Review Article

Reliability Components of Online Teaching and Learning Tools in Lesotho Higher Education Institutions: A Systematic Review

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ABSTRACT

Electronic learning is a techno approach that brings new opportunities for teaching and learning in many fields of education compared to the traditional classroom environment. However, there is a dearth of research on its effectiveness in practicality and whether it is dependable enough during teaching and learning. Thus, this systematic review aims to provide evidence from numerous findings on the reliability components (such as functionality, probability of success, environment, and duration) of online teaching and learning (OTL) tools in Lesotho higher education institutions (HEIs), focusing on functionality and probability of success only. A review of online learning tools includes Thuto, Google Meet, Google Classroom, Zoom, Moodle, and Microsoft Teams. Technology adoption models and Siemens' theory of connectivism underpin this review. The review covered 18 articles between 2015 and 2021. Scopus, Google Scholar, ProQuest, and EBSCO were used for data search. In addition, selected studies were reviewed by experts in Educational Technology at the National University of Lesotho. Some factors were found to hinder the functionality and success of OTL tools, including lack of internet connectivity, electricity, and gadgets. As a result of this review, OTL tools are effective to some extent in terms of functionality and likelihood of success. However, the weaknesses of the e-learning tools outweigh the strengths of Lesotho HEIs. Consequently, only using OTL tools could hamper the quality of higher education in Lesotho. In HEIs, blended learning and continuous training on e-learning tools should be introduced for effective teaching and learning.

Keywords: Higher education institutions, online learning tools, online teaching, and learning, reliability components

INTRODUCTION

Learning has recently extended mainly from the traditional face-to-face encounter in the classroom to the virtual environment. E-learning education, called online learning, takes place over the internet. Aderson (2016), Mpungose (2020b), and Sadiku et al. (2018) asserted that due to its flexibility, online teaching and learning (OTL) accommodates and engages different students in the comfort of their own space and time. One of the reasons for offering online courses is that it is easy and convenient for students to complete a higher degree. Dhull and Sakshi (2017) opine that it also helps students learn at their own pace and convenience. The key to successfully implementing OTL is taking student characteristics into account. It implies that strategies that work for conventional full-time students may not be effective for adult students with full-time jobs and family responsibilities. These students (the former) are mostly practically-oriented with a keen interest in tools and technologies (Sadiku et al., 2018).

More importantly, the introduction of OTL has proven to be challenging in sub-Saharan African countries (such as Zimbabwe, Ghana, Namibia, South Africa, Zambia, and Lesotho) due to internet access, poor connectivity, exorbitant data bundle, and frequent power interruptions (Henaku, 2020; Tamrat & Teferra, 2020; Makumane, 2021). In addition, the literature highlights more deficiencies in effective online implementation, such as the weakness of online teaching infrastructure, teachers' inexperience, the information gap, and the complex environment at home (Ali, 2020; Murgatrotd, 2020). Nonetheless, OTL has consistently focused on education research for decades. Moreover, with the upsurge of Coronavirus (COVID-19) worldwide, it became even more relevant since the global decision to shut down higher education institutions (HEIs) was rational to keep social distancing to stop its spread. As a result, countries worldwide, including Lesotho HEIs, migrated to OTL immediately. However, for online learning to run smoothly, Dhull and Sakshi (2017) and Makumane (2021) argue that digital technologies, such as text and video communication applications, cloud-based video conferencing services, and learning management systems (LMS), must be accessible to students and their teachers or lecturers. For instance, the National University of Lesotho used online learning tools such as Zoom, Google Meet, and Thuto for effective teaching, learning, and assessment processes since the outbreak of COVID-19.

Lesotho is currently a progressive country to better its educational system by teaching its inhabitants. The Curriculum Assessment Policy (CAP) mandates show that the country is committed to being better in the future. CAP's goals can illustrate this to provide pupils with the knowledge, attitudes, and skills they will need to adapt to socio-economic and technological changes. It also aims to promote aesthetic and creative skills through different forms of literary work and promote a sense of cooperation and service to others (Ministry of Education and Training, 2008). The policy also emphasizes modern educational pedagogies

that can help students develop creativity, independence, and survival skills. For all these to be achieved, the policy acknowledges that the new trend should be a shift from teaching to assisting learning; from facts to knowledge production by students; and from information memory to information analysis, synthesis, evaluation, and application; from knowledge acquisition to development of knowledge, skills, values, and attitudes.

Conversely, the resources to help facilitate this new innovative kind of learning are inadequate, particularly in the context of Lesotho. For instance, many students originate from rural areas and vulnerable families, and learning through e-learning poses a serious challenge because of their socio-economic background (Hlojeng & Makura, 2020). Several students come from poverty-stricken families and can barely afford data units or buy a smartphone and a laptop. Besides that, the country itself has poor infrastructure for OTL. Many areas do not have access to electricity, and schools and homes lack Information Communication Technology (ICT) infrastructure like the accessibility of Wi-Fi facilities. Moreover, schools are not capacitated enough with computers to allow students to learn.

Through the above-captured scenario, this study found it very significant to check the effectiveness of online learning tools used in Lesotho's HEIs. Most previous studies on e-learning have rarely examined the effectiveness of e-learning tools in Lesotho. The digital divide (DD)—the gap between those who have and do not have access to computers and the internet— significantly limits the probability of using Lesotho OTL tools. Nevertheless, it is undeniable that digital technologies have great potential to elevate the education systems in developing countries. Thus, this study reviewed the reliability components of online and teaching tools in Lesotho's HEIs. The purpose of the study is to establish the extent to which e-learning tools are effective, looking at their functionality and probability of success only. The study is poised to use the following questions to guide the review. These include how accessible is teaching and learning offered through online tools. Are instructors and students trained for online teaching and learning? Moreover, are the online learning and teaching tools user-friendly? As a result, the preceding questions will aid in evaluating e-learning tools' functionality and probability of success and delve deep into understanding the phenomenon being studied.

The Underpinning Theory

To reach out to rapidly evolving knowledge, George Siemens has proposed a new theory called Connectivism. This hypothesis is more concerned with decentralizing information and networking (Siemens, 2005; Mpungose, 2020b). Learners can access material through digital devices from anywhere and at any time. As they do so, they connect or, to put it in another way, network with other people through online platforms. As a result, the inference is that learning with connectivism is more at learners' disposal. This theory provides a lens into looking deeper at the effectiveness of e-learning tools. That is, as much as the

information is decentralized, it is accessible to everyone, everywhere. The connectivism also blends well with the technology adoption model. This model's strength lies in its simplicity. It has only two constructs; the perceived usefulness and ease of predicting the extent of adopting new technologies at each individual's level (Lai, 2017). This model postulates that it can be beneficial if people find technology easy to use. This theory helps see the actual problem, for instance, students' and instructors' attitudes towards e-learning tools—how they relate to the devices. For example, old-aged lecturers may find it challenging to navigate e-learning tools and need to relate better. However, the reliability of e-learning may be effective for the youth since they find it easy and interesting to maneuver—thus, a good relationship between a child and a tool. As a result, this review is underpinned by Siemens' theory of connectivism and technology adoption model.

MATERIALS AND METHODS

Inclusion and exclusion criteria for screening relevant studies employed the assistance of two educational technology experts at NUL to review selected studies. The inclusion criteria were based on online learning articles published between 2015 and 2021. The rationale for choosing this period is that the researchers were looking for the most recent publications and literature that discussed reliability components of e-learning, those written in English only, those that collected data from e-learning evaluation, and finally, full-text articles. In addition, articles were excluded if their focus was not on the Lesotho context, were not written in English, and their year of publication was before 2015. Finally, the abstracts, editorial comments, and editor letters were excluded. Figure 1 presents the flowchart of the systematic review.

Search Strategy

Systematic reviews use an explicit search strategy to guide studies' inclusion and exclusion criteria in a review. This study used electronic and manual searches. A comprehensive search through international
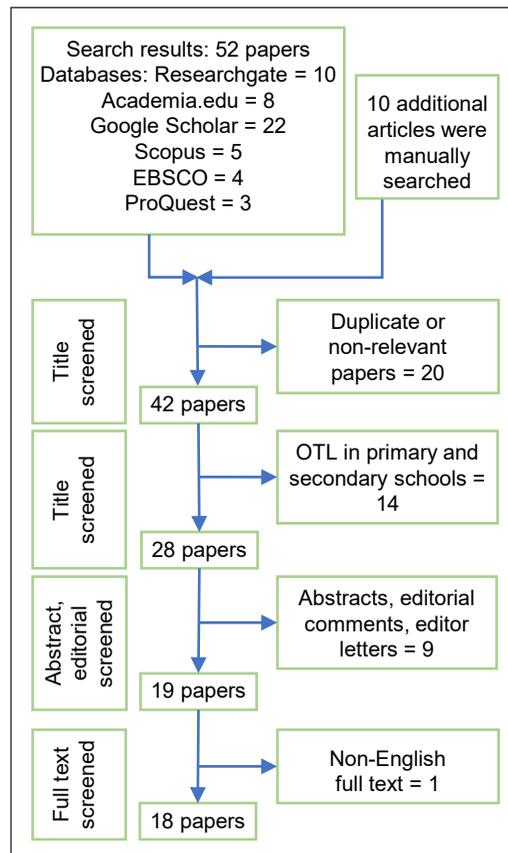
Figure 1. Flowchart of the systematic literature review

databases: ProQuest, Google Scholar, Scopus, EBSCO, and general internet search engines such as Google search bibliographic database identified a dataset of 52 articles from which 11 academic papers met the inclusion criteria for OTL in Lesotho. Also, online academic sites like Researchgate and academia.edu have used the four most relevant articles for this review while using these databases. These were considered appropriate because they give more relevant results with stable information. Finally, they are the most popular educational databases to which the study belongs. This review included the following search terms in electronic search: online teaching and learning, online learning tools, reliability of OTL in any field of education in Lesotho, and the effectiveness of online learning tools. Academic papers from which five were manually searched met the inclusion criteria of OTL in Lesotho.

Selection of Studies

Following the objective of this study, which sought to examine the effectiveness of OTL in Lesotho, this study employed a qualitative content analysis method. Findings derived from 18 articles were analysed qualitatively. It used the interpretivism approach to seek the deeper meaning of research. Interpretivism is a paradigm in which researchers do not predict people's actions. Instead, it describes how people make sense of their worlds and create meaning in their actions (Creswell & Poth, 2017). This review used this paradigm to focus on the effectiveness of OTL in HEIs. This paradigm gives an in-depth understanding of reflections and the reasons that inform them about using OTL tools. Only articles on OTL, e-learning and technological learning were included. The literature review in this study was limited to articles published in academic journals between 2015 and 2021. Articles published in the English Language were selected for the review.

RESULTS AND DISCUSSION

Of the 18 studies included in this review, they were all conducted in Africa. Table 1 summarises the articles included in this review. It shows the author, year of publication, paper title, type of paper, participants, and the results.

There are several factors to be considered for effective OTL, such as internet connectivity, data availability for learning, availability of e-resources for learning, students' attitudes, lecturers' and students' knowledge and skills on the usage of e-resources (Henaku, 2020; Makafane & Chere-Masopha, 2021; Mashinini, 2020; Oketch-Oboth, 2021). The findings below reveal the determining factors for effective OTL, as aforementioned. It is done to gather enough information from the literature to conclude whether OTL is reliable in Lesotho's HEIs.

Table 1
Summary of the articles included in this review

Authors	Year of publication	Paper title	Type of paper	Participants	Findings
Makumane	2021	Students' perceptions of the use of LMS at a Lesotho university amidst the COVID-19 pandemic	interpretive case study	10	Students' unique experiences with the LMS proved to have a bearing on the content acquired and the efficiency of technological knowledge in attaining goals.
Oketch-Oboth	2021	Online learning challenges, stress experience, and coping strategies among university students during the lockdown due to the COVID-19 pandemic	questionnaire	90 male and 70 female students	Students were concerned with the unconducive learning environment, internet connectivity problems, inadequate training on online learning platforms, unreliable power supply, cost of internet bundles, and lack of online learning equipment like laptops.
Makafane and Chere-Masopha	2021	COVID-19 Crisis: Challenges of Online Learning in one University in Lesotho.	qualitative approach	12 undergraduate students in the Faculty of Education	The findings of this study suggest that the challenges that the students experienced were mainly influenced by their attributes, pedagogical issues, and how the university supported them
Maphosa	2020	Using the MyLSU app to enhance student engagement and promote a smart town at a rural university in Zimbabwe	design science research	220 participants	The app was usable and easy to learn, and they would recommend it to others and agreed that they could use it without assistance. The results show that the app promoted student engagement and promoted concepts of a smart town
Henaku	2020	COVID-19: Online Learning Experience of College Students: A Case of Ghana	Systematic review	21 studies	Students from Asia and Africa had an unfavorable view of online learning during Covid-19.
Mpungose	2020b	The emergent transition from face-to-face to online learning in a South African University in the context of the Coronavirus pandemic	qualitative research	26	The Digital divide hinders students from realizing the full potential of e-learning. However, lecturers still want students to submit assessment tasks and engage with Moodle learning management system course activities.
Sepiriti	2021	investigating the effects of using the Thuto learning management system	Qualitative inquiry	NUL students	Thuto LMS is ideal during the Covid-19 era since learning still happens but has many challenges.

Table 1 *(continue)*

Authors	Year of publication	Paper title	Type of paper	Participants	Findings
Letseka et al.	2018	The Challenges of E-learning in South Africa.	Quantitative research	None	Modern technological devices in the form of information and communication technologies (ICTs) and access to the Internet are perceived to be ubiquitous.
Pete and Soko	2020	Preparedness for Online Learning in the Context of COVID-19 in Selected Sub-Saharan African Countries	Qualitative research: questionnaires	2,341 respondents (855 lecturers and learners from Ghana, 842 from Kenya, and 644 from South Africa)	There was an extremely low level of satisfaction with the internet connection, cost, and reliability
Mataka et.al	2020b	UNIVERSITIES IN PANDEMONIUM AS COVID-19 WREAK HAVOC: A CASE OF TWO CONVENTIONAL UNIVERSITIES IN SOUTHERN Africa	Qualitative research Surveys	Students, lecturers, administrators	Lack of preparedness in institutions became a source of confusion and uncertainty among students.
Mpungose	2020a	Beyond limits: Lecturers' reflections on Moodle uptake in South African universities	qualitative case study	31 lecturers	The study revealed that that the top-down imposition of mandatory Moodle implementation was resisted by lecturers, hindering uptake, and maximum potential took time to measure.
Mashinini	2020	COVID-19 and National University of Lesotho: Experiences and Challenges	questionnaire	50 NUL students	THUTO network system experienced overloads; some lecturers had to be trained on its use, some students could not access it due to a lack of connection at their homes, and others could not afford data for access even after partnerships with some service providers to zero-rate access
Mpungose	2021	Students' Reflections on the Use of the Zoom Video Conferencing Technology for Online Learning at a South African University	An interpretive qualitative case study	26 students	The study found that Internet access was a major challenge. While most students enjoyed synchronous Zoom discussions, they could not use other Zoom functions for effective engagement.

Table 1 *(continue)*

Authors	Year of publication	Paper title	Type of paper	Participants	Findings
Dube	2020	Rural Online Learning in the Context of COVID-19 in South Africa: Evoking an Inclusive Education Approach	Participatory action research	Ten students and five teachers	Many rural learners are excluded from teaching and learning due to a lack of resources to connect to the internet, the learning management system, and low-tech software.
Hussaini et al.	2020	Effectiveness of Google Classroom as a Digital Tool.	Survey research design	198 students	Google Classroom effectively improves students' access and attentiveness towards learning, knowledge, and skills gained through Google Classroom, makes to be active learners; however, a poor network hinders students from effectively utilizing Google Classroom, thus submitting late.
Amponsah et al.	2021	Academic experiences of "zoom-Fatigue" as a virtual streaming phenomenon during the COVID-19 pandemic	exploratory multiple-case study design	Eight academics	It was found that the participants viewed video conferencing during the COVID-19 lockdown period as an exhausting experience. However, a second major finding revealed that the participants were empowered with digital literacy skills to use video conferencing effectively. The current findings add to a growing body of literature on video conferencing, focusing on Zoom fatigue.
Awad et al.	2019	Evaluating learning management system usage at a small university	Survey and data log generated from event logs	25% sample of the faculty and 15% of students	Efficiency and saving time are essential benefits of any LMS. However, these are only some benefits, and many argue they are not the most important. To fully utilize Blackboard or any LMS, it is crucial to take advantage of the many tools they boast, especially those that improve student interaction and increase engagement.
Mafa	2018	Capabilities of Google Classroom as a Teaching and Learning Tool in Higher Education	A quantitative questionnaire	36 third-year healthcare service management learners	Google Classroom is compelling in educating and learning; thus, it improves teaching and learning.

Addressing the Probability of Success of Online Teaching and Learning Tools as a Reliability Component

How Accessible are the Teaching and Learning Offered Through Online Tools? It is apparent that in the context of Lesotho, the quality of education is negatively obstructed in HEIs like Limkokwing University of Creative Technology (LUCT), National University of Lesotho (NUL), Lesotho Agricultural College (LAC) as well as Centre for Accounting Studies (CAS). Many students come from disadvantaged families that cannot even buy data or a laptop and phone for their children to access the internet for teaching and learning. Maphosa (2021) indicated that most respondents clarified that one of the main drawbacks of online learning is that it is costly in terms of data. This is in congruence with teachers' views in Tanzania, who revealed that their main challenge is internet costs to deliver online content (Maphosa, 2021; Mfaume, 2019). Also, Mashinini (2020) agrees that sometimes students need more data to sustain them throughout the allocated time of the meeting. Similarly, Henaku's (2020) results disclose that participants highlighted that using OTL tools is financially draining, and the cost may negatively affect accessibility.

Most students in the above-captured HEIs complained that data bundles are costly, especially if one has to use Zoom and Google Meet for all lectures. This notion is supported by Oketch-Oboth (2021), that most students indicated that bundles were too expensive at the time. Likewise, Dube (2020) participants reported that data is too expensive and beyond reach for many who stayed in rural communities. Moreover, a survey conducted by Mataka et al. (2020a) indicated that students have smartphones but accessing data for daily learning activities is costly. They argued that the charges for data are exorbitant, significantly worse if one is online for a long time. The issue of data cost is further revealed by Mataka et al. (2020b), where parents stated their main worry is the data costs required for students to access the OTL tools.

Internet Connectivity

Because of poor infrastructure in remote villages, network speed and stability is poor. Therefore, learning through e-learning poses a severe challenge to students from such areas since tools like Zoom require strong internet. It slows down students' participation, which leads to poor understanding and process of learning, consequently negatively impacting the educational development of Lesotho. In Henaku's (2020) study, participants indicated that learning through Zoom and Google meet was problematic due to poor mobile networks. This network problem sometimes takes a long time before an audio or video can be downloaded, and when it is downloaded, many questions have already been asked, which confuses students. In addition, students have to download Google Meet before joining the class. Because of network problems, some students could not download Google Meet and failed to join the class. Henaku (2020) further portrays that students have difficulties

accessing Zoom because of network problems at their places, thus leading them to miss what teachers taught or ideas shared by other students. The issue of internet connectivity as a primary concern to most students is further addressed by Oketch-Oboth (2021), where the majority of students indicated that they were experiencing poor internet connectivity while a minority of students did not have accessible internet services at home.

Mpungose (2020b) studied 26 HEIs students in South Africa who were used as a sample to examine their experiences transitioning from face-to-face classroom to e-learning; the results remarked that students encountered the problem of internet connectivity. It is due to the digital divide limiting most students from effective e-learning, particularly those staying in remote areas and with low socio-economic status. For instance, a student confirmed this by stating that she only checked her emails from the community library with internet access because there is no internet access and network service at her homestead. Internet access plays a significant part in observing effective e-learning, but this can never be achieved if students have limited or no access to the internet. For more clarity, another student asserted that submitting was impossible because of a lack of internet access at home. This statement proves that assessing students online is difficult if the students have no access to the internet.

For this reason, most students become nervous when their instructors demand them to submit their work within the required time when they do not have internet access. The study of Dube (2020) also revealed that despite online learning being one of the best ways of learning, the unavailability of internet connectivity in some rural areas hampers innovation. For instance, one of the participants posited that it is difficult to access online learning materials. This position is further sustained by Hussaini et al. (2020), where students indicated that they find it challenging to submit their assignments on time because of the poor network in the university. They further state that there is no free functional Wi-Fi in the school.

Conversely, Letseka et al.(2018) findings disclosed that most students who participated in accessing and using MyUnisa learning management system had ample access to the internet, and only a minority of students did not. Most students accessed it from home and work. Pete and Soko (2020) remark that assessing the following online tools, Moodle, Google Classroom, and Zoom in Ghana, South Africa, and Kenya's universities reveals that internet services were affordable and adequate for students and lecturers. They were accessed at campus and the workplace, implying that respondents accessed them free of charge. Letseka et al. (2018) and Pete and Soko's (2020) views are much similar to the NUL postgraduate students who can access the Wi-Fi in the university. Still, the internet connection is terrible, so bad that they miss important information from the lecturer. Pete and Soko (2020) further portray this argument that as much as the internet services were affordable and adequate, lecturers and students were asked about the extent to which they are satisfied with an internet connection, and most respondents expressed dissatisfaction.

In addition, most respondents were dissatisfied with these tools' internet speed and stability. They discovered that platforms like Zoom require a strong internet connection, so the video is affected, which calls for internet providers to strengthen their signals and develop e-learning platforms (Pete & Soko, 2020).

Teachers' and Students' Knowledge and Skills in the Usage of e-Resources

Mpungose (2020a) conducted case study research on 31 South African lecturers from two universities and tested their efficiency using the Moodle learning management system. Results revealed that lack of training on using Moodle LMS hindered smooth online teaching and learning since students depended on lecturers for curriculum dissemination and supplementation of other relevant materials that needed to be uploaded by the lecturers. Most lecturers claimed they knew how to use Moodle LMS lesson activity theoretically, but practically it became a problem for them to apply it successfully. They even added that they attend Moodle LMS workshops only once a year. Others added that they failed to upload quizzes for grading because of inadequate training on the system. Mpungose's (2021) findings disclose that students had inadequate knowledge of using hardware and software resources for learning. One of the participants noted that they did not know that they had to download the Zoom app before joining the meeting. The participant said he only realized that Zoom was plugged in on the Moodle LMS while submitting his assignment. Most participants in their first year of studies agreed that training would improve the use of Zoom and other technological resources. Another student indicated she could be given training manuals; she can practice different functions of all Zoom and Moodle.

Mpungose's (2020b) explorative case study reveals that students were not prepared thoroughly by their lecturers to study online, to add to inadequate training on online learning tools. His participants opined that the sudden shutdown had hindered effective ways to be trained to access lectures online. Additionally, they lamented that they were not told which online platform would be used for online lectures. Furthermore, on the lack of facilitators' training for e-resources, Makafane and Chere-Masopha (2021) highlight that students in their study explained that their lecturers had turned the University LMS (Thuto) as a platform for dumping unexplained lecture notes and assignments. Their findings further indicate that the university was not doing enough to support online learning, particularly by making digital infrastructure and resources available and accessible to ensure that students were not disadvantaged. Following, Makafane and Chere-Masopha's (2021) findings pointed out that though the content taught through Thuto is comprehensive, communication is difficult because students have to make an appointment first. In addition, some concepts could be better elaborated to clarify some concepts on other platforms that do not limit self-expression, such as WhatsApp and Zoom.

The study by Henaku (2020) further indicates that students felt they needed adequate training on the e-learning platforms such as Zoom, Google Meets, and WhatsApp. Furthermore, Mataka et al. (2020a) discovered that using Zoom and other platforms that allow virtual meetings will be a severe drawback because not all students will participate in OTL. Lecturers also noted their main concern of training online platforms to reach the students because some need to learn how to use them (Mataka et al., 2020a). Dube (2020) further portrays this issue by reporting that most rural teachers in South Africa could not access online learning tools, thus hampering effective and efficient learning and teaching processes.

The World Bank (2020) also highlights that only a few classroom teachers have been trained in online instructional approaches and tools. As reported in Mpungose (2021), a case study finding on 26 students revealed that students were not equipped with functional knowledge and skills to use hardware and software resources (tools) for online teaching and learning. Some first-year students' reflections are that access is a challenge because they are not given the laptops promised to them since the first semester. One student noted that she did not know how to use OTL tools or even have a smartphone.

Meanwhile, Mpungose (2020a) disclosed that there were those lecturers who found online learning platforms convenient to use. For instance, one lecturer explained that he uses Moodle LMS to facilitate student discussion. His entire informal assessment task uses Moodle LMS resources because he asserts that results are readily displayed for students' feedback. In addition, Amponsah et al. (2021) findings reveal that many zoom and Teams video conferencing technology participants affirmed they had pre-requisite digital literacy skills and information about online teaching. They said Teams is a video conferencing approach, a spontaneous online teaching experience. One participant outlined that her experience with Zoom or Teams as online tools has improved her knowledge base with technology.

Similarly, another participant pointed out that Teams had positively impacted his knowledge of using these and other online tools. In addition to LMS convenience, Maphosa's (2021) study results in the 2021 survey disclosed that online teaching was easy for most respondents. Awad et al. (2019) showed that most faculty members found online learning easy to use. For Maphosa (2021), survey results reveal that a higher percentage of teachers approved that online learning, primarily through WhatsApp, supported and promoted collaborative learning and interaction between students and teachers and between students. In contrast, a lower percentage disagreed, and the lowest percentage vehemently opposed.

The study by Mafa (2018) demonstrates that students can work, read, and do their schoolwork in harmony or without being pushed by their schoolmates using Google Classroom. He further shows that students can individually respond to the teacher's

instructions in their own space and time. Since learning never stops, it goes past classroom contacts; for this reason, students are encouraged to learn online through Google Classroom, and a greater part of them are confirmed to be encouraged to utilise Google Classroom in their learning. The views asserted above are much similar to opinions from some of the HEIs in Lesotho, which argue Teams app used in one of the HEIs in Lesotho is easily accessible for students to receive and send their schoolwork using this app.

Availability of Devices for Learning

Mpungose (2021) study revealed the inaccessibility of hardware resources and the internet for learning. A participant commented: "e-learning is frustrating me when I am home because I do not have necessary resources like laptops and Wi-Fi access … my uncle is abusive in the house since he is not taking alcohol and not smoking because of lockdown regulations." Mpungose (2021) further posited that most of the participants stayed in remote areas, which implies a lack of accessibility to the internet. The study indicates that all the first-year students agreed with the above statement. A third-year student said: "I do not have a laptop and smartphone … I cannot afford data bandwidth for internet access…." Mpungose's (2020a) results on 26 students studying curriculum studies disclosed that affordability to possess hardware learning resources like laptops, phones, and others is difficult because of the socio-economic divide (poor socio-economic background).

Hence, most students depend entirely on the university to supply such resources for effective e-learning. A student asserted that they were promised laptops at the beginning of the academic calendar, but all in vain. Because of this, one had to resort to a smartphone for learning. Similarly, another student emphasized that the total lockdown will negatively affect her, for they are not given money to support them. She will not have money to access hotspot spaces like community libraries as she stays in remote areas. Additionally, this view of the total shutdown creating inconvenience for some students is incongruent with another participant who maintains that she would not have money for transport to go and come back from home. In other words, closing traditional lectures create bedlam since she does not have the necessary learning equipment.

However, another student posits that access to all the necessary resources leads to effective e-learning: "… at home, I have access to Wi-Fi, laptop, and other resources … we are just informed to use Moodle LMS and Zoom for e-learning." It denotes that lecturers do not consider whether students have access to electronic learning resources. Furthermore, some students' challenge is the lack of laptops or smartphones for Google Classroom; consequently, they have to depend on their friends to attend classes (Hussaini et al., 2020). They conclude that all these reasons challenge students to use Google Classroom efficiently and accessibly as an OTL tool.

Students' Attitudes Towards LMS

Because of boredom, many HEIs students attend Zoom VCT, Google Meet, and Teams classes in Lesotho deteriorate until a few consistent students are left to attend the class. As a result, students are not actively engaged in learning and teaching; sometimes, they are just passive members who log in to their WhatsApp and Facebook accounts. As presented in Mpungose's (2021) survey, lengthy lectures can cause fatigue, with students losing focus or concentration. All participants agreed with the observation that they ended up checking their Facebook posts while the lecturer was sharing the screen with them [presenting the lecture] because there were no activities given to do. Similarly, another participant said: "I also don't see people's faces … I don't feel like I am in class." In other words, students on a Zoom platform seem to be deprived of connectedness with their lecturers and learner autonomy; they do not feel as if they are in a real classroom (face-to-face) context.

Furthermore, some students do not join Zoom using the video function and use audio to save data. Most students highlighted that listening to the voice-only limits the interaction with the lecturer and other students on the platform, and they get bored. Some students leave the lecture early due to challenges with internet access. It is proved by another participant who stated: "I only come in for the first 30 minutes in the first lecture to save data bundle for other lectures."

Amponsah et al. (2021) reveal that learning management systems tend to cause fatigue to facilitators and students in the teaching and learning platform. For example, many participants regarded joining video conferences for longer than an hour, viewing and listening to the speakers' declaring points on issues as an 'online-taxing exercise.' Some also said it is physically and emotionally draining during video conferencing. Moreover, the participants voiced that they lost focus on ideas during the discussion because they were exhausted and could not listen or participate.

Addressing Functionality as a Reliable Component of Online Learning and Teaching Tool

Are Online Teaching and Learning Tools User-Friendly? Another line of thought on OTL's functionality demonstrates faculty members' insufficient information technology (IT) knowledge and the deficiency of electronic devices. Sepiriti's (2021) findings reveal that Thuto, an OTL tool used at the National University of Lesotho (NUL), is inaccessible. The study remarked that Thuto does not accommodate all students at once, and it goes offline frequently, thus, limiting students' participation; it is not easily accessible during the weekends. He further indicates that it is slow and unreliable while writing assignments so much that students miss their deadlines, and for that matter, they are penalized. At the same time, the problem is created by Thuto and not their human errors. Conversely, Makumane (2021) argues that Thuto LMS is viewed as a professional platform to which every lecturer

and student alike has access, promoting professional and structured communication, reliable record-keeping, and students following specific steps to access the content. The findings from Makumane (2021) and Sepiriti (2021) juxtapose the disconnect between the failures of Thuto as an LMS and the "unexamined" ideals for which it was mounted, hence the significance of the current study.

Google Classroom allows the facilitator to give a broad scope of assets for instruction and learning (Mafa, 2018). Many students agree that Google Classroom has numerous easy-to-use features which are provided by this learning management system, such as the capacity to download notes, assignments, and records, upload videos and audio, transfer files, and finally, permit one to see posts and notifications from either the facilitator or the learner. In accord with Mafa (2018), the findings discovered by Hussaini et al. (2020) portray that the majority of people claim it is easy and accessible to learn through Google Classroom, meaning that it is an effective strategy that enhances students' ability to think and access to learning material. Furthermore, knowledge and skills are magnified through Google Classroom as students' participation in class improves. Participants claimed that Google Classroom should be incorporated into teaching and learning as it would significantly improve students' academic performance. Therefore, Google Classroom positively impacts students' knowledge and skills (Hussaini et al., 2020).

The other positive comments about Zoom and Microsoft Teams are that participants acquire new digital skills. One participant stated that Microsoft Teams as a video-conferencing tool was introduced to them at a university continuous professional development session. With two follow-up sessions he attended this year, he improved his skills digitally. With the skills acquired through the sessions, he incorporates them with his students during the COVID-19 lockdown. Another female participant shared that she can now organise and chair Zoom meetings through the training she has acquired from the university. Finally, she has trained other faculty members to use video conferencing.

Nonetheless, as cited by Amponsah et al. (2021), so that people do not annoy others in LMS like Zoom and Teams, it is important to mute the microphones unless one wants to give their views to the session (Hines & Sun, 2020; Jiang, 2020). Besides muting the microphone and videos, another point is that people should not murmur behind gadgets (Hines & Sun, 2020). They also touched on arranging spaces so that disruptions would be minimised. It implies that the nature of these LMS can be quite disturbing, especially during synchronous online learning, if managed poorly. University of South Africa (Unisa) also uses satellite broadcast, which is revealed to be less interactive than video conferencing but more cost-effective. Also, students can see their lecturer, but the lecturer cannot. One of the disadvantages of satellite broadcasts is that they encourage passive viewing instead of active viewing. Moreover, students cannot control the medium and cannot stop the flow of information to ask questions and request clarification (Letseka et al., 2018).

More so, Amponsah et al. (2021) reported that the connection breaks up and causes poor sound and video conferencing quality, disturbing hearing. For instance, a participant illustrated that she was troubled by people's behaviour at her first Team meeting. Again, people did not mute their microphones, which disturbed the whole meeting. The worst part is that their many words simultaneously always echoed in her ears. In most interview sessions, people always expressed opinions by repeating 'what are you saying' and 'you are breaking up.'' Most participants posted that their dissatisfaction with poor presentations, poor sound, and high noise levels were disturbing and broke their concentration. One participant alluded that she hated sitting in meetings because poor-quality presentations or background noise affected her concentration.

IMPLICATIONS AND SUGGESTIONS

It is pretty evident from the existing literature that in as much as the use of OTL tools plays a valuable role in facilitating the dissemination of knowledge to learners, there are some factors affecting its functionality and probability of success which have been noted in the results such as internet connectivity, lack of infrastructure, electricity, gadgets to be used for OTL. Therefore, this implies that there could be a broadened digital divide between learners and lecturers regarding the tools' accessibility since it has to be accessible if it is functional. Therefore, it could pose some threats to a certain extent, hindering the progression and success of teaching and learning in HEIs. Therefore, for students who are disadvantaged and from poor social backgrounds, the situation can turn around if the government of Lesotho can provide subsidies to students, allowing them to access e-learning resources at low or no costs. Similarly, Lesotho telecommunication companies must assist learners by providing them free Wi-Fi since most lecturers in Lesotho HEIs do not prepare for different student situations. Alternatively, educational systems could consider blended learning platforms to address this digital divide among students so that the learning process does not slow down and negatively impacts the educational development of Lesotho. Furthermore, it could assist teachers and learners who find it difficult or struggle while using online devices. Besides that, it is advisable to have policies designed for OTL explaining step-by-step how to use e-learning and e-teaching resources.

The findings also illustrate that because of boredom, many students' Zoom VCT classes' attendance deteriorates daily until a few consistent students are left to attend the class. Therefore, the content delivered in this learning environment is wasted; the outcomes are unfavorable. One could imagine what this implies to the country's educational development if these learning conditions are left just as they are. Therefore, it would be advisable for lecturers to engage students actively in an online platform and maintain the same level of interaction as face-to-face to avoid losing focus in class. It is also wise for students to practice listening skills for effective learning.

Most students from NUL reported that Thuto LMS is inaccessible, especially on weekends, and constantly offline. On the same note, participants in Teams and Zoom VCT protested poor sound quality, break-ups in connectivity, and low quality of video conferencing. Another problem revealed from the literature is that online platforms encourage passive viewing instead of active viewing. Similarly, this indicates that these tools have limitations regarding their functionality and probability of success. These limitations pose a threat of depleting educational progress among Basotho learners, especially in this global pandemic, where students feel compelled to use online learning tools to avoid infection. However, adequate training of lecturers and learners in properly using hardware and software resources can remedy this threat. In addition, the institutions could draw policies regarding e-learning and e-teaching to guide lecturers and students in properly using the devices.

As much as OTL tools have limitations, it can still be reasoned that it has some positive impacts. The functionality and probability of success component of OTL tools are, to some degree, dependable since it provides features that enable learners to download notes, assignments, records, videos, and audio. As argued in the findings, OTL is easy to use and promotes collaborative learning and interaction, which sharpens one's knowledge base with technologies. One of the online learning tools, Moodle, quickly displays students' results for students feedback. Similarly, Google Classroom is an effective tool that develops students' thoughtfulness and easy access to lecture materials. Again, Google Classroom improves students' interest in learning while other students' level of participation in class activities is also believed to be enhanced by this approach. It concludes that Google Classroom positively affects students' knowledge and skills. Thuto LMS is also viewed as a professional platform to which every teacher and student has access, promoting professional and structured communication and reliable record-keeping. Students follow specific steps to access the content.

The advantages outlined above can be crucial in Lesotho's context because e-learning tools can efficiently deliver courses as the resources can be easily accessed anywhere and in unconstrained times. Again, because online learning tools promote collaboration amongst learners, students can interact with their friends from all over the country through group discussions and private chats. Suppose online learning tools increase participation in class activities. In that case, it portrays that more students will be able to comprehend the concepts taught through these tools, which leads to improved performance and maintains effective and quality education in Lesotho. Subsequently, one could argue that the functionality and probability of success of OTL tools are reliable.

CONCLUSION

This review investigated the reliability of Lesotho's OTL tools. The qualitative content analysis method used the interpretivism approach to conduct this study. This approach sought the deeper meaning of the information we gathered. It is also important to note that this study informs the users or institute administrators of strategies for the effective implementation of online learning. Further, it checks the reliability of online tools, thus informing future researchers of recent findings. Therefore, based on the findings extracted from the articles, it was concluded that OTL tools are reliable regarding the probability of success and their functionality. However, many shortcomings outweigh the strengths, implying that the education quality in Lesotho could be hampered if lecturers only rely on OTL tools. Therefore, blended learning is advisable, especially for students from disadvantaged families who cannot buy data or gadgets needed for OTL. In addition, students and lecturers should be trained in using the tools for effective teaching and learning. We acknowledge a few limitations in this review. It did not analyse all the reliability components of OTL tools. Therefore, further research is recommended, covering a broader scope of reliability components for the generalisability of the findings.

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