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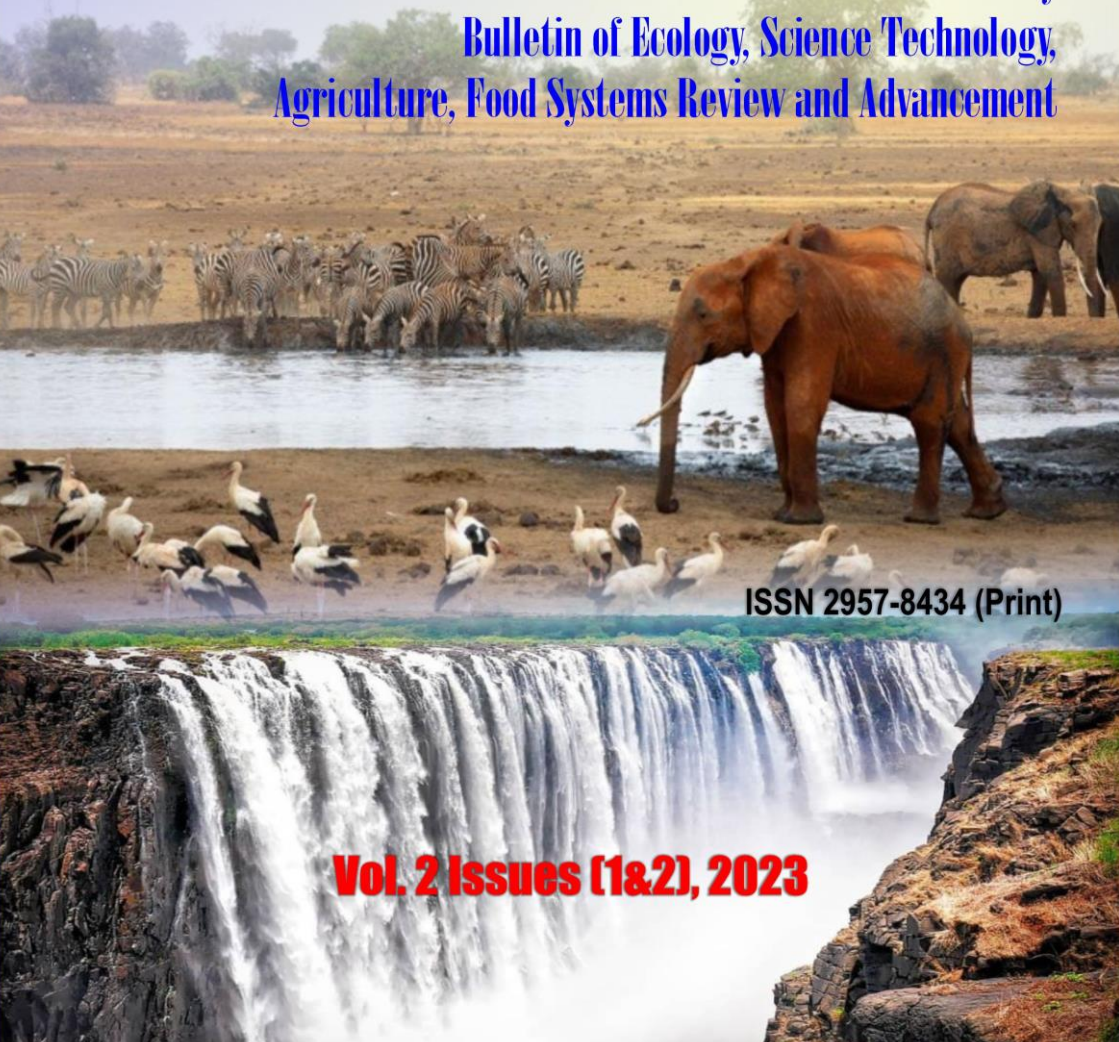
The Zimbabwe Ezekiel Guti University Bulletin of Ecology, Science Technology, Agriculture, Food Systems Review and Advancement



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The purpose of the *Oikos - The Zimbabwe Ezekiel Guti University Bulletin of Ecology, Science Technology, Agriculture and Food Systems Review and Advancement is* to provide a forum for scientific and technological solutions based on systems approach and thinking as the bedrock of intervention.

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The natural scientists, engineering experts, technologists; multidisciplinary teams are encouraged.

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Phenomenological Insights into Challenges and Opportunities of Learning through Social Information Communication Technology Andragogy

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Abstract

Globally, Social Information Communication Technology Andragogy (SICTA) has long been advocated for in tertiary institutions. Yet, most lecturers have remained stuck in their traditional face-to-face andragogical practices. The lockdown to curb the spread of the corona virus, COVID-19, has accelerated the adoption SICTA. In this article, we adopted a phenomenological design from a qualitative research perspective to examine students' challenges, solutions and opportunities of SICTA learning. Six students doing a Postgraduate Diploma in Tertiary Education (PGDTE) shared their experience of SICTA learning. A three-staged process was adopted to generate qualitative data through written narratives, document analysis and dialoguing. The content qualitative analysed data revealed multiple and nested challenges grounded in the use of multiple SICTA based platforms. SICTA created learning opportunities such as online learning competences, learning material accessibility and sharing, time limitless collaborative learning and enhanced self-directed learning.

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The researchers recommend that educators at tertiary level should conduct professional students and staff development on social ICT, design and establish policies for the use of Social ICT and disseminate relevant information as well as undisrupted access to internet and technological devices.

Keywords: andragogy, Social Information and Communication Technology platforms

INTRODUCTION

The outbreak of COVID-19 which brought about the lockdown and physical social distancing, has pushed the growth of sharing and exchanging ideas though Social Information Communication Technology (SICT) platforms. Today, SICT platforms are not only significant to online learning programmes, but also conventional face-to-face learning. In higher education, the COVID-19 lockdown to reinforce social distancing upped the adoption of SICT andragogy (SICTA). The COVID-19 lockdown forced students, lecturers and institutions to interact on teaching and learning matters through SICT platforms. In fact, the COVID-19 accelerated this technology-based communication in all economic sectors around the world. In education, in higher education classrooms, the use of SICT platforms rose significantly on the onset of COVID-19-induced lockdowns. At classroom level, university lecturers resorted to teaching through various social media platforms, such as Facebook, YouTube, blogs, Twitter, Myspace, LinkedIn, WhatsApp, Instagram, Skype and Zoom. Notably, when appropriately integrated into the classroom, these platforms provide social platform-based andragogical approaches that are inevitable in today's environment.

Arguably, adoption of SICTA in higher education taps into the advantage of the mushroomed use in social settings and interactions. This is because the new generation of students enter university with a strong command of competencies to communicate via social platforms. Social media was designed for entertainment and communication but is now being adopted and adapted for use in teaching and learning. However, the use of such social platform-based andragogical approaches has not been without challenges, particularly in

developing nations like Zimbabwe. In the view that many university programmes have been face-to-face, it became important to explore the preparedness of students, lecturers, institutions and nations in adopting SICTA. Hence, this article shares the Post Graduate Diploma in Tertiary Education (PGDTE) online programme students' experiences of SICTA learning in an institution of higher education in Zimbabwe. The purpose of this study is to give insights into university student challenges, opportunities and strengths of SICTA.

Three research questions were sought to answer in this study:

(1) What challenges did students experience in learning through SICTA platforms?
(2) What learning opportunities were availed to these students through SICTA platforms?
(3) How did these students navigate the SICTA challenges encountered?

This study is of significance in that it targets to understand the experiences of university students who are lecturers by profession and were learning through SICTA platforms. Further, the study's location in Zimbabwe, a resource-limited context, makes it unique as many similar studies have been conducted in richer educational settings and industrialised nations. Finally, many studies have focused on Learning Management Systems (LMS), whereas our study interrogates the use of SICTA.

LITERATURE REVIEW

Ideally, students and lecturers are to use university software, the learning management system (LMS), specifically designed to create, distribute and manage delivery of educational content for teaching and learning interactions. Interestingly, in most universities, students and lecturers have tended to resort to using social media. This is a shift from the use of social media for entertainment within virtual communities and networks. Now in remote teaching and learning, social media assisted learning technologies facilitate effective sharing of information and ideas to cover the content of courses. SICTA implies that social media have been adopted and adapted for teaching and learning in higher education classrooms.

In Zimbabwe, SICTA is gaining popularity in higher education classrooms. This lends support to numerous researchers who concur that Facebook, WhatsApp, X (Twitter), YouTube, Instagram and Pinterest are highly popular social ICT platforms used in education (Nakagawa and Arzubiaga, 2014; Hamid *et al*., 2015; Gon and Rawekar, 2017; Kustijono and Zuhri, 2018; Devi *et al*, 2019;). These social ICT platforms provide advantages that enable internet users to express themselves on specific topics in various forms, inclusive of text, voice, photos or audio and video recording (Gon and Rawekar, 2017; Kustijono & Zuhri, 2018; Devi *et al*., 2019). Table1 summarises social ICT platforms and how they are used.

Table 1: Social ICT Platforms and Uses

Social ICT	**Uses**
Facebook	▪ Creates space for students to ask and answer questions. ▪ Enables collaborative learning. ▪ Ideal for a flipped classroom ▪ Post videos, photos, documents and other resources on the group's wall and students can access before class or when they work on their assignments.
X	▪ Quick way to post class announcements and reminders. ▪ Helps classes track information on any topic
Blogs	▪ Create opportunity for students to write and display their writings on a large scale.
YouTube	▪ Excellent option of flipping classroom in that students can watch lectures and resources before entering the classroom
Instagram	▪ Opportunity for students to showcase their work
Google documents	▪ Students and teachers can use these tools to collaborate on assignments, projects, newsletters, among other things. ▪ Encourages teamwork
WhatsApp	▪ Teachers and students can share notes, watch videos, answer questions and discuss content.
Zoom and Skype	▪ Allow video/audio chat ▪ Collaborative learning ▪ Teachers can carry out classroom discussions and debate. ▪ Ability to connect with the outside world without leaving the classroom
Wikis	▪ Offer capability to promote and facilitate "common creation" through joining academic ventures.

Andragogy focuses on adult learning, whilst pedagogy's focus on teaching and learning of children-students in high and lower levels of education. These two approaches to teaching and learning cater for different learning characteristics and needs of children and adults. Adult learners, unlike children, are self-directed, have more experience, seek relevant information that they perceive as useful in their personal lives and work environment, triggered to learn by knowing 'why to learn', and intrinsic motivation (Pappas, 2014, 2015). The four proposed principles to consider when designing courses for adults are: (1) involving adult students in the design and development of their learning; (2) grounding all learning tasks and activities on their experiences; (3) connecting the learning of course to real life applications and benefits; and (4) providing adult students with opportunities to absorb information (Pappas, 2014). Andragogy is highly motivational because adults are goal-oriented and stand to benefit when offered meaningful learning experiences.

A considerable amount of literature provides andragogic benefits of social ICT integration in teaching and learning at tertiary level (Ounis, 2016; Chugh and Ruhi, 2018; Devi *et al*., 2019). Such benefits include social media tools creating a platform for improving the educational process through enriched text, videos and audio materials (Devi *et al*., 2019). Furthermore, social ICT in teaching, as Chawinga (2017) and Devi *et al*. (2019) assert, enables collaborative learning where students can tap on the synergy of working on assignments and projects together from their homes and any time. More significantly, social ICT provides easy access to learning materials and high interaction with the lecturers to make learning occur anywhere any time (Chawinga, 2017; Gon and Rawekar, 2017; Devi *et al*., 2019). In andragogy, social ICT platforms uses benefit students who find it difficult to express their thoughts in a face-to-face classroom context to make them actively involved in the learning process and helps build their confidence level as well (Devi *et al*., 2019). Moreover, Kustijono and Zuhri (2018) posit that social ICT in teaching, such as Facebook and WhatsApp, leads to reading efficiency and promotes students' critical thinking skills through the elements of analysing, evaluating, applying, generating and expressing ideas, with which the categories measure clarity, accuracy, relevance, depth and logic indicators. It can

be seen from previous studies that there are andragogic benefits of using social ICT in teaching, which can lead to an effective teaching and learning process.

Even though social ICT had become an educational equaliser, it still has its flaws. In teaching, the high expectations of teachers' availability, message flooding, time-consuming and eye strain, are some of the disadvantages of social ICT platforms (Ahad and Lim, 2014; Gon and Rawekar, 2017; Rosenberg and Asterhan, 2018). Sometimes, as Abraham and Saini (2015) and Devi *et al*. (2019) argue, students' use of social media regularly results in them losing abilities to engage in face-to-face communication. Furthermore, these authors argue that social media can be a distraction, as it diverts students' attention from classroom participation, and ultimately disrupt the learning process. According to Abraham and Saini (2015) and Gurcan (2015), there is a likelihood of users not being courteous and respectful of each other, such that profanity, vulgarity, obscenity or language that is harassing, derogatory or otherwise inappropriate for the school environment, circulates on these platforms. Additionally, the issue of privacy is one of the major dilemmas teachers and students face when using ubiquitous social ICT platforms such as Facebook (Asterhan and Rosenberg, 2015). In a nutshell, the above-mentioned barriers are major concerns that need to be tackled to effectively integrate social media in the education system.

Like any other teaching and learning approach, the advantages of SICTA come with challenges. Chugh and Ruhi (2018) and Mangala and Neelamalar (2018) bring to our attention that lack of technological and infrastructural resources, lack of technical expertise and lack of technical skills, are some of the challenges of SICTA learning that students experience., Moran, *et al*. (2011), Gurcan (2015), Chawinga (2017), and Chugh and Ruhi (2018) point out that additional challenges are lack of integrity of online submissions, privacy concerns, lack of integration with existing learning management systems, a steep learning curve and lack of institutional support for effective SICTA. Moreover, as Gurcan (2015) adds, these technologies do not necessarily work in a classroom as a challenge that affects the incorporation of social ICT platforms in teaching at the tertiary level.

CONCEPTUAL FRAMEWORK

The conceptual framework used in this study was constructed based on the research literature on andragogical practices and the social ICT use in the classroom. The framework shown in Figure 1 is a modification of the Technology Acceptance Model (TAM) proposed by from Davis (1989).

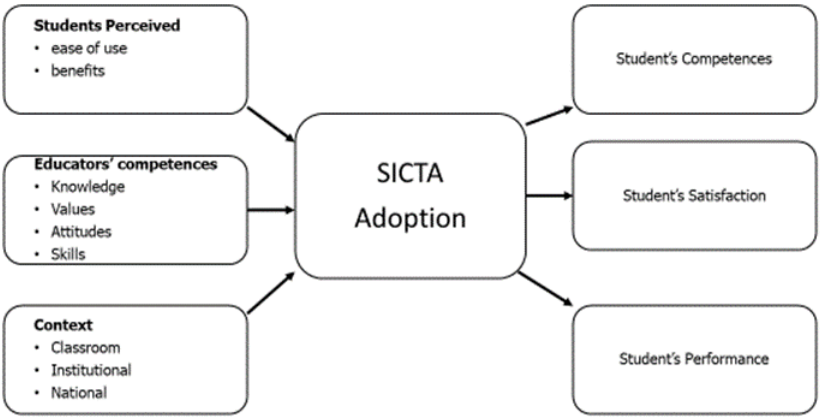

Figure 1: SICTA Conceptual framework (Davis, 1989)

TAM proposes that use of IT tools among users depends heavily on their perceived usefulness and ease of use (*ibid.*). However, this article's adaptation of this model, educator's competencies (knowledge, skills, values and attitudes) and context (classroom, institutional and national variables) influences SICTA practices and outcomes. As Figure 1 indicates, the perceived usefulness, ease-of-use, context and educators' competencies are significant variables and inputs to the behavioural intention to adopt any SICTA-based platforms in teaching and learning at tertiary level. The SICTA and its allied elements of approaches, such as collaborative learning, interactions among learning and teaching players, assessment and feedback and teaching-learning materials, are central to the outcomes of learning, such as learners' satisfaction, competencies and performances.

RESEARCH METHODOLOGY

This study adopted a phenomenological design from a qualitative research perspective. Phenomenological designs allow researchers to get a rich and detailed description of human experience (Groenewald, 2004). Thus, this phenomenographic study involved four student participants to report on how they experienced SICTA andragogy. These participants were enrolled in a Postgraduate Diploma in Tertiary Education (PGDTE) course in August 2019 at a university in Zimbabwe. It was a one-year course that ended in August 2020. Though the programme was intended to be online in the initial semester from August to December 2019, the lecturers tended to use a face-to-face interaction more than virtual. However, the eruption of COVID-19 and subsequent lockdown and the end of March 2020, forced the lectures to fully adopt SICTA. Thus, a phenomenology methodology was most suitable for this study, as it examined students' lived experiences and perceptions regarding the phenomenon of SICTA learning. The students studied five lecturers, five courses in the first semester and five courses in the second semester. A three-stage process of generating qualitative data was adopted, through written narrative, document analysis and dialogues. In Stage 1, data were generated through individual narrative writing, resulting in text data. Stage 2 followed with individual analysis of the four written narratives through constant comparative analysis and this generated field notes. The third and final stage involved group dialoguing that resulted in one document of the findings. The generated data were content qualitative analysed as informed by the conceptual framework and research questions. All the names used in the findings and discussion section are pseudonyms to protect participants through anonymity and confidentiality.

FINDINGS

The findings were thematically organised in three themes to provide answers aligned to the three research questions: (1) experienced multiple and nested SICTA challenges; (2) SICTA created opportunities for learning; and (3) convergent and divergent ways of overcoming SICTA challenges.

The researchers in this study were overwhelmed using multiple SICTA platforms adopted by lecturers. These included Short Message Service (SMS), Emails, Google classroom, WhatsApp and Zoom. These

platforms were external to the BUSE online management system. Moreover, they were nested and unsynchronised. By this it is meant that each of the five lecturers who taught in the second semester, adopted a different combination of SICTA platforms with the use of emails being the most common. All the lecturers used email to share learning materials, send assignments and give feedback. In addition to emailing, four of the five lecturers used WhatsApp to share learning materials, announcements and provide feedback on coursework. In some cases, lecturers adopted a blended model. However, blending was varied. For example, Dr. Sanyu blended Google Classroom with Google Email and WhatsApp texting, while Dr. Jasper and Dr. Marange blended emails and WhatsApp. Dr. Muyeza blended emails and Zoom.

The challenge that students encountered was to learn to use all these different SICTA platforms in a limited amount of time. The students were to learn to use these various platforms and at the same time carry on with our studies. In terms of the complexity of the SICTA platforms, Zoom was more complex to use, followed by Google Classroom, then WhatsApp and, lastly, emails. Alex, one of the student participants, narrated:

> I was overwhelmed by the number of accounts I had to create, memorise for the different courses. The use of WhatsApp and email was quite familiar and easy, but they brought more accounts and groups to the more complex Zoom and Google Classroom. Eish! it took me more than three months to figure out how to turn in assignments in Google Classroom.

Further, the researchers were challenged by economic, adaptability, electricity load-shedding, and connectivity. Other challenge were costly internet bundles, equipment and accessories. Students were part-time in full-time employment and with family responsibilities. However, meagre salaries in an ailing economy failed to sustain both their family and personal needs as students. It was very stressful for each one of the students to always access the internet. This challenge is captured in another student's expression. Alice aid that:

> During the lockdown, this online learning was a nightmare, Eish. I was not earning enough for both the upkeep of my family and purchasing data bundles to access learning materials. At times, I had to forego my family's needs, purchasing data bundles and many other times. I sacrificed accessing learning materials to provide for my family.

Besides, some of the students experienced the challenge of high cost of technological resources such as laptops and smart phones that are now needed in the absence of access to offices. These findings concur with Chugh and Ruhi (2018) and Mangala and Neelamalar (2018), who also established that the lack of technological and infrastructural resources are barriers to effective adoption of social ICT in teaching and learning. However, their economic challenges were unique to the students at individual level as nested within our institution and the broader Zimbabwe economic situation. Students believed other students in Zimbabwean institutions of higher learning and in other similar nations, might be experiencing similar challenges. Moreover, the COVID 19 lock down was reported to have adversely impacted many economies around the globe.

The students were also challenged by poor internet connectivity, depending on the service provider and data source used by an individual. For instance, students Flavia used the TelOne Wi-Fi, Alice used Econet data bundles, whilst Alex and Tony accessed the internet though NetOne data bundles. Regardless of the different service providers and data sources used, on several occasions all the students experienced poor network connections that made it impossible to learn through social ICT platforms. With poor network, downloading learning materials, uploading assignments, interacting and discussing via social media, became a nightmare. Flavia stated:

> Most of the time, especially in the first-semester, internet connectivity was poor. This made it difficult to download materials, collaborate with other students and upload assignments.

There was frequent electricity load-shedding in Zimbabwe and Bindura, in particular, that exacerbated this connectivity challenge. Lack of electricity makes technology devices dysfunctional, thus retrogressing online learning to the extent that most of the students could not meet submission deadlines.

Also, the students all experienced individual student-based challenges related to health, discipline and online learning competences (knowledge, skills and values). They were all eye strained as reported in the following excerpt by Alex and Flavia.

> Studying from the computer and phone caused us to have eye strain due to staring at the screen for a long time.

With regards to discipline, students were distracted by the high volumes of social chats such as WhatsApp and SMS, not related to learning, as exemplified in Tony's confession:

> Sometimes, I ended up engaging in non-academic chats for a long time, viewing and uploading WhatsApp statuses, thus wasting time that could be productively used for learning. Social media, especially WhatsApp, negatively affected my concentration and motivation to learn.

Devi *et al*. (2019) observe that most students tend to spend most of their time on social networking websites at the expense of their online learning.

Two of the students struggled with the use of SICTA platforms. This was attributed mainly to their limited ICT competences. The other two were advantaged because of their ICT academic and work backgrounds. Alex said, "Turning in assignments via Google Classroom was a skill that took me time to learn.")
Alice iterated:

> At first, I found it challenging to use some WhatsApp functions like sharing learning material and I was not familiar with using Zoom.

These competence-based problems were worsened by the lack of institutional technical expertise. The ICT BUSE desk could not provide support. Some scholars like Chawiga (2017) have heeded that lack of technical competences militates against social ICT andragogy.

The change from face-to-face to full online learning in the short time, was another big challenge. Adaptability challenge manifested as students abruptly lost physical classroom contact and got into the SICTA learning environment that physically isolated each of the students. This isolation denied them opportunities for explanation and clarification that occur naturally and timely in face-to-face interaction. Students preferred to discuss course content with their peers and the lecturer in the classroom, rather than online. Such sentiments were revealed to be grounded in the students' background experiences, inclusive of culture, education and profession. Flavia submitted that:

> I faced some difficulty through social networking in expressing my views and ideas in writing, as I preferred to express my ideas orally. That is an approach I have used for many years through my studies.

This view is supported by Devi *et al*. (2019) who argue that students' use of social media regularly may lead to losing their ability to engage in face-to-face communication.

To answer the first research question: What challenges did students experience in teaching and learning through ICT platforms? It was found out that the multiple and nested challenges were related to the use SICTA. In a nutshell, these include costly internet bundles, equipment and accessories, poor internet connectivity, electricity load-shedding, eye strain, distraction in learning, competence issues and loss of face-to-face interaction. Though challenged, COVID 19 circumstances pushed the students to adopt SICTA and successfully completed their studies. This is mainly because the semester was extended to September from June. This provided each the students opportunities to address and minimise the challenges.

Students benefited from SICTA created teaching and learning opportunities. The social ICT platforms learning opportunities opened up were diverse that were categorised into four main groups: (1) online learning competences; (2) learning material accessibility and sharing; (3) time limitless collaborative learning; and (4) enhanced self-directed learning.

First, despite their varied backgrounds, the students gained and enhanced online learning competences through varied platforms. These included (1) selecting, design and using online andragogy; (2) joining and using varied learning platforms; and (3) awareness of the different learning platforms. Alice weighed in:

> We learnt to use different SICTA platforms such as Google Classroom, Zoom and WhatsApp functions that I did not know previously, hence my ICT skills were enhanced.

Using multiple SICTA platforms enhanced online learning competencies as the students got to know how to use the various SICTA platforms such as Google Classroom, Zoom and WhatsApp.

Second, the students experienced the opportunity of easy accessibility and sharing of learning materials. Moreover, the online share materials and ideas were saved and stored for retrieval as when needed. In a dialogic discussion, it was observed that:

> The students were able to access and share lecture notes, receive assignments and upload assignments and tasks via the social ICT platforms easily and from anywhere. This made work easier and led to more learner reflection and satisfaction.

Alice narrated:

> SICTA enables storage of reading materials in digital form for accessing as when I purchased data bundles.

However, only one of the five lecturers used the Google Drive facility. For other platforms, such as Whatsapp and emailing, students had to download and organise the learning in folders. These findings are similar to the findings of many scholars (Chawinga, 2017; Gon and Rawekar, 2017), that social ICT leads to easy accessibility of teaching and learning materials.

Third, the SICTA platforms promoted time limitless collaborative learning in that the students engaged with course content and worked on assignments - group and individual, from their homes. The students could also ask each other and their lecturers questions mainly via WhatsApp and have them answered promptly. This enabled the students to understand the content better and thus improved their satisfaction and performance. Ultimately, time limitless collaboration increased their learning efficiency to attain their objectives of studying this PGDTE programme. Two of the students, Tony and Alex, opined that:

> The students all experienced increased interaction between student to student and student to lecturers. We had extended time with fellow students and lecturers. I would ask the lecturers about content which was not clear or confusing and I would get answers via social ICT.

These findings are in sync with scholars like Chawinga (2017) and Devi *et al*. (2019), who also found that social ICT platforms encourage collaborative learning. However, many of such scholars do not qualify the types and forms of collaborative learning wherein our study characterises it.

Furthermore, two of the students were confidence boosted as exemplified in Alice's narrative below:

> Sometimes I was unable to express my thoughts in the face-to-face classroom setting. However, I could easily clarify doubts by posting a message through social media that built my confidence level. I learnt to pause, express myself in different ways, ask myself if my messages would make sense when read by others. I studied how others expressed their thoughts. All these helped me to improve and gain confidence.

This view is confirmed by Devi *et al* (2019) who state that social ICT in teaching builds students' confidence level.

Fourth, the students enhanced their self-directed learning because of independent, individual, time flexibility, as well as location and time boundless SICTA-created learning opportunities. The andragogy was wholly learner-centred and self-paced. Learning could take place anywhere and the learning material could be accessed anywhere via social ICT. Also, learning is not restricted to given hours of the day and given days of the week. This made learning convenient. This opportunity is captured in the participants' statements below:

> I could study from home or anywhere I felt comfortable. I was also able to study and to access learning materials at any time of the day (Tony's narrative).
>
> Social ICT in teaching enabled me to take charge of my learning. I was more active in the learning process, and I could study at my own pace (Flavia narrative).
>
> Besides, through teaching via SICTA, the teachers could structure the learning process and personalise it to meet individual learning needs that was advantageous for the students' performance (Alice' narrative).

Similarly, Chawinga (2017) and Gon and Rawekar (2017) indicated that learning anywhere at any time are among the benefits of using social ICT in teaching and learning. This perfectly suited the World Health Organisation (WHO) COVID-19-induced physical social distancing requirements.

In short, the teaching and learning opportunities reported were online learning competences, learning material accessibility and sharing, time limitless collaborative learning, and enhanced self-directed learning.

The students developed diverse and complementary strategies for overcoming SICTA challenges. These included: (1) creation of peer

networks or groups; (2) peer teaching and learning; (3) behaviour change/adapting to multiple SICTA platforms; (4) adjusting to electricity load-shedding and working as much as possible when available; (5) shared cost of internet/cost comparison of data bundles; (6) exploring SICTA tools such as adjusting font sizes, screen light, minimising screen exposure; and (7) creating a home classroom.

The students created learning networks or groups to minimise the negative impact of the loss of face-to-face learning or physically isolated learning. These networks assisted them to learn collaboratively, as highlighted by Flavia:

> I felt the challenge of studying in isolation was minimised by increasingly interacting with fellow students and lecturers via SICTA. I would ask the lecturers and fellow students content that was not clear or was confusing and I would get answers via SICTA. Thus, collaborative learning minimised the negative impact of the loss of human contact.

The use of multiple social ICT learning platforms encouraged the students to quickly learn to learn. The students organised their learning themselves and navigated the SICTA platforms within the shortest time. Within these networks, some participants with limited or no confidence in expressing themselves in writing, adopted video and audio communications strategies via WhatsApp, Zoom and Google meetings. Flavia, again, said:

> I faced some difficulty through SICTA in expressing my views and ideas in writing, but I overcame the challenge by expressing my ideas orally via WhatsApp audio call.

Students engaged in peer teaching and learning to overcome their lack of SCTA learning technical competences, Tony and Alice became teachers in the group and assisted to explore the use of SICTA platforms effectively. Ultimately, the students learnt and were able to use multiple social ICT platforms used by their lecturers. Flavia added:

> Initially, I preferred to use emails that was a familiar platform to me...I then realised that I needed to access learning materials and attend lectures through platforms like Zoom and Google Classroom. I sought assistance from Tony

SICTA brought about behaviour change in the students. It forced the students to be self-disciplined, remain focused and desist from being

distracted by social media such as WhatsApp and Facebook. Alice affirms this view:

> Avoiding non-academic chats during study time and setting up a study timetable, helped me to stay focused on my studies and to minimise social media distractions. I also learnt to ignore social messages.

All adjusted to the electricity load-shedding and worked as much as possible whenever electricity was available. This instilled in students the ethos of hardworking, commitment and adaptability. Alice states how she worked around this:

> Since SICTA offers the time flexibility opportunity, I made sure I worked hard any time electricity was available. I worked mornings, afternoons or nights for not less than four hours whenever electricity was available.

The cost of learning was minimised through shared and compared strategies. The African philosophy of *Unhu/Vunhu/Ubuntu* of I am because you are, was put into practice. Three of the students opted for cheaper bundles such as Yomix offered by Econet and OneMoney offered by NetOne. Flavia also used such facilities whenever the TelOne internet source was down. Also, the the students minimised the cost of internet by sharing the internet. All this was obtained through research. Students downloaded materials from Google Classroom and shared them through cheaper platforms such as WhatsApp as confirmed by Alice

> I learnt about cheaper internet bundles such as Yomix from friends and adverts from internet providers and this helped to save on internet costs. Also, I used to receive materials from friends downloaded from Google Classroom and shared via cheaper platforms such as WhatsApp.

Multiple strategies to address the eye strain challenge were used. These included increasing font size, adjusting screen light and limiting computer exposure as much as possible. We Material was downloaded and printed to read off the computer and line. Toney said, "I adjusted the screen light and the font size to avoi*d* straining my eyes whenever I was reading from the computer."

The students created a working space at home, referred to as a home classroom. The home classroom was created by identifying a spare room and old furniture such as bedding and chair as well as setting up a learning schedule. Alice said,"*First, I create a working space and then I then up a learning schedule that I followed strictly."*

Some of the students' ways of overcoming SICTA challenges were similar to what was reported in the literature. For example, Hand (2018) reports that to overcome physical isolation, it is important to have regular contact with peers to create a greater sense of community of practice in a digital environment. This is similar to social networks, such as WhatsApp groups the students created. Literature offers several benefits to the student involved in peer learning. These benefits include adjusting to university life, improving learning competence, acquiring a clear view of the course expectations and an increasing understanding of the subject matter of the course, as well as providing a less intimidating digital learning environment (Capstick, 2004; Edwards, 2012). In this study, this benefit translates to the student's adjustment to SICTA learning, improving not only learning competences, but students' competences of using online tools. Moreover, behaviour change to fully learn through online platforms is supported by Hand (2018), who says setting explicit best practices as early as possible enables students to remain focused. In this study, peer learning values set by the students at the outset of SICTA guided them to remain focused through the duration of their study. As all students were African, their peer values were grounded in *Unhu/Ubuntu. Ubuntu* is a communitarian philosophy that embeds and emphasises on values of compassion, tolerance, harmony, discipline, respect, care, empathy/compassion, morality, ethics, honesty, hospitality, and sharing (Letseka, 2012). The *Ubuntu* set values brought about positive interdependence (Seger *et al*, 2016) among the students. This is to say each student perceived his or her contributions in the form of cost-sharing and helping each other to navigate SICTA as to essentially guarantee the success of the group.

One major lesson drawn from this study is that using SICTA platforms in learning has many inherent challenges. However, it creates many opportunities for students that motivated them to use a myriad of strategies to overcome the SICTA challenges.

CONCLUSION AND RECOMMENDATIONS

In the students' PGDTE programme, the SICTA-based platforms adopted were: emails, SMS, Google Classroom, WhatsApp and Zoom. These platforms were used for sharing learning materials,

collaborative learning, interactions, announcements, posting and uploading assignments and making video and audio presentations. The researchers believe that SICTA offered value in teaching and learning due to the opportunities that were availed to the students as noted in the findings, such as online learning competences, learning material accessibility and sharing, time limitless collaborative learning and enhanced self-directed learning. However, the students experienced challenges in using SICTA as discussed above e.g., internet challenges, distraction in learning, lack of technical skills and technical expertise, to mention a few. Importantly, the study explained how the students used opportunities to minimise the challenges. SICTA is radically changing the way education has been traditionally delivered. Worth noting, with the introduction of online mode of study and the outbreak of COVID-19 that has induced physical social distancing and lockdowns, institutions of higher learning can only become sustainable if they promote the use of social ICT such as WhatsApp, Zoom, Google Classroom, Facebook, YouTube, etc. Hence, social ICT in teaching at tertiary level is on the rise.

Social ICT platforms can be very helpful in achieving higher order thinking and meta-cognitive skills. However, Abraham and Saini (2015) contend that achieving those objectives demands planned intervention. To counteract the challenges that affect the incorporation of social ICT platforms in teaching at tertiary level and maximise their potential, the following recommendations are proposed.

First, the professional development of staff and students on the use, importance and the impact of using social ICT platforms in teaching and learning at tertiary level should be provided. Besides, tertiary level institutions should put in place measures to ensure that both teachers and students have access to internet and technological devices on and off-campus. Moreover, educators at tertiary level should design and establish appropriate policies for the use of these platforms within their premises, always considering users' behaviour in these environments. For effective use of social networking sites, documented guidelines can provide clarity and practical advice to positively channel online discourse. Furthermore, educators at tertiary level should craft well-designed and organised methodologies or practices that integrate social networks in the educational community. Tertiary

education institutions need to find ways of incorporating social ICT for various uses, be it advertising, marketing, promotion or, importantly, for learning and teaching activities. Lastly, to reduce the distraction of students, social media usage in academia, tertiary education institutions should focus on the dissemination of relevant information, particularly so that it aids in meeting learning outcomes and scaffolding assessments.

As an area for further study, researchers could examine why lecturers in higher education prefer using external social ICT platforms to internal learning management systems. For example, at BUSE, most lecturers avoid the BUSE learning management system (Moodle) in favour of social ICT platforms.

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