has enabled many universities to provide education through online learning. The application of online learning requires quality access to internet services and electricity. Many areas in Africa, Tanzania included, experience infrastructural problems, which are more prevalent in rural areas. This reality could deter efforts aimed to provide online learning. This study, therefore, aimed to delineate rural students' experiences with online learning. Specifically, the study sheds light on how rural students study online and the difficulties faced. The study's findings show that Open University of Tanzania Moodle system, Zoom meetings and WhatsApp group discussions enabled students to support their online learning. Through these tools, the selected rural students accessed learning resources and tutor support, and participated in online lectures, examinations and discussions. Thus, for these students, online learning provided an avenue for both synchronous and asynchronous learning.

Besides, the findings show wide use of the asynchronous mode because most of the rural students did not have direct and timely access to the synchronous mode. The students used emails and WhatsApp group discussion forums at their individual convenience. This usage of these tools also emerged in other institutions (Oye *et al*., 2012). The mode is good as it allows students to get what others shared during live sessions. Live Zoom lectures were not recorded hence depriving rural students of a crucial element of their studies. One of the students reported that Zoom meetings were important as tutors presented and clarified diverse topics, and issues, hence permitting students to discuss what had been presented. Such an opportunity is critical for knowledge development and content mastery. While online learning is expected to be flexible enough for rural students, live learning sessions minimise their liberty to study within their convenient places and time.

The lack of convenience experienced by rural students in online learning appears to explain their usage of offline learning strategies. The students use learning materials downloaded from Moodle and other open resources while others preferred printed copies of the materials. On the other hand, the findings have indicated the use of learning support from university graduates and high school teachers as substitutes for tutors. Nevertheless, considerations on academic qualifications, depth of knowledge and skills were critical for university students' development. Perhaps, the selection of a group of teachers with relevant qualifications to support rural students under special arrangement could be a better arrangement in such a context. As such, capacity-building on knowledge sharing and skills development needs be extended to selected secondary school teachers in rural areas to foster their usefulness to ODL students' cognitive and affective domains. Nonetheless, the application of non-online strategies complements online studies and sustains rural students' learning process. The findings resonate with those of a study conducted in Mozambique and Cape Verde where universities opted for a blended mode and integrated traditional face-to-face sessions and

printed materials to support students in rural locations (Ramos *et al*., 2011). The strategies adopted by the rural students enabled them to prepare their assignments in a physical space and later upload them in online platforms for assessment. They did the same when given questions to study and sat for online examinations which were conducted through zoom meetings.

Consistent with previous studies (e.g., Mahai, 2014; 2020; Mutatana, 2019; Rotas & Cahapay, 2020), the present study has revealed poor access to internet services, which inevitably limits students' capacity to fully exploit online learning. As a result, the students use non-online strategies to support their learning, an avenue that reduces students' capacity to collaborate, develop collegial relationships, and share learning resources and experiences. Such features were noted by other scholars (e.g., Gillett-Swan, 2017; Hogan, 2011; Skordis-Worrall *et al*., 2015) to be central in enhancing learning among students in online contexts. On a similar note, the rural students' learning was affected by their possession of limited technical skills demanded by online learning. This exposes the essentiality of digital literacy in supporting students' learning and navigation of online learning platforms. Impliedly, this seriously challenges learning in an online context. In this regard, Gocotano *et al*. (2021) document that because of lack of ICT skills, students in the Philippines struggled to reach their fellow students and participate in learning.

Similar experiences were also observable among some students in Saudi Arabia and Tanzania (Gamdi & Samarji, 2016; Gillett-Swan, 2017; Mahai, 2020; Mtebe & Raphael, 2017). Evidently, the students require technological skills to excel in online learning. Accordingly, the study discloses that students experienced challenges associated with records management. This resulted in some students missing assignment grades and struggling to track results records. Some students were required to repeat assignments or examinations to compensate for the missed grades. These experiences ended up discouraging their effective learning and, at times, caused unnecessary delays in the completion of studies. Generally, keeping and maintaining records is an art that has to be embraced by both online students and education providers. Apart from this, the inflexibility of zoom meetings and assignment submission schedules experienced by participants of this study echoes what was evidenced in Mutatana's (2019) study, in which it was noted that rigid institutional schedules interfered with socio-economic and academic responsibilities of students in Zimbabwe. Accommodating the diverse needs of the rural students is important for their successful learning and retention. The vision of OUT, which is to become a leading open online university in knowledge creation and application (OUT, 2018) means the university has to strive to have in place a well-developed ICT infrastructure to support students' online learning (Nihuka, 2013; OUT, 2020). This will eliminate online learning difficulties faced by rural students and help the university to realise its vision. As it stands, this study suggests that there is a significant inequality in access to learning resources and support among students, with those in rural areas suffering the most. Consequently, rural students resort to non-online strategies to address this disparity. Nevertheless, this adds the danger of accelerating variations in skills and knowledge development among rural students. However, although the 21st century embraces the use of digital learning approaches, entirely relying on online learning without blending it with traditional methods is likely to hinder rural students' academic development and participation in learning.

Study Implications and Limitations

In all, the study has both theoretical and practical implications for the Open University and the nation. Understanding rural setting students' online learning landscape helps the government

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of Tanzania to effectively plan its improvement of various areas, including ICT infrastructure. The study's findings are important for open and distance learning universities because they provide information about rural students' experiences and their engagement in online learning. It specifically informs on learning processes and challenges, which are crucial for developing guidelines to manage support distribution and improvement of the mode of teaching to reflect the current situation in the rural environment. This study adds to existing knowledge on students' online learning practises from a rural perspective. The remoteness of the region made the researcher use mobile phone and WhatsApp video calls to engage participants in interviews. A physical visit to students' locations could have enriched the assessment of the rural learning context and allowed for documentation of challenges from the natural environment. However, the use of probing questions supported by semi-structured interviews unearthed in-depth information for the study.

Conclusion and Recommendations

Students' lived experiences of online learning call for immediate interventions to improve access to relevant academic and non-academic support to enhance their learning at a distance. The current infrastructural and academic challenges, if not addressed, could affect students' academic achievement as well as hinder their knowledge and skills acquisition. It is therefore important to strengthen rural infrastructure and improve online teaching and learning support to allow students' academic development. However, given the poor infrastructure in the rural areas, it was difficult for students to have a unique lived experience with online learning. The majority continued with traditional methods which helped them to proceed with studies.

The poor rural infrastructure and limited development of technology are the main challenges which limited students' effective learning and participation in online learning. The same has made most of the rural students to rely on the use of non-online strategies to safeguard their positions in the learning process. A blended mode of learning, combining traditional methods in physical spaces and online practices, was apparent among rural area-based students. Such a mode is one of the options that can improve effectiveness and efficiency in learning for students in rural areas. The use of graduates and secondary school teachers seems inevitable in the students' context. However, the university must assess the quality of the non-online strategies used by the students to allow for competence, skills and knowledge development. The development of learning materials or modules in the form of PDFs, word, audio, and video could also inject some flexibility in learning processes. Documentation of students' records should be enhanced to avoid unnecessary disturbances and delays in students learning. There is also a need to engage private sectors such as internet and mobile phone service providers to support the mission of improving rural infrastructure. On the other hand, the government's commitment to improving rural infrastructure is necessary to transform the current and future rural students' experiences with online learning. Quality output ought to be backed up by quality input and therefore, relevant investments are essential in maintaining the OUT's status. Ultimately, this paper proposes that further studies be directed towards assessing the impact of online learning on students in the rural settings.

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