

# Integrating E-Learning in Botswana Junior Secondary Schools: A Case of Religious Education

Gaone Vivian Olesitse<sup>1</sup> & Baamphatlha Dinama<sup>1</sup>

<sup>1</sup> University of Botswana, Gaborone, Botswana

Correspondence: Gaone Vivian Olesitse, University of Botswana, Gaborone, Botswana.

doi:10.56397/JRSSH.2024.08.07

## Abstract

This study assumes that teaching and learning where Information and Communication Technology (ICT) is incorporated makes a big difference in the learner's educational performance. However, there is generally a limited integration of technology in the education process in Botswana junior secondary schools. Therefore, this study explores how the integration of E-learning tools can improve Religious Education (RE) students' academic performance. Data were collected using interviews, classroom observations and focus groups and later thematically analysed. The sample was based on a junior secondary school in an urban area and consisted of three teachers and three focus groups comprising ten students in each. The findings of the study indicate that E-learning tools are largely user-friendly, efficient and can enhance the academic performance of the students. Even though the use of ICT is desirable and preferable, there is presently limited access to computers in schools as well as inadequate support on its use; hence this affects the teachers' content delivery and consequently students' academic performance.

**Keywords:** E-learning tools, ICT, learning process, students' academic performance and teaching

## 1. Introduction

The rapid technological and social change puts forward the need for lifelong learning which the conventional classroom learning is not able to satisfy. As such, E-learning is an increasingly preferable alternative when compared to the conventional face to face classroom learning since it facilitates teaching and learning in relation to collaborations, innovations and accountability for both teachers and students (Paechter et al., 2010; Yadzi & Ghazal, 2013; Franklin & Nahari, 2018; Hero, 2019). ICT may include Web-based learning, computer-based learning, virtual classrooms, and digital collaboration, use of audio or video recording,

email discussions and many more learning platforms to enhance independent learning which eventually instils accountability and responsibility among learners (Guragain, 2016). In this regard, the use of technology in schools has gained momentum since it places the student at the centre of teaching and learning process which can in turn enhance students' academic outcomes in terms of competencies (Friesen & Lowe, 2012; IEA, 2013; Díez-Pradoz, & Peñuelas, 2018).

Since E-learning tools are essential for the 21<sup>st</sup> century teacher, they are used as an extension of other teaching tools because they have the potential to develop creativity in learning (Zare,

Sankhari, Salari & Mansouri, 2016; Batane & Ngwako, 2017). These tools tend to support and potentially promote creativity and innovation in schools (Cachia, Ferrari & Punie, 2011) hence leading to the desired positive academic results. Luoga and Komba (2005) and Tossy (2012), note that ICT can possibly change the way teaching, learning and other forms of administration of educational activities are conducted if it can be appropriately integrated into the curriculum. Most importantly, it offers efficient use of time while it eases sharing of educational resources between teachers and students, thereby, improving the quality of teaching and learning since the intended objectives of the lessons are likely to be achieved (Ambrose, 2001; Salmon, 2000; Jones, 2011; Moakofhi, Leteane, Phiri, Pholele, & Sebalatlheng, 2017). It is from this premise that the study sets out to explore ways of integrating E-learning tools in pedagogy in order to enhance the academic performance of RE students in Botswana junior secondary schools.

## 2. Statement of the Problem

Religious Education syllabus in Botswana demands that the teaching and learning of RE should integrate E-learning tools to enhance the exchange of information and its contribution to new knowledge through internet search at junior and senior secondary schools (Botswana Government, 1994; Eyitayo & Eyitayo, 2005; Botswana Government, 2008; Garegae & Moalosi, 2011; Mafuraga & Moremi, 2017). Furthermore, there is a clear indication that it can possibly improve the students' academic performance, through problem-solving abilities, informational reasoning skills, communication skill, being autonomous, creative as well as develop other high order thinking skills (Rosenblit et al, 2005; Batane, 2013; Massimo, 2014; Sedimo & Ngwako, 2016; Batane & Ngwako, 2017; Orey, 2017 & Abuhassna et al., 2020). However, the researchers have observed that there is a minimal use of E-learning tools in schools which could probably be due to teachers' lack of confidence, possible incompetence, and their attitude towards technology-based pedagogy. It could also indicate lack of encouragement by the school management to its staff to integrate the E-learning tools in teaching and learning which could help them to reflect on teaching and learning with their colleagues and for administrators and teachers to collaborate and

communicate (Dinama, Gasha & Olesitse, 2021). This assumed minimal usage could be contributing to the decline on academic performance in RE and which therefore calls for ways to arrest this challenge (Botswana Examinations Council, 2015; 2017; 2018; Moswela, 2015; Dinama et al., 2016; Kititia, 2015; UNESCO, 2013).

## 3. Key Research Questions

- 1) To what extent does RE teachers and students integrate E-learning tools in the teaching and learning process respectively?
- 2) What are the possible challenges faced by RE teachers when integrating E-learning tools in the teaching and learning process?

## 4. Literature Review

### 4.1 *The Integration of E-Learning Tools and Students' Academic Performance*

A study by Abuhassna and Yahaya, (2018) concludes that on-line learning has the potential to enhance students' academic performance, as well as increase their engagement, motivation and attendance which are the key requirements for learning (Junco, 2014). The potential for E-learning to improve academic performance and foster 21<sup>st</sup> century skills depend on the schools' ability to model student centred, and highly personalised learning environments (Hadiyanto, Failasofah, Armiwati, Mukhlash & Yulhenli, 2021). This is because E-learning has become an important part of the routine setting for education and training as it enables more learners to have access to the learning materials whilst providing students and teachers with exceptional flexibility and convenience (Yosuf, 2012; Batane & Ngwako, 2017; Mafuraga & Moremi, 2017). In this way, teachers devise innovative ways of integrating technology in education to stimulate and support active learner participation in schools and beyond (Almaih, 2018; Wilmot, 2001; Carr, 2000; Barreto, Vasconcelos & Orey, 2007) as well as promoting effective teaching practices (Pavel, Frush & Neascu, 2015; Tairab & Ronghuai, 2017). Furthermore, there is a connection between the use of E-learning tools and students' academic performance as observed by Zolochesvskaya, Zubanova, Fedorova, and Sivakova (2021).

In their study, Ghavifekr and Rosdy (2015) conclude that the integration of ICT in teaching and learning has a positive impact on the academic performance of students, especially

that they need to be prepared for the current digital era. In the Botswana context, despite its benefits, schools are facing challenges whereby teachers are not maximising the usage of technology (Batane & Ngwako, 2017; Ntshwarang, Malinga & Losike-Sedimo, 2021) yet it could immensely enhance students' academic achievement since it encourages student-centred learning (Coleman, Gibson, Cotten, Howell-Moroney & Stringer, 2016).

The 21<sup>st</sup> century teaching and learning requires teachers to be able to integrate E-learning tools in their lessons so as to meet today's literacy requirements (Kong et al, 2014; Hero, 2019). Similarly, Wu and Hsu, (2014) indicate that students have high expectations on E-learning tools in the learning process but due to teachers' lack of confidence, their incompetence and negative attitude towards technology-based pedagogy, students miss out a lot. In this way, it then becomes the school management's focus to ensure that teachers receive sufficient support to integrate E-learning tools in their classroom teaching and learning (Batane & Ngwako, 2017).

#### *4.2 Possible Challenges of Integrating E-Learning Tools in Lessons*

Botswana has tried to provide resources for its junior secondary schools; however, many schools struggle with their effective use. While available in most schools, computers often are not connected to the internet, hence, impeding their use for instruction (Buda, 2020). The major challenges faced by teachers when integrating E-learning tools in their lessons, have been linked to limited access to computers in schools, inadequate training of teachers on computer skills, inadequate ICT support and lack of interest by teachers to use E-learning tools during their lessons (Tazei, 2011; Ntshwarang et al., 2021; Almai, 2018; Eltahir, 2019). Furthermore, another major concern is that most of these E-learning tools provided in schools are neither enough, nor in good condition (Dunne, Lawlor & Rowley, 2010; Tazei, 2011).

### **5. Methodology and Research Design**

This study adopted a qualitative approach (Anderson, 2001; Chilisa, 2012), while using a case study research design (Brewer, 2007) in order to investigate how the E-learning tools could improve RE students' academic performance. The approach was used in order to explain the phenomena of teaching the students while integrating E-learning tools as well as

finding out the possible challenges encountered in the teaching and learning process. Data were thematically analysed, and the main emerging themes were understanding of E-learning tools by teachers and the students, exposure to E-learning tools during initial teacher preparation, and academic performance in RE using E-learning tools.

#### *5.1 Population and Sampling Procedures*

The sample for this study consisted of three Religious Education (RE) teachers and three focus groups each comprising ten students in a school located in an urban setting where there is ample access to the internet. The researchers held focus group discussions with students of different learning abilities, in a private room adjacent to a student-friendly part of the school. This procedure was done so that the participants could feel comfortable to talk about their experiences, and this enabled easy access to the collection of rich data that had thick descriptions and examples (George, 2012; Leavy, 2017).

#### *5.2 Data Collection Instruments*

Data were collected using interviews, classroom observations, and focus group discussions. The researchers and the participating teachers agreed upon a time which was convenient for both of them. The interviews followed Castillo-Montoya's (2016) protocol for interviewing participants, which ensures that interviews are in-line with the research questions, provide inquiry-based conversation and that feedback is received on interview protocols. A digital tape-recorder was used to record the overall conversation; and this was done with the consent of the interviewees. The recordings were later transcribed and reviewed and were complemented by field notes for accuracy (Bloor & Woods, 2006).

RE lessons were observed to determine the integration of E-learning tools during teaching and learning through the use of a devised structural observation checklist. This entailed systematically looking at and noting people, events, setting and artefacts which allowed the researchers to gather data in its natural setting (Cohen, Manion, & Morrison, 2011).

### **6. Findings and Discussions**

Data collected and analysed showed that RE teachers and students understand the use of E-learning tools. However, the findings, on the one hand, revealed that teachers lack interest

while on the other, students exhibited interest in lessons conducted when using E-learning tools.

#### 6.1 Understanding of E-Learning Tools by RE Teachers and the Students

The findings show that teachers lack interest and also possess limited skills in the use of E-Learning tools. When asked about her understanding of the use of E-learning tools, one of the participants, Ms. Neo said that it is when one is

*“Using electronic technologies to facilitate the curriculum inside the classroom and outside normal classrooms. This means that the traditional way of teaching whereby the teacher facilitates everything is now being slowly replaced by E-learning tools. In the old traditional classroom setup, the homework was based on book research as compared to nowadays where textbooks have been replaced using E-learning tools. As teachers we must encourage students to Google and think outside the box so that they learn more. The millennial teacher just touches the base, they just guide the students and force them to dig deep through Google”.*

When asked the same question about what he understood about E-learning Mr. David said that

*“It is the modern technology used in teaching and learning where chalkboards are replaced by computers and most of the updated information is found on the internet. I find myself lucky to be teaching in a town where there are internet cafes around and some of my students have access to the internet at their homes. In fact, my students helped my understanding of E-learning tools since I lost touch with it after college”.*

Another teacher, Ms. Tebogo had this to say about E-learning, *“it is a learning strategy which uses the computer and the internet as medium of class interaction for presentations”.* She further said *“The outbreak of COVID 19, has forced teachers to conduct their lessons using E-learning platforms such as the Google classrooms and Zoom platform. It is cost-effective, learner- friendly, encourages a sense of responsibility, and learners do not wholly depend on the teacher”.* Unfortunately, *I have little understanding of how it works even though I have some students in my class who are familiar with how to use the internet.*

During focus group discussions, some of the students showed adequate understanding of the E-learning tools and their use since some have been exposed to them at primary school level while others had a limited understanding and

knowledge. One participant, Thuto said

*“I developed interest in the use of computers when our teacher at Magapu Primary School taught us the importance of the computer. I had thought that at junior secondary school I would learn more about computers but our RE teacher never takes us to the computer lab. It is only on rare occasions when she brings the laptop and the overhead projector to show us some religious festivals, but I would really like our teacher to use the laptop more or take us to the computer lab for our lessons”.*

In another focus group, Tefo commented *“I remember learning about parts of the computer at primary school, but we were never given a chance to use them at junior secondary school where I am presently at. Our teacher promised to take us to the computer lab once the computers have been repaired because most of them are not working”.* It is evident from the data collected in this study that students are interested in the use of E-learning tools for their lessons while teachers show lack of interest in their usage, something that made students feel inadequate.

#### 6.2 E-learning Tools During Initial Teacher Preparation

Teachers indicated that they were introduced to E-learning tools during their initial teacher preparation at teacher training colleges and the university. For instance, Ms. Tebogo notes that *“during my initial teacher training at the University of Botswana I was introduced to E-learning. During our time, all the notes, videos, even some classes were conducted using E-learning tools”.* This was also true for Mr. David who went to a teacher training college and was introduced to E-Learning tools though the lesson was held only once in a week. He went on to state that *“It was done for us in preparation for the project, which was to be typed, but some trainees like me did not know how to use the computer and I dodged the computer lessons. I have lost out because nowadays E-learning in schools is everywhere and emphasised”.* Ms. Neo also buttressed the point raised by Mr David that they used computers at teacher training colleges, but she did not like attending the lessons because it was not easy for her since she hated it. She said *“when I was at senior secondary school, our class-teacher told us that if you don’t understand the English language then you can never know how to use a computer. This stuck with me for a long time, and I developed a dislike towards it. Since I was a Setswana and Religious Education teacher trainee, I just wondered what I had to do with*



*E-Learning tools. I told myself that they are not for me”.*

It is evident that teachers are exposed to E-learning tools during initial teacher training, and they join the teaching profession with an idea of how to use them. However, they do not fully use the knowledge they gained at teacher training colleges or universities to help with the content delivery because of their lack of interest.

### 6.3 Academic Performance in RE Using E-Learning Tools

Participants noted that if E-learning tools could be incorporated in the junior secondary schools, the results could improve as they give real life illustrations in any topic under discussion. They expressed that their schools generally lack textbooks, for example, there is no prescribed textbook for the Form 2 level, and this could be the time when RE teachers could fully rely on the use of E-learning tools. The participants further showed that E-learning tools are convenient because they have the potential to instil responsibility on the students and can further cultivate individualised learning. When E-learning tools are properly used in schools there is a great possibility of a positive change in students’ academic performance especially if students are adequately supported and encouraged by their teachers (Batane & Ngwako, 2017). Ms. Tebogo commented:

*“It boosts students’ self-esteem and confidence and hence the level of understanding increases. The use of E-learning tools is convenient especially where the school transport is not easily available. Instead of visiting the worship places, we can connect through Skype or Zoom, and all the information will be delivered by the first-hand informer who is an Imam, for example, in the case of Islam. For instance, the dress code, places of worship, reading of the Koran, all these will be done in the setting of a planned chat with the said Imam”.*

Similarly, Mr. David agreed with what Ms. Tebogo said in connection with the use of E-learning tools that have proved to be effective in improving the academic results and helping teachers to deliver the content to the students in an exciting way. He stressed that E-Learning tools, *“could improve academic performance because in RE, for all the topics students could watch videos and I think this could enhance their understanding of the RE concepts.”* Ms. Neo also confirmed the potential of E-learning tools in improving the RE results by saying *“obviously, because it is the*

*technology era, and therefore if it has to be infused in the curriculum delivery, I think that the results could improve”.*

However, the participants acknowledged that they do not fully use the E-learning tools because most of the computers in their school computer laboratories are not working and that most of the time the internet connectivity in their school is poor. This was indicated to be a hindrance on the part of teachers as it denied them an opportunity to illustrate real-life examples that could sharpen their students’ critical thinking skills and consequently their understanding of different religious beliefs. In that way, independent learning would be promoted. For instance, Ms. Tebogo said

*“I can say sometimes I use E-learning tools, maybe twice in three months for topics such as rites of passage, sacred places, sacred material in religions and rituals in worship such as Muslims performing the Wudu before prayers because I think students need to see these things for better understanding and in order to critically analyse different rituals in worship for different religions. I usually prepare electronic teaching aids by downloading videos to show to my students using an overhead projector. This has proven to be interesting to my students and I feel encouraged to increase the frequency at which I use E-learning tools because on the days that I use them, all students do participate”.*

She further said

*“RE is a challenging subject which has unique spelling terms that are found in different religions. Therefore, it works for my classes when I show them these videos because they get to understand the correct spelling and pronunciation of some words which motivate and encourage them to develop interest in using E-learning tools. When I realised that most of my students enjoyed the use of E-learning tools, I opened a WhatsApp group where we have Saturday chats to discuss how to write essays since they have a challenge with that. This has proved to be a good initiative especially for the Form 3s who are in their final year. The crop of today enjoys using phones, so this becomes an interesting exercise which everyone is looking forward to. In such instances, I would hear comments such as... ‘Madam, don’t forget our discussion on Saturday through Zoom’”.*

In the same way, Mr. David indicated that he never uses the E-learning tools because of his incompetence. He added that

*“I don’t feel comfortable using E-learning tools*

during the RE lessons because I can't even switch the computer or my laptop on even though I have an idea. I am scared as to what would happen if on that day it does not switch on. What explanation will I give to my students? Even when it's my turn to prepare a test in the department my colleagues know that I make handwritten drafts then ask them to type for me".

Similarly, Ms. Neo said "it is the sheer lack of commitment and knowledge on my side as a teacher which makes my students less interested as well. Also in our school, most of the computers are not working and the internet is always down, and Wi-Fi would in most cases be off. The few computers that are working are lying idle and are rarely used since teachers are now demoralised because of the unavailability of the internet. Even if we had enough of them we would not fully use them". Even if the schools could provide enough computers in schools and ensure that the Wi-Fi was functioning well, the teachers would still be hesitant to fully utilise them to enhance their teaching because of their incompetence and lack interest on E-learning tools.

Data collected from the focus group discussions revealed that students were interested in the use of E-learning tools, and they could learn and retain information better when these tools are integrated into their lessons, nevertheless, they had little access to these tools. Thabo said "I enjoy RE so much when our teacher shows us videos and because of that, I have developed a liking for Buddhism so much". Maipelo added by stating that "I had no idea how the Buddhist temple looked like, but after seeing its picture on the video, I really liked it". It was clear that students enjoy the lessons more when E-learning tools are used than when they are required to complete the homework using the textbooks. Meshack concluded "I find the textbook to be limiting my potential to develop research skills, I personally approached my teacher Ms. Neo to often show our class videos and then we discuss what we learnt. We can later make a summary of what we learnt into our homework books".

Students further expressed their interest on the use of E-learning tools and that if it was used throughout the lessons RE would have more students doing well during the final junior certificate examinations. Lebo noted, "our teacher lends us textbooks, but they do not have all the information that I need as a student, for example, the textbook gives the facts about a religion but when the same topic is shown from YouTube, we learn a lot".

Thato also added by saying that "the illustrations that we watch in the videos that our teacher plays for us help us understand better and I see my performance improving if we continue using E-learning tools". Students praised E-learning tools for their effectiveness in helping them understand the content despite the differences in learning abilities. An academically challenged student; Patrick had this to say, "I like the videos and especially how the people dance in different religions".

During lesson observations, the researchers noted the inadequate use of the E-learning tools as the lesson plans did not show integration of the E-learning tools. However, we noted that only one teacher out of the three who were observed, showed students the downloaded videos of different places of worship, which was specifically on how Muslims worship. The students showed much interest in this lesson because they were able to answer the follow-up questions regarding what they watched.

"This is just a dream yet to be realised".

The participants agreed that the incorporation of E-learning tools in the teaching and learning process is just a dream yet to be realised because of insufficient computers which are mostly not functioning. They also indicated that IT officers who are employed to provide technical assistance were reluctant to help them hence they lost interest in the use of E-learning tools. Since they could not be empowered in the use of E-learning tools they too could not use them in their teaching. When talking about the state of computers in her school, Ms. Tebogo said,

"In our school, we don't have enough computers which can be used by individual students. The computer laboratory is a white elephant, because a lot of computers are not working, and a few that are working do not receive the signals for the internet. This is a big challenge especially in this era of COVID-19 where there should be social distancing, and students cannot share a computer. If I want to show my students how the Muslims worship, I use my laptop and borrow the overhead projector from the sciences department. I have also come to realise that some of my students are not familiar with the use of computers and therefore are not comfortable with the use of E-learning tools as they are afraid, they may do things wrongly and be laughed at by their classmates. This means that even if I bring the laptop and the overhead projector to class, I am the one operating it though with little knowledge".

Due to inadequate knowledge on the use of E-learning tools, Mr. David indicated that he found it challenging to use an overhead projector and a laptop even though he is aware of their potential in enhancing effective teaching and learning, and hence an improvement in the academic performance of students. Therefore, each time he decides to use them, he consults his colleagues to help him because according to him,

*"Preparing for these lessons is time consuming because I am not very good at using my laptop. I just bought it because I know it is the era of technology more so that the school cannot provide us with computers. Computers are just lying in the computer room and are not working. Another thing is that since the computer awareness in our school is not active; no support for the IT team, most of my students are not able to use the computers so I cannot give them research work where I expect them to use technological tools. I am the one doing the research work and come to class to share with them".*

Similarly, Ms. Neo added that

*"The infusion of IT in our curriculum will take a long time to be realised because even the IT officer in our school does not have interest to motivate teachers to use the E-learning tools. So how do we expect IT infusion in our school curriculum to take place? I am telling you this is just a dream yet to be realised in the long run". "Also, as a teacher, I am not conversant with the use of E-learning tools, I do trial and error because our subject would do extremely well if these tools were fully infused. Each topic in RE is understood better when students watch the videos of different religious people".*

From the discussions, on the one hand, it is clear that students appreciate E-learning tools and are ready to learn and improve their academic results whilst on the other, teachers express little interest and also some are not competent in using them.

## 7. Conclusion

The findings of the study revealed that E-learning tools have proved to have the potential of improving the provision and acquisition of education and learning in junior secondary schools, if used during lessons. In Botswana junior secondary schools, the computer laboratories are already provided, and they are equipped with computers, internet connectivity and video facilities which are basic necessities for E-learning set-up. However, the study found out that there is inadequate support

from the ICT officers which might be a contributing factor when integrating E-learning tools during teaching and learning process. There is also lack of commitment by some teachers in using E-learning tools regardless of the need that is taking place in the form of digital learning and teaching of the 21<sup>st</sup> century. It comes out clearly that E-learning tools are not fully integrated into the school curriculum and failure for schools to ensure that computer laboratories are well equipped, and all the tools are functioning well indicates that schools are not ready to fully integrate E-learning tools in the school curriculum.

## References

- Akugizibue, E., & Ahn, J.Y. (2020). Perspective for effective integration of E-learning tools in university mathematics instruction for developing countries. *Education and Information Technologies*, 25(1), 889-903. DOI: 10.1007/s10639-019-09995-z.
- Anderson, M.J. (2001). A new method for non-parametric multivariate analysis of variance. *Austral Ecology*, 26(1), 32-46.
- Batane T. & Ngwako, A. (2017). Technology use by pre-service teachers during teaching practice: Are new teachers embracing technology right away in their first teaching practice? *Australian Journal of Educational Technology*, 3(1), 48-61. doi.org/10.14742/ajet.2299
- Batane, T. (2013). Internet Access and use among young people in Botswana. *International Journal of Information and Education Technology*, 3(1), 117-119. Doi: 10.7763/IJET.2013.V3.246
- Bloor, M., & Wood, F. (2006). *Keywords in qualitative methods: A vocabulary of research concepts*. London: Sage.
- Botswana Examinations Council (2015, 2017 & 2018). *Botswana General Certificate of Secondary Education results summary*. Gaborone: Government Printers.
- Botswana Government, (2008). *Three-year junior secondary school religious education syllabus*. Gaborone: Government Printers.
- Botswana Government, (1994). *Revised national policy on education*. Gaborone: Government Printers.
- Buda, A. (2020). Stumbling blocks and barriers to the use of ICT in schools: A case study of

- Hungarian Town. *Information of Education*, 19(2), 159-179.
- Castillo-Montoya, M. (2016). Preparing interview research: The interview protocol refinement framework. *The Qualitative Report*, 21(5), 811-813.
- Chien, SP., Wun, H.K., & Hsu, Y.S. (2014). An investigation of teachers' beliefs and their use of technology-based assessments. *Computers in Human Behaviour*, 31, 198-210. DOI: 10.1016/j.chb.2013.10.037
- Cohen, L., Manion, L., & Morrison, K., (2011). *Research methods in education* (7<sup>th</sup> Ed.). USA: Routledge.
- Dinama, B., Gasha, G., & Olesitse, G.V. (2021). Improving teaching and learning outcomes through professional learning communities – A case of business education subjects in Botswana. *Innovare Journal of Education*, 9(4), 1-6.
- Dinama, B., Jeremiah, K., Shlupheki-Jorowe, B., Keakantse, M., Kemoabe, R., Kgaswe, B., & Sebina, O. (2016). Students' academic performance in religious education: A Case of selected schools in Botswana. *International Journal of Learning, Teaching and Educational Research*, 15(12), 67-83.
- Dunne, A., Lawlor, M. & Rowley, J. (2010). Young people's use of online social networking sites – a uses and gratifications perspective. *Journal of Research in Interactive Marketing*, 4(1), 46-58.
- Eltahir, M.E. (2019). E-learning in developing countries: Is it a panacea? A case study of Sudan. *IEEC Access*, 7, 97784-97792.
- Ghavifekr, S., Rosdy, W.A.W. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education*, 1(2), 175-191.
- Hadiyanto, H., Failasofah, F., Armiwati, A., Mukhlash, A., & Thabran, Yulhenli, T., (2021). Students' practices of 21st century skills between conventional learning and blended learning. *Journal of University Teaching & Learning Practice*, 18(3), 1-19.
- Hero, J.L. (2019). The impact of technology integration in teaching performance. *International Journal of Sciences: Basic and Applied Research*, 48(1), 101-114.
- Junco, R. (2014). iSpy: seeing what students really do on-line. *Learning Media and Technology*, 39(1), 75-89.
- Kamangar, F. & Ismaili, F. (2013). Sample size calculation for epidemiologic studies: principles and methods. *Archives of Iranian Medicine*, 16(5), 295-300.
- Katitia, D. M. O (2015). Teacher education preparation program for the 21<sup>st</sup> century: Which way forward for Kenya. *Journal of Education and Practice*, 6(24), 57-63.
- Kong, S.C, Chan, T.W, Griffin, P, Hoppe, U, Huang, R, Kinshuk, & Yu, S, (2014). E-Learning in school education in the coming 10 years for developing 21<sup>st</sup> century skill: Critical research issues and policy implications. *Educational Technology and Society*, 17(1), 70-78.
- Moakofhi, M., Leteane, O., Phiri, T., Pholele, T., & Sebalatlheng, P. (2017). Challenges of introducing e-learning at Botswana University of Agriculture and Natural resource: Lecture's perspective. *International Journal of Education and Development using Information and Communication Technology*, 13(2), 4-20.
- Moswela, B. & Moloko-Mphale, L. (2015). Barriers to clinical supervision practices in Botswana schools. *Journal of Education and Training studies*, 3(6), 61-70.
- Ntshwarang, P.N., Malinga, T., & Losike-Sedimo, N. (2021). E-learning tools at the University of Botswana: Relevance and use under COVID-19 crisis. *Higher Education for the Future*, 8(1), 142-154.
- Olugbara, C.T. & Letseka, M. (2020). Factors predicting interpretation of E-learning by pre-service science teachers: Structural model development and testing. *The Electronic Journal of E-Learning*, 18(5), 421-453.
- Sedimo, N.L. & Ngwako, A. (2016). Technology integration in teaching, student motivation, and reading achievement. *Advances in Social Sciences Research Journal*, 3(12), 201-207. DoI:10.14738/assrj.312.2412.
- Tazei, E. (2011). Factors that influence pre-service teachers' ICT usage in education. *European Journal of Teacher Education*, 34(4), 483-499. DOI: 10.1080/02619768.2011.587116
- Umunnakwe N. & Sello Q.M. (2016) Effective utilization of ICT in english language



learning- The case of university of Botswana undergraduates. *Universal Journal of Education and Research*, 4(6), 1340-1350.  
<http://www.hrpub.org/download/20160530/UJER11-19506395>

United Nations Educational, Scientific and Cultural Organisation (2013). *New York: UNESCO*.

Zhang, C. (2013). A study of internet use in EFL teaching and learning in Northern China. *Asian Social Sciences*, 9(2), 48-52.