

Emerging perspectives and challenges for virtual collaborative learning in an institution of higher education: a case of Lesotho

Gloria Lihotetso Matee

*Faculty of Health and Education, Botho University, Maseru, Lesotho and
Department of Language and Social Education, National University of Lesotho,
Maseru, Lesotho, and*

Nthabiseng Motlohi and Palesa Nkiwane

Faculty of Health and Education, Botho University, Maseru, Lesotho

Received 7 June 2021
Revised 29 October 2021
Accepted 4 November 2021

Abstract

Purpose – This study aims to investigate emerging perspectives and challenges which teaching staff and students in the Faculties of Business and Accounting, Health and Education as well as Computing encountered in using Virtual Collaborative Learning during their classes in one accredited institution of higher education in Maseru district Lesotho. Previously conducted studies reveal that although similar studies to the current one have been conducted in different countries across the globe, conducting them in another different country such as Lesotho and in a different context might provide new information.

Design/methodology/approach – The study draws on Lev Vygotsky's social constructivism as the theoretical framework because it is relevant and appropriate. The study was buttressed by constructivism paradigm, qualitative design as well as a qualitative case study. A purposive sampling technique was used in this study. A sample of 35 students and 11 teaching staff from the 3 respective faculties were used as participants of the study. This qualitative case study was based on online questionnaires issued to the participants using emails for data collection. Data were generated based on the themes which emerged.

Findings – The findings of the study suggest that majority of students found Virtual Collaborative Learning helpful and a user-friendly tool. However, lack of resources, clear instructions from the teaching staff and cooperation, internet connectivity issues, as well as data expenses have been identified as stumbling blocks that discourage students' satisfactory engagement in Virtual Collaborative Learning. The findings further revealed various strategies including encouraging students to cooperate, grading students' participation on online platforms and consultations could be used to overcome the challenges encountered in using Virtual Collaborative Learning. For generalisability and understanding of the breadth of the students and teaching staff experiences and challenges of Virtual Collaborative Learning, the authors recommend further study to be conducted on a larger representative sample, using the established themes of the current study.

Research limitations/implications – Using face-to-face interviews and classroom observations for data collection would have been more suitable for a qualitative methodology. However, due to COVID-19 regulations that restrict contact and limit lessons on online platforms, an online questionnaire was used for data collection.



The authors would like to express their heartfelt gratitude to all the participants, colleagues and the management of Botho University, Maseru campus, for their contributions towards the success of this research, Mr John Batani for his IT expertise and outstanding support, and our families for their remarkable support.

Originality/value – This research reveals emerging perspectives and challenges which are encountered by teaching staff and students while using Virtual Collaborative Learning in one institution of higher education in Maseru Lesotho.

Keywords Internet, Distance learning, Higher education, E-learning, Blended learning, Digital learning, Perspectives, Challenges, Collaboration, Collaborative learning, Virtual collaborative learning, Institutions of higher education

Paper type Research paper

Introduction

With the current outbreak of coronavirus pandemic (COVID-19), Virtual Collaborative Learning seems to be a significantly pertinent method of teaching and learning, given that COVID-19 affects the education system across the globe (Tadesse and Muluye, 2020). Virtual Collaborative Learning adopts cooperation and group work among participants who are expected to create knowledge through interaction in small teams using online platforms (Hernández *et al.*, 2014; Weber *et al.*, 2014; Bukvova *et al.*, 2006). Prior to the COVID-19 crisis, studies affirm the implementation of Virtual Collaborative Learning and its challenges in institutions of higher education (Rahman *et al.*, 2014; Weber, 2014; Muuro *et al.*, 2014; Faja, 2013; Matyokurehwa, 2013). The outbreak of COVID-19 confronted the education sector with many challenges. Ngwacho (2021) states that “The COVID-19 catastrophe being the most recent challenge has triggered swift and unprecedented distraction across higher learning institutions, impacting learners, lecturers, and institutions.” However, Sun (2020) explicates that “Students can conduct classroom display under the guidance of teachers or group cooperation through the ‘online’ self-study before class, and carry out learning discussion in the ‘offline’ class, to promote students’ ability of independent thinking and innovative learning.” Keeping this in view, this study aims to investigate emerging perspectives and challenges which teaching staff and students encountered in using Virtual Collaborative Learning as a method of teaching and learning in one accredited institution of higher education in the Maseru district, Lesotho.

Literature review

Virtual Collaborative Learning in institutions of higher education seems to be a significantly pertinent method of teaching and learning in the emerging situation of the COVID-19 crisis. Collaboration is an essential 21st century skill, which students in institutions of higher education need to acquire as they might work with other people for the most part of their adult lives. It is a key 21st century skill that encourages group work and interaction among group members (Child and Shaw, 2016; Chandra, 2015; Laal and Ghodsi, 2011). Collaboration espouses Collaborative Learning which puts more emphasis on teamwork, problem-solving and of which it is believed that it stemmed from an attack against authoritarian teaching style as argued by Hesse *et al.* (2015) cited in different works (Zambrano *et al.*, 2019; Chandra, 2015; Hernandez, 2012). In the light of the given definitions, the implication is that modern-day learning is in such a way that it seems to be encouraging learning to be more student-centred than teacher-centred. That is, Collaborative Learning as a method of teaching and learning inspires students to be active participants and interact with one another in their present-day online learning environments, especially during the COVID-19 pandemic.

Collaborative Learning can be implemented in virtual environments as Virtual Collaborative Learning where it also adopts cooperation and group work among participants who are expected to create knowledge through interaction in small teams using online platforms (Hernández *et al.*, 2014; Weber *et al.*, 2014; Bukvova *et al.*, 2006). Premised on this elaboration, it seems that for Collaborative Learning to be effective in virtual environments, instruction and

activities should be delivered and given using appropriate online platforms. Such platforms should be accessible to both the teaching staff and students and be monitored by the teaching staff. With this in view, it is research sensible for an inquiry to be conducted to establish how teaching staff and students perceive the aspect of teaching and learning in virtual environments, as well as challenges they encounter in using Virtual Collaborative Learning.

Implementation and challenges of virtual collaborative learning

Before the present situation of the COVID-19 crisis, the literature confirms the implementation of Virtual Collaborative Learning as a method of teaching and learning in institutions of higher education (Rahman *et al.*, 2014; Weber, 2014; Muuro *et al.*, 2014; Faja, 2013; Matyokurehwa, 2013). This assertion holds for Rahman *et al.* (2014) that currently, teaching and learning activities also take place on virtual platforms supported by information communication and technology (ICT)-based applications such as a weblog, wiki, social networking and video sharing sites.

Documented scholarship reveals that even though Virtual Collaborative Learning is of the essence, the sudden outbreak of the COVID-19 pandemic negatively impacted the education sector. Institutions of higher education in many countries were temporarily closed to control the spread of COVID-19 (Kajiita *et al.*, 2020; Tadesse and Muluye, 2020; Makafane and Chere-Masopha, 2021; Ngwacho, 2021). This closure of schools resulted in higher education institutions having to alternatively engage in virtual teaching and learning, as well as use the virtual collaborative learning method of teaching and learning. However, lack of network infrastructures, loss of non-verbal cues, reduced mechanisms for informal conversations, lack of feedback from instructors and peers, lack of time to participate, slow internet connectivity, affective team support, presence of a positive group leader, consensus-building skills, low or no participation of other group members, e-learning resources, computer literacy and internet access (Makafane and Chere-Masopha, 2021; Tamrat and Teferra, 2020; Zozie and Chiwanga, 2018; Muuro *et al.*, 2014; Weber *et al.*, 2014; An *et al.*, 2008) have been displayed as other challenges encountered in using Virtual Collaborative Learning in institutions of higher education.

Even though online education has become an integral part of many colleges and universities, teaching staff are frequently faced with challenges of adopting teaching methods to the virtual environments (Faja, 2013). By implication, therefore, teaching staff should be equipped with indispensable skills which they can use to implement Virtual Collaborative Learning and encourage students to be active participants in their online groups. They need to design online group work in such a way that it includes both group and individual performance-based tasks, as well as the individual's responsibilities (Bacon and MacKinnon, 2016; An *et al.*, 2008). The given challenges call for an inquiry to be carried out in different contexts at institutions of higher education to find out whether or not the same challenges can be encountered.

Studies related to virtual collaborative learning

Virtual Collaborative Learning seems to be a subject of research in different countries across the globe. For instance, An *et al.* (2008) conducted a quantitative research study in the USA on teacher perspectives on online collaborative learning focussing on factors perceived as facilitating and impeding successful online group work. The key findings revealed that even though there were five factors identified as a major success for online collaborative learning, there were seven factors found to be impeding successful online group work. In Germany, Weber *et al.* (2014) conducted a canonical action research addressing aspects of Virtual Collaborative Learning that were identified as critical in a series of courses named "Net Economy." These included technical infrastructure, motivation and collaboration and assessment and evaluation. The key findings of the study revealed students' lack of

involvement in the preparation of the course and problems of cooperation in the teams, among others.

Africa is also not an exception to the use of Virtual Collaborative Learning in institutions of higher education. In Kenya, [Muuro *et al.* \(2014\)](#) carried out a quantitative research study with a focus on students' perceived challenges in an online collaborative learning environment in higher learning institutions of Nairobi. The study findings reflected lack of feedback from teaching staff and peers, lack of time to participate, slow internet connectivity and low or no participation of other group members as major challenges in institutions of higher education. For the Southern African Development Community region, still in Africa, [Matyokurehwa \(2013\)](#) conducted a qualitative research study on challenges faced in implementing ICT in higher learning institutions in Botswana. The study findings showed that major challenges are to do with funding, students' late exposure to ICT technology and the curriculum design of institutions. Hence, the current study takes a rather similar route although focussing on the emerging perspectives and challenges for Virtual Collaborative Learning in one institution of higher education in Lesotho.

Lesotho's context for virtual collaborative learning

Lesotho is not an exception to the use of Virtual Collaborative Learning as a teaching and learning method in higher education institutions. It is worth acknowledging that studies have been conducted on the use of technology for teaching and learning in institutions of higher education in Lesotho. Currently, [Turugare and Rudhumbu \(2020\)](#) and [Makafane and Chere-Masopha \(2021\)](#) conducted quantitative research studies in Lesotho. [Turugare and Rudhumbu's \(2020\)](#) study investigated the extent to which universities in Lesotho integrated technology in teaching and learning, as well as identifying factors that act as challenges and opportunities to effective integration of technology in the universities. The study revealed the need for the integration of technology into teaching and learning to be enhanced via sustainable approaches for staff development, technical support and a fair supply of infrastructure. [Makafane and Chere-Masopha's \(2021\)](#) study focussed on the types of challenges the students were experiencing, how the students dealt with those challenges and the general implications. The study findings suggest that the challenges that were experienced by the students were mainly influenced by their personal attributes, pedagogical issues and how the university supported them.

Therefore, the studies leave an information gap for further research to be conducted, specifically focussing on collaborative learning in virtual environments at institutions of higher education in Lesotho. Drawing from documented literature, it seems that Virtual Collaborative Learning poses some emerging perspectives and challenges that should be subjected to research. In what follows, the statement of the problem is presented.

Statement of the problem

Literature, as shown in the previous section, reveals that across the globe, different countries are shifting from traditional teacher-centred methods of delivering instruction to strategies that are more student-centred such as Collaborative Learning in both physical and virtual environments. Hence, there is an introduction of Virtual Collaborative Learning in different levels of learning in the education systems of many countries in the world. Despite the use of Virtual Collaborative Learning in institutions of higher education, there is a paucity of local research on the students' and teaching staff's experiences and challenges on Virtual Collaborative Learning.

Grounded on the previously conducted studies' knowledge gaps, it seems that even if relatively similar studies have been conducted in other countries, conducting them in a different country such as Lesotho and in a different context might provide new information. For instance, as has already been discussed in the foregoing paragraphs, most studies leave

an information gap for the emerging perspectives and challenges for Virtual Collaborative Learning in institutions of higher education. [Turugare and Rudhumbu's \(2020\)](#) study, as well as [Makafane and Chere-Masopha's \(2021\)](#) study, which were conducted in Lesotho, therefore, leave an information gap for further research to be conducted which will specifically focus on, among others, collaborative learning on virtual environments at institutions of higher education in Lesotho. As a result, this study seeks to unearth some emerging perspectives and challenges for Virtual Collaborative Learning, which are encountered by teaching staff and students in one institution of higher education in Maseru Lesotho. The following section features what form research questions.

Research questions

This section entails the main research question and specific questions. The following is the main research question for this study:

What are the emerging perspectives and challenges which teaching staff and students encounter in using Virtual Collaborative Learning in one accredited institution of higher education in Lesotho?

The more specific questions which were used in this study to provide answers to the main research question are as follows:

- RQ1.* How is Virtual Collaborative Learning perceived by teaching staff and students in the institutions of higher education in Lesotho?
- RQ2.* What are the benefits of using Virtual Collaborative Learning in the institutions of higher education in Lesotho?
- RQ3.* What are the challenges encountered in using Virtual Collaborative Learning in the institutions of higher education in Lesotho?
- RQ4.* What are strategies which can be used to overcome challenges encountered by teaching staff and students in the institutions of higher education in Lesotho?

In what follows, a theoretical framework is expounded.

Theoretical framework

This study draws on [Vygotsky's \(1978\)](#) social constructivism theory as the theoretical framework to advance the researchers' understanding of emerging perspectives and challenges which teaching staff and students encounter in the institutions of higher education. [Amineh and Asl \(2015, p. 5\)](#) define social constructivism as a theory of knowledge and communication that examines the knowledge and understandings of the world that are developed jointly by individuals. Additionally, [Akpan et al. \(2020\)](#) expound that social constructivism is a collaborative form of learning based on interaction, discussion and knowledge sharing among students. In other words, social constructivism focusses on interaction, collaboration and group work for learning to take place.

Social constructivism theory's principles, which align with virtual collaborative learning according to [Akpan et al. \(2020\)](#):

- It focusses on interaction, collaboration and group work for effective learning.
- Knowledge is seen as what the students do in collaboration with other students, teachers and peers.
- Facilitators guide students for the collaborative nature of learning to take place.

This theory was, therefore, purposefully chosen due to the aforementioned principles which include among others that learning is a collaborative process; thus, students are encouraged to share ideas collaboratively, brainstorm to discover cause and effect, solve problems or create something new to add to the existing knowledge (Akpan *et al.*, 2020). The outlined principles were further used to situate the current study in Virtual Collaborative Learning which is being used in the selected institution of higher education in Lesotho.

Methodology

The current study is qualitative in nature and is reinforced by the constructivism paradigm. As per this paradigm, people's view of the world is often influenced by their experiences (Creswell, 2014). The study subsequently adopted a qualitative case study approach (Asunka, 2008) to examine participants' perceptions and challenges regarding the use of Virtual Collaborative Learning in institutions of higher education. As Maree (2012, p. 76) explicates, "Case study research is aimed at gaining greater insight and understanding of the dynamics of a specific situation." The researchers strived to gain a deeper level of understanding of individual participants' perceptions and challenges regarding the use of Collaborative Learning in virtual environments of one accredited institution of higher education in Lesotho (Bromley, 1991 in Maree, 2017).

Participants

Participants for this study were all full-time teaching staff with a minimum qualification of masters' degree. The other participants were all third-year undergraduate students who were 18 years and above who were either in the fifth or sixth semester in the year 2020 and have registered across the three faculties of Business Accounting, Health and Education and Computing. The third-year students were selected since they were near completion of their first degree and were experiencing Virtual Collaborative Learning in both fifth and sixth semesters in 2020. Given COVID-19 restrictions, such as maintaining social distance, the participants were mostly learning online. The researchers asked for permission to conduct the study at the selected institution and were granted. Management Information System Department provided the researchers with a list of all third-year students with their mobile phone numbers and email addresses. In 2020, there were about 186 third-year students registered across the three faculties, 54 from the Faculty of Business Accounting (FBA), 57 from the Faculty of Health and Education (FHE) and 75 from the Faculty of Computing (FOC). There were also 26 full-time master's degree lecturers, 9 FBA, 7 FHE and 10 FOC.

Observing the COVID-19 rules and regulations, the researchers communicated to the lecturers through the institution's email addresses and the questionnaires seeking their permission to participate in the study. Out of 26 lecturers, 11 lecturers willingly filled the questionnaires. Again, the researchers called all the phone numbers for third-year students, but not all responded. From FBA, 26 responded; in the FHE, 23 responded and 24 responded from the FOC. Those who responded were informed about the study, sought their permission to participate in the study by answering the online questionnaire that would be sent via their email addresses, assured of keeping their anonymity and their willingness to participate was taken into consideration (Makafane and Chere-Masopha, 2021; Henning, 2017). The aim was to involve all the third-year students, but given that the majority of the students did not respond to the telephonic calls, the researchers could not send emails to all the third-year students. Although the purpose of the study was explained to 73 students who responded to the calls, only 35 students willingly participated in the study.

Sampling

Purposive sampling method was hence used in this research. Maree (2012) expounds that qualitative research is generally based on non-probability. This is where participants are selected because of the rich source of information that they have regarding research questions used for data collection. Maree (2012) further stresses that as opposed to quantitative research, sampling in qualitative research usually involves smaller sample sizes. Badugela (2012, p. 25) stated that purposive sampling “is a strategy to choose the small groups or individuals likely to be knowledgeable and informative about the phenomenon of interest.” Third-year undergraduate students were, as a result, selected given that they have been exposed to Virtual Collaborative Learning since their first year of study at the selected institution of higher education. Given their exposure, they were considered to be more knowledgeable with regard to the phenomenon.

Data collection

To collect data from both teaching staff and students, semi-structured online questionnaires were used. Data was collected in November 2020. Even though the researchers’ initial intention was to use face-to-face interviews, focus group discussion and observation methods, due to COVID-19 restrictions such as social distancing and minimised human movement that the Government of Lesotho imposed in 2020 (Ministry of Health, Lesotho, 2020), the alternative method being online questionnaires had to be used. Rakotsokane (2012, p. 49) states that “Questionnaires are good methods of data collection when there is a need for a particular class of people to be questioned.” The questionnaires used for data collection were designed and administered using Google Forms and sent through participants’ email addresses to obtain sufficient and relevant information from them (Singh *et al.*, 2020; Upoalkpajor and Upoalkpajor, 2020). The use of online questionnaires helped the researchers to explore the participants’ emerging perspectives and the challenges they encounter as they use Virtual Collaborative Learning.

To analyse the qualitative data collected in this study which consisted of both teaching staff and students’ responses to the questions, thematic analysis was used (Asunka, 2008). The qualitative data for this study was categorised and analysed based on the themes which emerged to make interpretations and to draw conclusions with regard to the research questions. The researchers also drew insights from the theoretical approach that was used in this study to understand the emerging perspectives and challenges for Virtual Collaborative Learning in one accredited institution of higher education in Lesotho. The next section reveals study findings by research questions.

Study findings and interpretations

To answer the research questions and to gain a deeper understanding of the phenomenon from the participants, online questionnaires were the main data collection technique for this study. To analyse and interpret the findings, the researchers read and interpret data collected and coded it according to the themes which emerged (Matee, 2019). For the researchers’ analysis of the responses, data was categorised into teaching staff and students. The themes which emerged were presented, interpreted and supported with extracts from the participants’ responses (Makafane and Chere-Masopha, 2021), as well as using Nvivo qualitative analysis online tool in relation to the research questions. Demographic characteristics were analysed in a tabular form for easy understanding (Upoalkpajor and Upoalkpajor, 2020).

Teaching staff

Table 1 shows demographic characteristics of 11 teaching staff who willingly participated in the study; 2 men, 7 women and 2 who preferred not to disclose their gender. The

participants were ranging from 20 to 50 years of age and above. They were from FBA, FOC and FHE with masters' degree, PhD and other qualifications.

Study findings and interpretations on teaching staff

The findings of this study revealed that teaching staff members who participated in this study all use Virtual Collaborative Learning in their online teaching. They expressed its benefits, challenges, as well as strategies that can be used while using this teaching and learning method in institutions of higher education. The Nvivo software helped us to code the themes which emerged while we were analysing the data collected.

The first research question sought to understand the teaching staff's understanding of Virtual Collaborative Learning. Participants expressed that Virtual Collaborative Learning is a modern online platform, which enhances teaching and learning beyond classroom walls and encourages thinking out of the box to explore and share ideas. They showed that it also facilitates collaboration, teamwork and discussions in virtual environments. These findings are consistent with the study's theoretical framework in that, as stated by [Akpan et al. \(2020, p. 50\)](#), social constructivism "[. . .] emphasizes the collaborative nature of learning under the guidance of a facilitator or in collaboration with other students." A participant elaborated:

It is a hallmark of university study as it includes skills such as developing arguments, reflecting, evaluating and making judgements. In this way, thinking abilities could be assessed. It calls for personal reflections on critical incidents, events or issues, and record the learning achieved as a result. It solves problems and develops plans. This is an important ability, both academically and vocationally as it helps students to apply theory and argue a case.

The findings are in line with [Unal and Cakir \(2017\)](#) study, which illustrates that nowadays, community colleges have an important role in training individuals with the necessary skills and competences needed in the business sector. The findings suggest the importance of Virtual Collaborative Learning by encouraging cooperation among the students in virtual environments.

The second research question sought to understand the benefits of using Virtual Collaborative Learning by teaching staff. Teaching staff revealed that using Virtual Collaborative Learning is beneficial to them. The benefits which emerged are that using Virtual Collaborative Learning helps teach staff to engage students in online group discussions where they do not necessarily have to meet physically. They reiterated that this

Table 1.
Demographic
characteristics of
teaching staff

Variable	Subcategory	Frequency
Gender	Male	2
	Female	7
	Prefer not to say	2
	Total	11
Age	20–29	1
	30–39	6
	40–49	3
	50 and above	1
	Total	11
Faculty	FBA	2
	FOC	3
	FHE	6
	Total	11

type of teaching and learning is very relevant and makes teaching easy, especially during the COVID-19 pandemic era where meeting students physically poses a health risk. One of the participants expounded:

It allows students to challenge current concepts and provides a space for them to explore new ideas.

Another participant further showed that this type of teaching and learning is in line with the policy of the university to train well-rounded and globally employable graduates. The findings suggest that many teaching staff find this type of learning to be helpful in the sense that teaching and learning are flexible, easily accessed and safe during the COVID-19 pandemic era. The findings seem to be consistent with [Zambrano *et al.* \(2019\)](#), who expound Collaborative Learning as a promising instructional technique for learning to solve complex problems. As per one of the principles of the study's theoretical framework, the teacher is a facilitator who guides and encourages students to work together in groups to solve problems, investigate and discover or construct knowledge by themselves ([Akpan *et al.*, 2020](#)).

The third research question revealed challenges encountered by teaching staff in using Virtual Collaborative Learning. The participants expressed that they encounter challenges in using Virtual Collaborative Learning. The challenges they encountered thematised into lack of resources, lack of cooperation, internet issues, data issues and resistance by students. They explained that lack of suitable technology methods, as well as lack of knowledge or improper usage of technology, constitute challenges, which are encountered in using Virtual Collaborative Learning. They again expounded that lack of body language, inability to respond promptly to students like in physical environments and inability to tell whether students understand or not institute challenges to using Virtual Collaborative Learning. They further elaborated that internet issues such as unreliability and unstable connection, as well as expenses towards data, contribute to students not cooperating and/or being resistant. Again, they indicated that both teaching staff and students take time to adapt to Virtual Collaborative Learning. One participant commented:

The participation is often skewed, with only a few students making much of the contribution to the discussion.

The findings, therefore, revealed that there are various challenges, which teaching staff encounter in using Virtual Collaborative Learning in institutions of higher education. These findings align with [Muuro *et al.*'s \(2014\)](#) study findings which also reveal issues of connectivity and lack of students' participation as some of the challenges encountered by the teaching staff.

The last research question sought for strategies that can be used to overcome challenges encountered by teaching staff in using Virtual Collaborative Learning. The participants proposed various strategies which can be used in using Virtual Collaborative Learning in institutions of higher education. They proposed encouraging students to cooperate and explained the importance of using Virtual Collaborative Learning to them, encourage students who have data challenges to use the university's campus network, use familiar methods of teaching, reduce the content on virtual learning and encourage students to work at night when networks are faster. These findings revealed that even though using Virtual Collaborative Learning may be challenging, there are strategies, which can be used to overcome such challenges.

[Figure 1](#) below presents the word cloud formed from the lecturers' responses.

Students

[Table 2](#) shows the demographic characteristics of 35 third-year students who willingly participated in the study: 17 men and 18 women. The participants ranged from the ages of

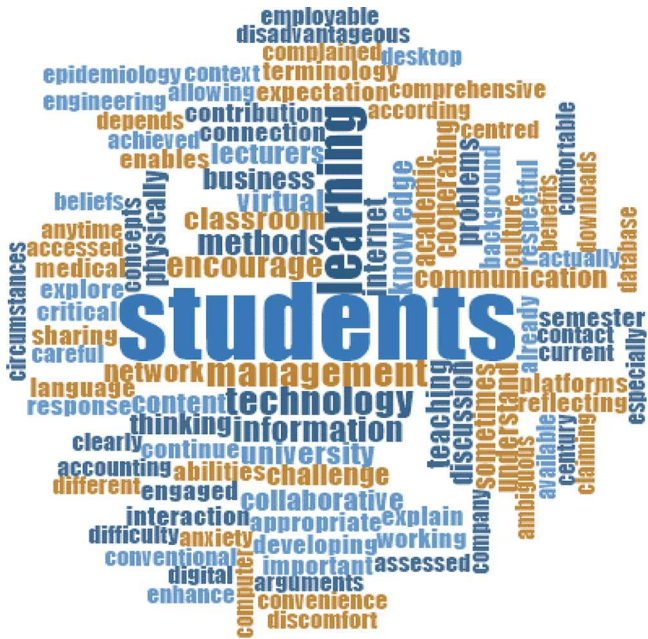


Figure 1.
Lecturers' responses
to their questionnaire

Variable	Subcategory	Frequency
Gender	Male	17
	Female	18
	Total	35
Age	18–20	1
	20–25	29
	25–30	4
	30 and above	1
	Total	35
Faculty	FBA	9
	FOC	9
	FHE	17
	Total	35
Academic level (semester)	5	1
	6	34
	Total	35

Table 2.
Demographic
characteristics of
students

18 to 30 and above. They were from FBA, FOC and FHE and 34 of them were fifth-semester students while one of them was a sixth-semester student.

Study findings and interpretations on students

The findings revealed that all the 35 students who participated in this study use Virtual Collaborative Learning for their online learning. The majority of students, 14 of them showed that they use Virtual Collaborative Learning two or more times per week, followed

by 12 who use it daily, then 9 who use it once a week. The Nvivo software helped us to code the themes which emerged while we were analysing data collected from the students per research questions.

The first research question sought to understand emerging perspectives of Virtual Collaborative Learning by students. Most students described Virtual Collaborative Learning as a helpful way of learning. This finding is in line with [Hernández et al.'s \(2014\)](#) study, which maintains that for successful learning to take place in virtual settings, collaboration is said to be key and one of the dominant characteristics in technology-supported education.

The second research question addressed benefits, which students gained or were gaining in using Virtual Collaborative Learning. Many students explained that using Virtual Collaborative Learning is beneficial. The benefits they mentioned thematised into teamwork, timely preparation, information, accessibility and convenience. They showed that the use of Virtual Collaborative Learning is helpful in that they are able to discuss as a whole class regarding the content uploaded for them. These findings are in line with [Kumi-Yeboah et al.'s \(2017\)](#) study findings that online collaborative activities help participants to engage with peers during discussions. They expressed that they were able to prepare themselves ahead of time because teaching staff upload content prior to contact sessions. They further acknowledged that this type of teaching and learning is quite informative because it encourages research on the part of students. One of the participants explained:

I get different opinions from others, so that opens a wide range of understanding and perceiving things in multiple ways and helps me not to be stereotyped. Eagerness to research or go around finding the best solutions for what is being discussed, that broadens my thinking and learning ability.

The participants also emphasised that using Virtual Collaborative Learning is helpful in that they are able to do any work given to them from wherever they are. One participant noted:

[. . .] if there are some matters we need to talk about, we easily communicate with the team anytime from wherever we are[. . .]

Furthermore, they expressed that this type of learning is convenient in that even during the COVID-19 pandemic era, learning still takes place without physical contact.

These findings concur with the guiding principles of the theoretical framework used in this study, which encourages collaboration among individuals ([Akpan et al., 2020](#)). The finding also suggests that students are expected to create knowledge through interaction in small teams on online platforms ([Bukvova et al., 2006](#)).

The third research question sought to understand challenges encountered by students in using Virtual Collaborative Learning. Many participants explained that they encounter various challenges such as network problems, data expenses, lack of clear instructions from the teaching staff and problematic group members when using Virtual Collaborative Learning. They expressed that the main challenge which they face is that at times network becomes a problem in that it sometimes becomes too slow or even denies them a chance to submit their work. One participant articulated, "Sometimes blackboard fails to load due to network issues. When submitting an assessment, it does not show results; it appears as a blank page." The issue of data emerged as another challenge, which the students encounter in using Virtual Collaborative Learning. They expressed that it is expensive and that some materials shared consume a lot of data. They stated that another challenge which they encounter is a lack of clear instructions from the teaching staff. One participant elaborated:

The challenge especially with the blackboard discussion forum is that as students we just post the information or views for the sake of attending some topics given, without interacting with each

Limitations and areas for further research

Even though the study displayed literature reviewed regarding Virtual Collaborative Learning in institutions of higher education in different countries across the globe, researchers do not claim to have exhausted all documented studies; hence, they suggest that further research be conducted in the same area of study. Researchers further state that using face-to-face interviews and classroom observations for data collection for the current study would have been more suitable for a qualitative methodology. However, due to COVID-19 regulations that restrict contact and limited lessons to online platforms, an online questionnaire was used for data collection.

For generalisability and understanding of the breadth of the students and teaching staff experiences and challenges of Virtual Collaborative Learning, researchers recommend further study to be conducted on a larger representative sample, using the established themes of the current study. Furthermore, it could be useful for research to inquire into inclusive methods which can enhance Virtual Collaborative Learning for visually impaired persons in institutions of higher education in Lesotho.

Conclusion

The current study explored the emerging perspectives and challenges encountered by both teaching staff and students in one institution of higher education in Maseru, Lesotho. This study is of the essence because it sets out to reveal the emerging perspectives of both teaching staff and students on the currently implemented teaching and learning strategy across the globe. The findings of the study suggest that majority of students found Virtual Collaborative Learning to be a user-friendly tool, which was helpful. However, lack of resources, lack of cooperation, internet connectivity issues, lack of interest to participate, data expenses, lack of clear instructions from the teaching staff and problematic group members have been identified as stumbling blocks that discourage students' satisfactory engagement in Virtual Collaborative Learning. The findings further revealed various strategies including encouraging students to cooperate, grading students' participation on the online platform, use of clear instructions and consultations that could be used to overcome the challenges encountered in using Virtual Collaborative Learning in institutions of higher education.

Recommendations

Virtual Collaborative Learning appears to be of the essence to both teaching staff and students at the selected accredited institution of higher education in Maseru, Lesotho. Based on the findings that surfaced in this study, we, therefore, recommend that teaching staff use their requisite skills to implement Virtual Collaborative Learning and encourage students to be active participants in their online groups. Again, teaching staff should give instructions and activities on online platforms which can be easily accessed. According to these study findings, we also suggest that the authorities of the selected accredited institution of higher education in Maseru, Lesotho, provide requisite training for students on the benefits of online teaching and learning platforms. We also recommend that the authorities of the selected accredited institution of higher education in Maseru Lesotho should seek for zero-rating of Virtual Learning Environments from internet and mobile services providers and continuously check if it is working as expected. Again, to further understand the perceptions and challenges of the use of Virtual Collaborative Learning by students and teaching staff, we recommend further study to cover a representative sample of all institutions of higher education in Lesotho. The findings will better inform the authorities at the institutions of higher education and the policymakers to develop strategies for improved teaching and learning experiences.

References

- Akpan, V.I., Igwe, U.A., Mpamah, I.B.I. and Okoro, C.O. (2020), "Social constructivism: implications on teaching and learning", *British Journal of Education*, Vol. 8 No. 8, pp. 49-56.
- Amineh, R.J. and Asl, H.D. (2015), "Review of constructivism and social constructivism", *Journal of Social Sciences, Literature and Languages*, Vol. 1 No. 1, pp. 6-9, available at: jssll.blue-ap.org (accessed 11 March 2019).
- An, H., Kim, S. and Kim, B. (2008), "Factors perceived as facilitating and impeding successful online group work", *Contemporary Issues in Technology and Teacher Education*, Vol. 8 No. 1, pp. 65-83.
- Asunka, S. (2008), "Online learning in higher education in Sub-Saharan Africa: Ghanaian university students' experiences and perceptions", *International Review of Research in Open and Distance Learning*, Vol. 9 No. 3.
- Bacon, L. and MacKinnon, L. (2016), "The challenges of creating successful collaborative working and learning activities in online engineering courses", *14th LACCEI International Multi-conference for Engineering, Education and Technology: "Engineering Innovations for Global Sustainability", 20-22 July 2016, San José, Costa Rica*.
- Badugela, T.M. (2012), "Problems facing educators in implementing the national curriculum statement: the case of tshifhena secondary school, Vhembe district, Limpopo province", University of South Africa.
- Bromley, D.B. (1991), "Academic contributions to psychological counselling. 2. Discourse analysis and the formulation of case-reports", *Counselling Psychology Quarterly*, Vol. 4 No. 1, pp. 75-89.
- Bukvova, H., Gilge, S. and Schoop, E. (2006), "Enhancing the framework for virtual collaborative learning: comparison of two case studies", Spouts: working papers on information systems, Vol. 6 No. 67, available at: <http://sprouts.aisnet.org/6-67> (accessed 22 May 2020).
- Chandra, R. (2015), "Collaborative learning for educational achievement", *IOSR Journal of Research and Method in Education (IOSR-JRME)*, Vol. 5 No. 2, available at: www.iosrjournals.org, (accessed 25 February 2020).
- Child, S. and Shaw, S. (2016), "Collaboration in the 21st century: implications for assessment", *Research Matters: A Cambridge Assessment Publication. Issue 22*, available at: www.cambridgeassessment.org.uk/research-matters/ (accessed 6 March 2020).
- Creswell, J.W. (2014), *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*, 4th ed., Sage Publications, Thousand Oaks, CA.
- Faja, S. (2013), "Collaborative learning in online courses: exploring students' perceptions", *Information Systems Educational Journal (ISEDJ)*, Vol. 11 No. 3, pp. 42-51.
- Henning, E. (2017), *Finding Your Way in Qualitative Research*, Van Schaik Publishers, Pretoria.
- Hernandez, R. (2012), "Collaborative learning: Increasing students' engagement outside the classroom", *US-China Education Review A* 9. pp. 804-812.
- Hernández, N., González, M. and Muñoz, P. (2014), "Planning collaborative learning in virtual environments", *Media Education Research Journal*. Vol. 42 No. 21, pp. 25-32, available at: www.revistacomunicar.com (accessed 22 May 2020).
- Hesse, F.W., Care, E., Buder, J. and Sassenberg, K. (2015), "A Framework for teachable collaborative problem solving skills", in Griffin, P. and Care, E. (Eds), *Assessment and Teaching of 21st Century Skills: Methods and Approaches*, Springer, Dordrecht, pp. 37-56.
- Kajjita, R.M., Nomngcoyita, T. and Kang'ethe, S.M. (2020), "The 'revolution' on teaching and learning: Implications of Covid-19 on social work education in institutions of higher learning in Africa", *African Journal of Social Work (AJSW)*, Vol. 10 No. 3, pp. 25-33.
- Kumi-Yeboah, A., Dogbey, J. and Yuan, G. (2017), "Online collaborative learning activities: the perceptions of culturally diverse graduate students", *Online Learning*, Vol. 21 No. 4, pp. 5-28, doi: [10.24059/olj.v21i4.1277](https://doi.org/10.24059/olj.v21i4.1277) (accessed 22 June 2020).

-
- Laal, M. and Ghodsi, S.M. (2011), "Benefits of collaborative learning", *Procedia - Social and Behavioral Sciences*, Vol. 31, pp. 486-490, available at: www.sciencedirect.com (accessed 5 March 2020).
- Makafane, D. and Chere-Masopha, J. (2021), "COVID-19 crisis: Challenges of online learning in one university in Lesotho", *African Perspectives of Research in Teaching and Learning*, Vol. 5 No. 1, pp. 126-138.
- Maree, K. (2012), *First Steps in Research*, Van Schaik Publishers.
- Maree, K. (2017), *First Steps in Research*, 2nd ed. Van Schaik Publishers.
- Matee, L.G. (2019), "Opportunities and challenges in pilot implementation of integrated curriculum: a case of english language teaching and learning in lesotho pilot secondary schools", Unpublished MA. ED thesis, National University of Lesotho, Roma, Lesotho.
- Matyokurehwa, K. (2013), "Challenges faced in implementing ICT in higher learning institutions: a Botswana perspective", *International Journal for Infonomics (Infonomics)*, Vol. 6 Nos 1/2, pp. 708-712.
- Ministry of Health, Lesotho (2020), "Public health COVID-19 regulations (26/2020): declaration of Covid-19 state of emergency notice", *Lesotho Government Lockdown Gazette*, Vol. 65 No. 24, pp. 210-212, March 27.
- Muuro, M.E., Wagacha, W.P., Oboko, R. and Kihoro, J. (2014), "Students' perceived challenges in an online collaborative learning environment: a case of higher learning institutions in Nairobi, Kenya", *The International Review of Research in Open and Distance Learning*, Vol. 15 No. 6, pp. 132-161.
- Ngwacho, G.A. (2021), "Virtual teaching and learning paradigm shift implications on access, equity and quality in higher education in Kenya", *The Cradle of Knowledge: African Journal of Educational and Social Science Research (AJESSR)*, Vol. 9 No. 1.
- Rahman, M.H.A., Yahaya, N. and Halim, N.D.A. (2014), "Virtual world for collaborative learning: a review", *2014 International Conference on Teaching and Learning in Computing and Engineering*, doi: [10.1109/LaTiCE.2014.18](https://doi.org/10.1109/LaTiCE.2014.18).
- Rakotsoane, L.F.C. (2012), *Writing a Scholarly Research Proposal: A Professional Step-by-Step Guide for Beginners*, Morija Printing Works, Lesotho.
- Singh, A., Sharma, S. and Paliwal, M. (2020), "Adoption intention and effectiveness of digital collaboration platforms for online learning: the Indian students' perspective", *Interactive Technology and Smart Education*, Vol. 18 No. 4, pp. 1741-5659, doi: [19.1108/ITSE-052020-0070](https://doi.org/10.1108/ITSE-052020-0070), available at: www.emerald.com/insight/1741-5659.htm (accessed 26 August 2021).
- Sun, C. (2020), "Research on the application of SPOC online and offline hybrid teaching mode in collage English curriculum", *IOP Conference Series: Materials Science and Engineering*, Vol. 750, p. 12170.
- Tadesse, S. and Muluye, W. (2020), "The impact of COVID-19 pandemic on education system in developing countries: a review", *Open Journal of Social Sciences*, Vol. 8 No. 10, pp. 159-170.
- Tamrat, W. and Teferra, D. (2020), "COVID-19 thread to higher education: Africa's challenges, responses and appreciations", *International Higher Education/Africa*, Special Issue, No. 102, pp. 29-31.
- Turugare, M. and Rudhumbu, N. (2020), "Integrating technology in teaching and learning in universities in Lesotho: opportunities and challenges", *Education and Information Technologies*, Vol. 25 No. 5, pp. 3593-3612.
- Unal, E. and Cakir, H. (2017), "Students' views about the problem based collaborative learning environment supported by dynamic web technologies", *Malaysian Online Journal of Education Technology*, Vol. 5 No. 2, available at: www.mojet.net (accessed 25 February 2020).
- Upoalkpajor, J.L.N. and Upoalkpajor, C.B. (2020), "The impact of COVID-19 on education in Ghana", *Asian Journal of Education and Social Studies*, Vol. 9 No. 1, pp. 23-33.
- Vygotsky, L.S. (1978), *Mind in Society: The Development of Higher Psychological Processes*, Harvard University Press, Cambridge, MA.
- Weber, P., Lehr, C. and Gersch, M. (2014), "Improving virtual collaborative learning through canonical action research", *The Electronic Journal of e-Learning*, Vol. 12 No. 4, available at: www.ejel.org (accessed 22 May 2020).

- Zambrano, J., Kirschner, F., Sweller, J. and Kirschner, P.A. (2019), "Effects of group experience and information distribution on collaborative learning", *Instructional Science*, Vol. 47 No. 5, pp. 531-550, doi: [10.1007/s11251-019-09495-0](https://doi.org/10.1007/s11251-019-09495-0) (accessed 25 February 2020).
- Zozie, P. and Chiwanga, D.W. (2018), "Mapping an open university in Malawi: implications for Africa", *Research in Comparative and International Education*, Vol. 13 No. 1, pp. 211-226.

Further reading

- Mukwambo, P. (2016), *Quality as Human Development: A Case Study of Teaching and Learning in Zimbabwean Universities*, University of the Free State.
- Picciano, A.G. (2017), "Theories and frameworks for online education: seeking an integrated model", *Online Learning*, Vol. 21 No. 3, pp. 166-190, doi: [10.24059/olj.v21i3.1225](https://doi.org/10.24059/olj.v21i3.1225) (accessed 8 July 2020).

About the authors



Gloria Lihotetso Matee is a full-time lecturer at the National University of Lesotho in the Department of Language and Social Education and a former Communication and Study Skills Lecturer in the Faculty of Health and Education at Botho University in Maseru-Lesotho. She has been in the teaching profession for over 12 years. She has experience in teaching Communication and Study Skills. Gloria Lihotetso Matee is the corresponding author and can be contacted at: lgmatee78@gmail.com



Nthabiseng Motlohi is a Lecturer in the Faculty of Health and Education in the Department of Health Information Management at Botho University, Maseru Campus. She holds a master's degree in Pharmaceutical Sciences (Bio-pharmaceutics) and a bachelor's honours degree in Pharmacy. Nthabiseng has a career that spans a decade in pharmaceutical manufacturing, retailing, teaching and research. She has presented her research findings at local and international conferences since 2014.



Palesa Nkiwane is a Sociolinguist, a Language Practitioner and a Senior Lecturer, as well as an academic Counselor. She teaches Communication and Study Skills in the Faculty of Health and Education at Botho University Maseru-Lesotho. Palesa has 16.5 years of experience in tertiary institution teaching, where she has held positions from Lecturer, Senior Lecturer and Coordinator of the Communication and Study Skills Department. She has worked in different tertiary institutions, namely: the National University of Lesotho (NUL), Institute of Extra Mural Studies of The National University of Lesotho (IEMS), Lesotho Institute of Public Administration and Management (LIPAM) and Botho University. In these institutions, she was taught, Communication and Study Skills, Business Communication, Sociolinguistics, Psycholinguistics, as well as Semantics of English. As a graduate student at Witwatersrand University, she also had an opportunity to tutor the first-year undergraduate students in different Linguistics Modules. In various leadership and individual contributor roles, her responsibilities include; module designing, lecturing, departmental coordinating, as well as academic advising and counselling.