The Use of Mobile Phone Technology in Teaching and Learning for Primary School Pupils During Covid-19 School Closure in Tanzania

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Abstract

This study investigated the use of mobile phone technology as a mitigation strategy for facilitating teaching and learning during the unprecedented COVID-19 pandemic-induced school closures in Tanzania. Employing an interpretive qualitative approach and a case study design informed by the Framework for the Rational Analysis of Mobile Education (FRAME), the study involved eleven (11) participants, encompassing one head teacher, three subject teachers, and seven parents. Data were collected through semi-structured interviews and documentary reviews and subsequently analysed using content and thematic analysis techniques. Findings revealed a sense of shock among parents and teachers due to the unforeseen closure of schools, but they promptly embraced mobile phones as a means to sustain students' learning. These devices facilitated the exchange of learning materials via text messages, calls, social media, and emails. However, limitations in instructional skills and financial constraints for smartphone purchase and internet connectivity among parents posed significant challenges. The study recommends collaborative efforts between the government and other stakeholders to establish a robust online learning infrastructure that can ensure educational continuity during unforeseen school closures.

Keywords: *Mobile phone, technology, primary school, teachers, parents, Tanzania*

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Introduction

The emergence of an unknown respiratory disease was initially observed in Wuhan, China, on December 31, 2019 (McAleer, 2020). In response to this public threat, the World Health Organisation (WHO) promptly declared a "Public Health Emergency of International Concern" on January 30, 2020, and subsequently designated it as COVID-19 on February 11, 2020. By the end of February 2020, the disease had permeated all continents except Antarctica (ibid). As of August 26, 2022, the WHO documented 596,873,121 confirmed cases of COVID-19 globally,

with 6,459,684 reported deaths (World Health Organization, 2022). The swift and widespread transmission of the pandemic prompted the WHO to advocate for stringent measures, including lockdowns, across nations. These measures significantly impacted various sectors, including education. Consequently, schools were compelled to close, teachers were confined to their homes, and a considerable number of students experienced prolonged absences from school (Zancajo, 2022; McAeer, 2020; Koran et al., 2021). In response to this unprecedented disruption, traditional face-to -face instruction metamorphosed into online teaching and learning, thrusting learners into an era of "forced self-learning holidays". Within this altered educational landscape, mobile phone technology emerged as a pivotal tool in addressing the challenges posed by the abrupt shift to remote learning.

As of early April 2020, UNESCO documented a staggering 1,576,021,818 impacted learners, constituting 91.3% of the total enrolled learners across 188 countries subjected to lockdowns in response to the global COVID-19 crisis (UNESCO, 2020). The profound repercussions of the pandemic are encapsulated by an estimated loss of over 1.8 trillion hours of contact learning for schoolchildren worldwide (UNICEF, 2022). Notably, countries like Uganda and Kenya implemented prolonged school closures spanning two years, disrupting the academic continuum within these institutions. In 2022, Uganda officially reopened its schools, introducing a revised curriculum to address the lost instructional time (Dahir & Musinguzi, 2022). However, the most substantial toll was exacted on in-school dropouts, surpassing 35% in sub-Saharan Africa alone (Moscoviz & Evans, 2022). Disturbingly, the vulnerability of girls escalated during the pandemic, with 98 million adolescent girls globally out of school, and indications suggest that the pandemic exacerbated this figure by an additional 20 million.

Five districts such as Kitgum, Ngora, Kyegegwa, Kasese, and Lyantonde in Uganda reported over 2,372 teenage pregnancies during the pandemic lockdown (Forum for African Women Educationalists [FAWE], 2021). Specifically, Kampala (29,591), Wakiso (28,472), Mukono (12,308), Kamuli (12,224), and Kasese (11,634) recorded the highest incidence of pregnancies among 10-24-year-olds during the COVID-19 pandemic. Similarly affected districts comprised Mayuge (10,666), Jinja (10,113), Oyam (10,093), and Mbale (9,991). Conversely, Karenga (608), Moyo (1,042), and Nabilatuk (1,061) reported the least impact (ibid). While educational institutions are gradually reintroducing conventional teaching methods with adherence to health protocols—such as the use of sanitisers, mask-wearing, and social distancing—due to the persistence of COVID-19 variants like Omicron, Delta, and Alpha (The Indian Express, 2021), it is evident that a return to pre-pandemic normalcy may be protracted on a global scale.

Education during COVID-19 lockdowns: Response from UNESCO and other countries

Globally, the pandemic lockdowns kept the majority of the children out of school. Being the global agency for education, UNESCO embarked on several initiatives to support children who were learning at home. Most of these initiatives involved digital learning management, which could be supported by mobile phone technology (Mahundu, 2021). The technology included but was not limited to the preparation of educational TV channels, mobile phone applications, including social media, and tools to help teachers and parents promote children's learning at home. Although the decision to use technology and the recommended gadgets was useful, learners from disadvantaged societies could not access them. Also, the implementation of this decision had no direct management and control in individual countries. It was evident that "*For at least 463 million children whose schools were closed due to COVID-19, there was no such a thing as remote learning*", as noted by the head of the UN Children's Fund (UNICEF, 2022). Some of those categories adopted by UNESCO are shown in Table 1 below.

Table 1

Digital Learning Management Systems Proposed by UNESCO

CenturyTech	Personal learning pathways with micro-lessons to address gaps in knowledge, challenge students and promote long-term memory retention.
ClassDojo	Connected teachers with students and parents to build classroom communities.
Edmodo	Tools and resources to manage classrooms and engage students remotely, offering a variety of languages.
Edraak	Arabic language online education with resources for school learners and teachers.
EkStep	Open learning platform with a collection of learning resources to support literacy and numeracy.
Google Classroom	Help classes connect remotely, communicate and stay organised.
Moodle	Community-driven and globally supported open learning platform.

Nafham	Arabic language online learning platform hosting educational video lessons that correspond with Egyptian and Syrian curricula.
Paper Airplanes	Matches individuals with personal tutors for 12-16-week sessions conducted via video conferencing platforms.
Schoology	Tools to support instruction, learning, grading, collaboration and assessment.
Seesaw	Enables the creation of collaborative and sharable digital learning portfolios and learning resources.
Skooler	Tools to turn Microsoft Office software into an education platform.

Source: Adopted from Mahundu (2022)

Regarding countries' responses, the prolonged episode of school closures necessitated many students around the world to move to remote (distance) learning from home through various technology-based or alternative initiatives that schools could implement to remain connected (Olanrewaju, 2021; Sayed et al., 2021). For example, while some countries lent laptops to students (New South Wales, Australia), others, such as Great Britain and Japan, opted to print and deliver additional work booklets. Interestingly, Mexico took a different alternative network due to its well-established tradition of television usage in the provision of secondary education to groups of students in rural areas as part of its telesecundaria policy (Gouëdard, 2020; Sayed et al., 2021). During the pandemic outbreak, only seven per cent of households in Mexico did not have a TV set (OECD, 2017). In Africa, many countries embarked on distance learning at their level of capacity, especially through the use of television, radio, newspapers, and social media platforms (Olanrewaju, 2021; Sayed et al., 2021). Those who lacked access to technology were left behind as they could not attend online classes.

Education during COVID-19 school closure in Tanzania

The government of Tanzania declared the closure of all educational institutions on March 17, 2020, after the first confirmed case of COVID-19 was reported on March 16, 2020 (Manyengo, 2021). The suspension of face-to-face teaching and learning in schools necessitated the Ministry for Education, Science, and Technology (MoEST) to initiate online classes for primary and secondary students from home through radio, television, and YouTube (Mahundu, 2022). Tanzania Institute of Education (TIE) and other stakeholders introduced online classes, where parents and siblings were supposed to support their children by following the lessons from home. According to Manyengo (2021), nearly 80% of the utilised

television stations were private, such as Azam TV (which dedicated one of its channels [UTV] to school lessons), Clouds Plus, Upendo TV, and Zuku TV. The Tanzania Broadcasting Cooperation (TBC) specialised in broadcasting lessons for advanced-level classes, especially Form Six students (high school graduating class) who were preparing for their final examinations—set for June 29, 2020 (National Examination Council of Tanzania [NECTA], 2020). Despite these initiatives, many students could not access the lessons due to various constraints, including the lack of radios, televisions, and digital devices, as well as ineffective parental support for online learning. The school closures in most developing countries revealed the unequal access to digital technologies and the flaws in effectively administering the delivery of online learning to students who were at home and did not have any other support (Lynch, Singhal & Francis 2020; McBurnie, Adam & Kaye, 2020). In addition to that, parents and guardians were unexpectedly tasked with the responsibility to monitor their children's learning at home.

However, educators, including teachers, started looking at how best to mitigate the challenges faced in reaching out to their students. They identified that mobile devices, including cell phones, could be one of the immediate resources to be used. Educational researchers identified cell phones as being effectively utilised by many teachers and parents to support teaching and learning in the education sector in developing countries, including Tanzania (Manyengo, 2021; Mahundu, 2022). Many individual schools, especially private and public schools in urban areas, used mobile phone applications such as WhatsApp, Zoom, and messaging to facilitate teaching and learning for their students (Todd, 2020). Other partners, particularly telecommunication companies such as Tigo, Vodacom, and Airtel, lowered costs by introducing affordable internet bundles for accessing teaching and learning materials (The Citizen, 2020). Despite all these initiatives, the use of mobile phone technology for teaching and learning during the pandemic school closure could not fully support all schools and students. This study, therefore, intended to explore how a cell phone was used as a mitigation strategy for facilitating teaching and learning and the challenges encountered by parents and teachers during the process.

Problem statement

Despite the parents and caregivers being obliged to support the learning of their children at home during the lockdown, most parents in rural communities had neither formal education nor online learning facilities enough to support their children compared to parents in urban areas (Akinrinmade, Ammani & Zuilkowski, 2021; Abdullahi et al., 2020). In economically marginalised families, challenges mounted, including financial inability to afford the facilities (TV, radio, mobile phone, electricity bills, and internet connectivity) (Olanrewaju, 2021). Mobile phone technology appeared to be more affordable to the majority of parents than

other devices, such as TVs and computers (Osorio-Saez et al., 2021). Regardless of their usefulness, however, mobile phones are claimed to be disruptive devices (such as addiction to internet use and exposure to inappropriate content) to students because of improper use and limited supervision (Kihwele & Bali, 2013; Muhanga, 2017; Mwapwele & Roodt, 2016). Thus, this study intended to explore how mobile phone technology was used to mitigate the teaching and learning of primary school students and the challenges encountered by teachers and parents in Tanzania.

Purpose and Study Questions

This study explored the use of mobile phone technology as a mitigation strategy for teaching and learning of primary school students during the COVID- 19 pandemic-induced school closures in Tanzania. Specifically, the study aimed to answer three questions:

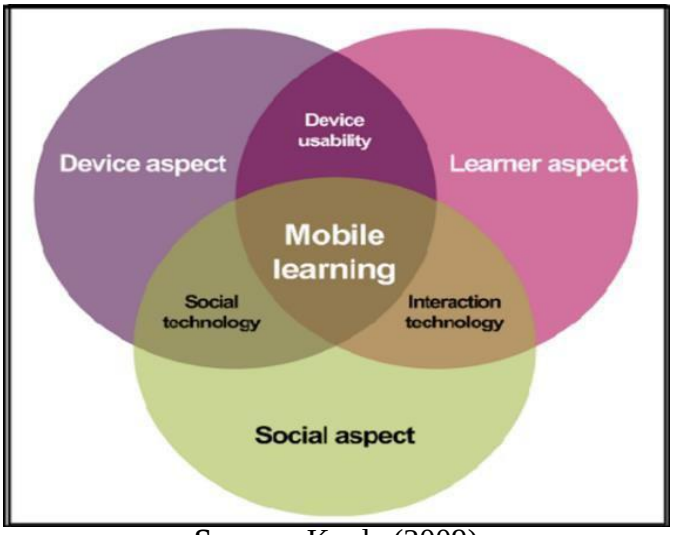
1. What was the response of parents and teachers to the government's decision to close schools due to the COVID-19 pandemic?
2. How was mobile phone technology used as a mitigation strategy for facilitating the teaching and learning of primary school students during the COVID-19 pandemic school closure?
3. What were the challenges encountered by teachers and parents in the use of mobile phone technology in the teaching and learning of students during the COVID-19 school closure?

Theoretical framework

The study was guided by the framework for the Rational Analysis of Mobile Education (FRAME) model, which was developed in 2006 by Marguerite Koole. She used it as the foundation for evaluating the suitability of mobile devices and the usefulness of mobile technologies for online learning (Koole, 2009). The FRAME model describes a mode of learning in which learners can move within different physical and virtual locations with continuous participation and interaction with other people, information, or systems at anytime and anywhere. That is to say, whether individually or collectively, learners can utilise and create information whereby the interaction with that information is mediated through technology. According to Koole (2009), in the FRAME model, information becomes useful and meaningful through these complexities of interactions within a given information context. Basically, the FRAME model suggests three interactive components (*device, learner, and social aspects*) being represented by a Venn diagram, as shown in Figure 1.

Figure 1

A Model for Framing Mobile Learning



Source: Koole (2009)

The three elements of device (D), learner (L), and social (S) aspects are represented by three circles whose intersections where two circles overlap consist of attributes which belong to both aspects.

The device aspect (D) entails the physical, technical, and functional features of a particular mobile device, such as input and output, internal storage, power, compatibility, processor speed, and expandability capabilities (Shneiderman & Plaisant, 2005). Since a device is a bridge between technology and learners, it should be well constructed with high psychological and physical comfort levels such as structure, size, weight, and composition in relation to individual learners. Thus, well-designed mobile devices in relation to learner's aspect equip learners with cognitive focus rather than the devices themselves (Koole, 2009).

The learner aspect (L) refers to an individual's cognitive abilities, prior knowledge, emotions, memory, and possible motivations. In other words, it describes how learners utilise what is already known to them as well as how they encode, store, and transfer information according to learner-centred approaches. The basic assumption of the learner aspect is that a learner's prior knowledge, motivation, intellectual capacity, and emotional state significantly contribute to the encoding, retaining and transferring of information (Koole, 2009). This can be enhanced by careful selection of a mobile device which is relevant to a particular learner in a given context. *Social Aspect (S)* has to do with the processes of social interaction

and cooperation among individuals through mobile devices. Such interaction should observe certain rules that make communication exchange meaningful. Mobile learning takes place well when learners are exposed to relevant social aspects of communication, whether physically or virtually. Thus, communication participants must observe those rules for conversation and detect all the threats which may cause communication breakdown (Preece, Rogers & Sharp, 2002).

Regarding interactions, *the device usability intersection (DL)* connects the needs and activities of learners to the physical and technical characteristics of the mobile device. A portable, intuitive, and transparent device reduces cognitive load and facilitates rates of task completion as long as a learner concentrates on tasks rather than the device task. *The social technology intersection* (DS) focuses on how mobile devices enhance communication and collaboration amongst multiple individuals and systems for connectivity features such as telephony, short messaging service (SMS), and internet through wireless networks. In other words, it focuses on the means of information exchange and collaboration between people with various intentions. In mobile learning, therefore, mobile devices should be well designed to provide learners with the possibility of communicating even when they are separated (Preece, Rogers & Sharp, 2002). The interaction *learning intersection (LS)* is grounded on the synthesis of learning and instructional theories. However, it draws mostly from social constructivism, which acknowledges that learning involves collaboration and meaning from various aspects (Koole, 2009). When this interaction considers the needs of learners in their context, it impacts learners' ability to understand, integrate, negotiate, interpret, and use new ideas as needed in formal instruction or informal learning (ibid). The *Mobile Learning Process (DLS)*, which is the primary concern of the FRAME model, is essentially aided by the proper and effective interaction of the device (D), learner (L), and social (S) aspects, which have already been described.

In the context of this study, teaching and learning activities for students while at home during the COVID-19 pandemic school closure depended on three interactive aspects: devices (mobile phones) which were relevant to the students; the learner aspect (students) whereby the used mobile phones were relevant to students, and the social element in which school administration, teachers, parents, and students had supportive interaction through mobile phones. They also have to observe rules that make communication exchange meaningful for the sake of students' learning. Thus, based on the research questions, the FRAME model can contextually be used to explore the use of mobile phone technology as a mitigation strategy for facilitating the teaching and learning of primary school students during the COVID-19 pandemic school closure.

Methodology

The design

This study employed a qualitative research approach informed by the interpretive paradigm and case study design. The approach was considered appropriate for this study because it offered the possibility to examine its objectives by interacting with participants in the relevant environment through interviews (Creswell, 2014; Pesambili, 2020; Pesambili, 2021; Pesambili & Mkumbo, 2024). The semi-structured interview was used as the main data generation method in this study. It was administered to each sampled participant (school administrator, teachers, and parents) separately at an agreed time and place. This form of the interview was chosen so that participants could provide their experiences of how mobile technology was integrated into teaching and learning, support structures, and, finally, the effect of the use of technology.

Study sites, participants and sampling procedure

The study involved one public primary school in Ubungo Municipality, in the Dar es Salaam region. The school was purposively selected as one of the schools where mobile phone technology could effectively work due to the presence of an electricity supply, internet connectivity, and parents' economic ability to afford bandwidth and smartphones, contrary to many parents in rural areas. The study employed purposive and convenient sampling procedures. Purposively, the study involved one (1) head of school and two (2) academic teachers. Convenient sampling involved two (2) subject teachers who participated in the preparation of teaching and learning materials which were used during the COVID-19 pandemic school closure. Also, seven (7) parents were conveniently selected from among parents whose children participated in the use of mobile phone technology as a mitigating strategy in teaching and learning during the COVID-19 school closure.

Data management and analysis

Data collected were transcribed verbatim concurrently while in the field, coded, patterned and finally categorised into themes for analysis. The data from interviews and documents were analysed qualitatively using thematic and content analyses, as proposed by Braun and Clarke (2006). The following section presents and discusses the findings.

Findings and Discussion

Response of parents and teachers to school closure during the COVID-19 pandemic

In this segment, teachers and parents were asked how they reacted after hearing the government's unexpected order to close schools. The researcher aimed to explore how the school management and parents adjusted to the new situation of school closure in the first place and whether the reaction had continuity in the entire cause of school closure. Findings indicated that both teachers and parents were astonished and shocked by the news of immediate school closure as they were worried about the academic and health destinies of their students. In the next reaction, they thought about the way students can continue learning while at home. Hence, technology became their first option. During the interview, one school administrator (SA) commented that:

> I received the news of the school closure with shock. The fear of the pandemic intensified from health safety to academic crisis since students were forced to stop schooling. I started to think about how teaching and learning could continue, but it was not easy to get the way forward at the very beginning. We then communicated with parents and told them our strategies (Interview response from SA, 2022).

Related to that, one teacher, T1, echoed that:

> I received the information of the abrupt school closure with sadness, especially as I thought about the destiny of class seven students who required very close academic support in their preparation for their final national examinations. I began to think of what could be done without any clear solution, but soon, the school introduced some initiatives to support those students (Interview response from T1, 2022).

In a similar quest, one parent, P6, remarked that:

> I received the news of immediate school closure with much sadness as I worried my child would backslide academically until I received a phone call from the school about the initiatives that were to be taken (Interview response from P6, 2022).

These findings indicate that both teachers and parents experienced school closure due to the COVID-19 pandemic, with worries about the fate of students' academic progress. These worries brought psychological tension and struggle for possible reactive solutions in the first place (Azubuike, Adegboye & Quadri, 2020). In a broader view, many governments, including Tanzania, initially shut down schools and switched to distance learning, mostly using information and communication

technologies (ICT) as one of the approaches that support this type of learning (Organisation for Economic Co-operation and Development [OECD], 2020). These processes are normally implemented quickly, without planning, and their outcomes critically depend on contextual settings. In other words, during times of emergency, speed in the implementation of responses is key, while evidence of what may work becomes limited (OECD, 2015). For instance, with the closing of school buildings and the transition to online learning, education systems faced attendance challenges and higher absenteeism, but still, countries persisted with online learning. In the context of this study, as respondents' quotations have indicated, both teachers and parents preferred mobile phones as a useful technology in the teaching and learning of students while at home.

Use of mobile phone technology in teaching and learning during COVID-19 school closure

The findings revealed that mobile phones were easily used in the teaching and learning of primary school students during the COVID-19 pandemic. According to the FRAME model, mobile phone technology can effectively help the teaching and learning process depending on how it can connect the needs and activities of learners to the physical and technical characteristics of the mobile device. The majority of the respondents commented that mobile phones were useful for teaching and learning because they were portable, intuitive, and transparent enough to make students concentrate on tasks rather than mobile phones. Through mobile phones, teachers not only sent teaching-learning materials and assignments but also informed parents about the available online teaching-learning resources. On the other hand, parents used mobile phones to search online academic materials for their children, receive materials and directives from teachers, and provide feedback to teachers. For instance, one teacher T2 opined that:

> Mobile phones were more easily accessible to most parents than television, computers, and radios. We sent teaching and learning materials and assignments and received feedback through parents' mobile phones. Such teaching and learning materials included compiled subject notes, past papers for revision, pictures and drawings, and audio-video lessons we prepared (Response from T2, 2022).

In connection to that, the school administrator, SA, commented that:

> We collected parents' mobile numbers and created WhatsApp groups, especially for classes seven and four. Parents whose phone numbers were not reachable through WhatsApp were contacted through normal calling and, in rare cases, through neighbours who had smartphones. Then, we started communicating about the teaching and learning activities of

> students and updating parents about the online teaching and learning resources (Response from T4, 2022).

In a similar concern, one parent, P1, commented:

> I used television programs and my smartphone to support my child's learning, especially for those subjects he could easily forget without schooling for a long time. I also joined the school initiative programme through teacher-parent communication to support my child's academic progress. This was easier for me because my mobile phone supported the programme (Response from P1, 2022).

Related to that, mobile phones were used as a mitigation strategy for facilitating teaching and learning since they enabled learners to keep pace with the coverage of the syllabus. For instance, teacher T1 commented that:

> Through mobile phones, I was able to communicate with parents, send assignment documents to my students, and give them feedback. I was worried that my students could lag behind due to school closure. However, we were able to cover several topics and make revisions, something that contributed to good student performance in their class four national assessments (Response from T1, 2022).

In the same vein, parent P4 commented that:

> Through my mobile phone, it was easier for my child to receive lessons from teachers. I insisted on tuning in to television and radio teaching and learning programmes to continue learning. This helped my child not to stack as I worried during the lockdown before the introduction of teaching and learning programmes through mobile phones in schools (Response from P4, 2022).

These quotes indicate that the mobile phone was the most affordable and relevant technology to many parents compared to others, such as television, radio, laptops, and desktop computers (Olanrewaju, 2021). Again, mobile phones supported several teaching and learning materials and facilitated communication among teachers and students through parents on the available online resources such as social media platforms and TV and radio programmes. In other words, mobile phones connected learners and their education needs through teacher-parent collaboration supported by mobile phones' features such as portability, information accessibility, psychological comfort, and satisfaction. Mobile phone technology was one of the common initiatives which teachers and parents adopted to support the online teaching and learning of students during the COVID-19 pandemic school closure (Lynch, Singhal & Francis, 2020; McBurnie, Adam & Kaye, 2020). Moreover, mobile phones played a vital role

in mitigating the teaching and learning loss among students during the pandemic school closure.

In connection to the FRAME model, a supportive mobile phone for student teaching and learning at home should enhance communication and collaboration among multiple individuals (school administrators, teachers, parents, and students) and systems for connectivity features such as telephone, short messaging service (SMS), and internet through wireless networks. The findings showed that parents and teachers played a distinctive role in supporting students learning while at home through the use of mobile phones. The participants' responses indicated that teachers prepared and sent the teaching and learning materials, assignments, and other relevant information regarding students' learning through parents' mobile phones. Thus, mobile phones were important tools in connecting teachers, parents, and students through text messaging, internet-assisted communication, and phone calls. For instance, teacher T4 commented that:

> It was our duty to prepare and send academic materials to parents as well as receive feedback from them. Parents were to supervise their children in learning and provide relevant mobile phone facilities to enhance the process of learning for their children (Response from T4, 2022).

Related to that, supportive social technology-enabled parents to receive and print the sent materials, send feedback to teachers, supervise students' learning at home, provide their mobile phones for children's use, and supply bundle width and airtime. For instance, one parent, P6, had this to say:

> I was responsible for supervising my child's learning at home through directive information I received from teachers. I received and printed school-sent learning materials and purchased bundle width and airtime to enhance teacher-parent communication and internet connectivity. Basically, mobile connected me and the school in supporting my child academically (Response from P6, 2022).

These findings signify the presence of shared responsibilities between parents and teachers to enhance student's learning during the COVID-19 pandemic school closure. These responsibilities were enabled by supportive mobile phones through features such as internet connectivity, text messages, and network connections. While teachers produced teaching and learning materials for students, parents supervised their children's learning and provided other necessary support such as textbooks, online resources, and power supplies for electronic devices. Through supportive social technology, parents had to play teachers' supervisory role in facilitating students' learning at home (Novianti and Garzia, 2020; Cruddas, 2020). However, the extent to which they managed such a role will be presented in the next theme.

Challenges in the use of mobile phone technology for students' learning during COVID-19 school closure

This segment focuses on major challenges that emerged in the use of mobile phones for primary school teaching and learning during the COVID-19 pandemic school closure. During the interview, participants revealed that this new experience had several challenges despite its usefulness. The major challenges included the parents' lack of instructional skills, insufficient funds to purchase bundle width and electricity, limited time for supervising their children at home, sharing mobile phones with children, and the lack of smartphones for some parents. For instance, one parent, P7, stated that:

> I have a smartphone, but money for purchasing bundle width and airtime was a challenge for me. Also, I had no idea of the syllabus requirements, some difficult Kiswahili terminologies, and teaching techniques. Hence, sometimes, my child used my mobile phone to access irrelevant information while pretending to be accessing educational materials (Response from P7, 2022).

Another parent, P3, said that:

> It was difficult for me to share my phone with a child because I used it for my personal use. Sometimes, teachers could send academic materials in the afternoon, but I came back in the evening when my child had slept already. As you know, COVID-19 brought about economic challenges, and the government encouraged the citizens to work for national development (Response from P3, 2022).

In a similar scenario, one teacher, T4, commented that:

> Some students did not participate in the programme because of having no parents/guardians at home. In such situations, the support given to students was very limited (Response from T4, 2022).

These findings reflect those of Mahundu (2022), who found that parents and guardians had varied experiences in supporting their children's learning. For example, some parents had difficulties in tracking and affirming the quality and efficacy of the e-learning materials because of their inadequate knowledge of the national syllabus for various subjects. Studies have also confirmed that most students from economically marginalised societies have no access to online education facilities (Olanrewaju, 2021; Mahundu, 2022). Moreover, the profound challenge in this quest, according to Yahaya (2017) and Mahundu (2022), was that most parents faced difficulties in determining the quality and efficacy of the e-learning materials because of their inadequate knowledge of the national syllabus of various subjects, poor pedagogical skills for their children's T/L practices at home, as well as their inability to help their children attend

online classes and make follow-ups.

Conclusions and Recommendations

The emergence of the COVID-19 pandemic exposed an urgent need for an improved use of online technology. During its initial stages, both teachers and parents were perplexed about the initiatives to sustain teaching and learning activities. However, the use of mobile phones became a vital bridge between schools and students at home during the school closure. The study has depicted that the teaching and learning activities during the COVID-19-induced school closure were aided by effective interaction between mobile phones (devices), students (learners), and social aspects. Besides, during school closure, many parents did not know how to support their children's learning and give them feedback. Other parents did not even take the teaching seriously. The study recommends the need for collaborative efforts between the government and other educational partners to invest in educational technology, particularly the use of mobile phones. There should also be an imperative for continuous training and orientation to parents with at least some basic educational and supervisory skills, which may be useful in the anticipated occurrence of other school closures in future.

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