Africa Education Review

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/raer20

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**To cite this article:** Sifundo Nkomo & Walter Matli (2022) A Framework for Embracing Mobile Gadgets to Nurture the Reading Habits of Rural Learners in Southern Africa, Africa Education Review, 19:3, 36-54, DOI: 10.1080/18146627.2023.2248547

**To link to this article:** https://doi.org/10.1080/18146627.2023.2248547

Article

# A Framework for Embracing Mobile Gadgets to Nurture the Reading Habits of Rural Learners in Southern Africa

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## Abstract

Access to mobile gadgets has increased exponentially, altering social and educational conditions in Africa. This also applies to the reading habits of rural learners in secondary schools. This paper investigates how mobile gadgets could be embraced to nurture the reading habits of rural secondary school learners in Southern Africa. This qualitative study employed a multiple case study design in five rural secondary schools in Beitbridge District, Matabeleland South, Zimbabwe, and five rural secondary schools in Vhembe District, Limpopo, South Africa. Focus group interviews were adopted as a data collection tool for this study. Data was then analysed thematically according to the objectives of the study. The findings reveal the benefits of mobile reading, which include sharing reading materials, easy access, and use by rural learners. The barriers to mobile gadget reading include a strong emphasis on academic, as opposed to leisure, reading and internet connectivity problems. The findings further reveal that some rural learners in Beitbridge did not have access to mobile gadgets. In addition, we found that some rural learners in Limpopo were using their mobile gadgets to read e-news and e-novels. Some of them spend five or more hours accessing social media for entertainment purposes only, and this has a negative effect on their reading. The study concludes that some rural learners in Southern Africa use their mobile gadgets to nurture their reading habits, although some challenges were identified. In response, this study presents an integrated framework that could be adopted to embrace mobile gadgets to improve the reading habits of rural learners.

**Keywords:** mobile gadgets; mobile reading; reading habits; rural learners; Southern Africa

UNISA university of south africa PRESS | Routledge Taylor & Francis Group

Africa Education Review
www.tandfonline.com/RAER
Volume 19 | Number 2 | 2022 | pp. 36–54

https://doi.org/10.1080/18146627.2023.2248547
ISSN 1753-5921 (Online), ISSN 1814-6627 (Print)

## Introduction

Advances in digital technology and the increasing availability of mobile devices, such as smartphones and tablets, are dramatically changing the ways in which learners access, acquire, and consume information. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) (2014, 4) notes with great optimism the potential of information and communication technologies in transforming nations' educational systems worldwide. Healthy reading habits influence an individual's personal development and society in general. UNESCO (2014, 5) laments that reading must necessarily begin with access to text and, more aptly, to books. Yet, in many parts of the world, such access is either non-existent or sorely lacking. Many people, whether they are experienced readers looking for a good story or new readers taking tentative first steps towards literacy, do not read for one reason: they do not have access to books (UNESCO 2014). *BBC News* (2016) contends that in Africa most children have never owned a book of their own, and it is common for 10 to 20 learners to share a single textbook at school.

In their study, Ross (2010) found out that, of the 16 sub-Saharan African countries sampled, most primary and secondary schools had few to no books, and in many countries, these low levels considerably slow the reading acquisition process and consequently affect learning in all other subjects. The International Labour Organisation (ILO) (2017) agrees that rural children are the most affected by the literacy crisis, as they do not have school or community libraries to access books. Book shortages continue to present a significant obstacle to literacy worldwide. In Japan, where 99 per cent of the population can read and write, there is one library for every 47,000 people. In Nigeria, by contrast, the ratio is one library for every 1,350,000 people (Ajeluorou 2013). Drawing on the analysis of over 4,000 surveys collected in seven developing countries, UNESCO (2014) concludes that schools in poor and developing countries rarely have books, and in some rural areas there are no libraries for accessing the reading material. This is the main reason why learners are not reading. Accounts from the literature suggest that physical access to books is a challenge in schools and communities in sub-Saharan Africa. As a result, this study investigated the potential of mobile gadgets as a possible solution to this challenge. This is because most people, including children, have access to mobile gadgets in sub-Saharan Africa, according to the United Nations (UN) (2013).

Recent data from the UN indicates that out of the estimated seven billion people on Earth, over six billion now have access to a working mobile gadget. More to the point, mobile gadgets are plentiful in places where books are scarce. While they are still used primarily for basic communication, they are also — and increasingly — a gateway to long-form text. For a fraction of the cost of a physical book, it is often possible to access the same book via a mobile device (UN 2013). Research reveals that consumers often opt to acquire mobile gadgets, even if they do not have the income to do so (Wesolowsk et al. 2012). This amplifies the potential role that mobile gadgets play, even among the

poorest citizens. In developing countries, people may often sacrifice their meals for airtime to communicate, which cements the role of mobile gadgets as a tool for day-to-day living. This was confirmed by research in South Africa that found that 41.2 per cent of people would forgo their meals just to be able to communicate (Rey-Monero, Blignaut, and Tucker 2016). The Global System for Mobile Communications (GSMA) (2021) report reveals that mobile gadget penetration in Africa, particularly in Southern Africa, has been growing rapidly in recent years, driven by the availability of affordable devices and expanding mobile network coverage. While "mobile gadgets" can refer to a wide range of portable electronic devices, including smartphones, tablets, e-readers, and other handheld devices, smartphones are the most used mobile gadget in Africa (GSMA 2021).

According to Mzekandaba (2020), South Africa's mobile gadget penetration reached 91.2 per cent in 2019, up from 81.7 per cent in 2018. A study by the Zimbabwe National Statistical Agency (ZIMSTAT) reveals that mobile gadget penetration in Zimbabwe stands at 87 per cent (*Zimbabwe Mail* 2022). The recent emergence of mobile reading can provide a new platform for learners in Southern Africa to enhance their literacy through mobile reading. Moreover, mobile gadget access provides a new way to deliver education without installing complex communications infrastructure (Traxler and Vosloo 2014). Zimbabwe has a total of 12 million active mobile gadget subscribers out of an estimated total population of 14 million, and a mobile penetration rate of 90 per cent (POTRAZ 2015, 1). According to Gambanga (2020), mobile gadgets have gained prominence in rural Zimbabwe as 84 per cent of households embrace cellular communications. Consequently, mobile gadgets provide learners the opportunity to carry their reading materials in their own hands (Bachisi 2021). Even those learners who are described as hard-to-reach, such as those in rural communities, can easily benefit from reading materials offered via mobile technologies (Duncan-Howell and Lee 2007).

Therefore, this study focused on how mobile gadgets could be embraced to nurture the reading habits of rural secondary school learners in Southern Africa. Two countries in Southern Africa (Zimbabwe and South Africa) were the target of this research. The objectives of the study were: to determine the access and use of mobile gadgets by rural secondary school learners in Southern Africa, to ascertain the factors that influence the adoption of mobile reading by rural secondary school learners in Southern Africa, and to develop an integrated framework that could be embraced by rural secondary school learners in Southern Africa to nurture their reading habits.

## Literature Review

The literature provides varied views concerning access to mobile reading, and thus this paper attempts to present these diverse perspectives. The literature covers the access and use of mobile gadgets in reading and the influence of mobile reading.

## Rural Schools

The Rural Schools' Community Trust (2018) describes rural schools as educational establishments that are far from the cities, where most of their learners live in rural places. It is in a district with fewer than 600 learners. Gardiner (2008) attests that in South Africa, some authors use the concept synonymously with the concept of farm schools. According to Sipple, Francis, and Fiduccia (2019, 260), rural schools include features such as distance to towns; challenging topography and poor conditions of roads and bridges to access school; limited access to information technology; poor access to services and facilities such as electricity, water, and sanitation; and limited or no access to lifelong learning services, and so forth.

## Reading and Reading Habits

According to *BBC News* (2016), reading is many things, but it always and must necessarily begin with access to text, and, more aptly, books. According to Azikiwe (1998, 106), a reading habit is "the adopted way and manner a learner plans his private readings, after classroom learning so as to attain the mastery of the subject." Furthermore, "good reading habits are good assets to learners because they (habits) assist learners to attain mastery in areas of specialisation and consequent excellent performance, while the opposite constitutes constraints to learning and achievement leading to failure" (Azikiwe 1998, 107). Reading is not attractive when compared with interactive activities that individuals can engage in on the internet (Liu 2005). Previous research has discussed the factors that affect the reading habits of rural learners. For example, a study done by Mohammed and Amponsah (2018) in Ghana shows that a lack of confidence to practise how to read in class, poor motivation from teachers and parents to help develop the interest of the pupils in reading, a lack of pre-reader books in school and at home, a lack of libraries, teachers' inadequate knowledge on phonemic awareness strategies of teaching reading, a lack of reading clubs, and a lack of reading competition among the pupils in the schools were causes of poor reading habits among learners. Mugambi (2015) conducted a study in Kenya and pointed out that scarcity of learning materials, low reading skills, and poor infrastructure affected rural learners. According to a study done by Muchemwa (2014) in Zimbabwe, conditions that cause reading deficiencies include the learner, the atmosphere at home, the learner's peers and community, conditions at school, and the classroom situation. Furthermore, a study done by Cekiso et al. (2022) in South Africa shows that the reading performance of learners from rural areas was affected by several factors, specifically, the low level of education of their parents, a home environment not conducive for after-school reading, the parents' socio-economic status, and non-availability of reading materials at school and at home. According to Mullis et al. (2023), the Progress in International Reading Literacy Study (PIRLS) report reveals that 81 per cent of South African Grade 4 pupils, across all 11 official languages, cannot read for meaning.

With the rapid growth of digital information and entertainment, there has been a change in the way learners view reading and the way in which printed materials are used to

facilitate reading (Liu 2005). Nowadays, reading is no longer confined to print. The emergence of augmented reality technologies and mobile applications has brought about extraordinary changes in the reading habits of most people, including learners (Akyol and Ozdemir 2021). Rochester (2015, 1) maintains that mobile reading includes deciphering and consuming content written in digital format using mobile gadgets such as phones, tablets, personal computers, and e-readers, among others. Digital content that can be read on mobile devices covers e-books, e-newspapers, and mobile cartoons (Rochester 2015, 1). According to Gala (2009, 6), a mobile gadget refers to a portable electronic device that is designed for personal use and offers various functionalities such as communication, entertainment, productivity, and internet access. These devices are typically compact, lightweight, and easy to carry, allowing users to stay connected and perform tasks while on the move. Mobile gadgets are commonly powered by rechargeable batteries and often feature wireless connectivity options such as cellular networks, Wi-Fi, and Bluetooth. Examples of mobile gadgets include, but are not limited to, e-readers, smartphones, tablets, smartwatches, and portable media players (Gala 2009, 6).

## Access to and Use of Mobile Gadgets in Reading

Mobile gadgets have been described as tools for accessing resources (Kukulska-Hulme 2007; Wong et al. 2015). Learners can find more information by using search engines or various applications such as those providing news feeds or language learning functionalities. Learners can access documents, read books, watch videos, take photos, share information, and take notes using their mobile gadgets (McQuiggan et al. 2015; Sampson et al. 2013). Problems and barriers have been reported when reading on mobile gadgets, especially in rural areas, due to technical reasons (Witt et al. 2016) such as the size of the keyboard and the screen (Cheon et al. 2012) or an unstable internet connection (Koç, Turan, and Okursoy 2016). Several African scholars agree that one of the major hindrances to the adoption and use of mobile gadgets on the continent is the lack of the requisite infrastructure. Bachisi (2021) notes that the advent of mobile gadgets, especially in education, came as a blessing to the continent. It has meant that, at last, African learners can access rich resources presented on developed world servers. This move, however, has come with its challenges as schools have needed to upgrade their information and communications technology (ICT) facilities and infrastructure such as mobile gadgets, telecommunications technologies, internet, bandwidth, and power supply (Bachisi 2021). Kukulska-Hulme (2007) identifies the same bandwidth problem in the context of schools in Tanzania. Mobile gadgets present several challenges such as limited processing power and memory size, as some of them are too small to hold the enhanced resources of multimedia applications (Kukulska-Hulme 2007). Due to these and many other challenges, some users have negative perceptions of using these gadgets for educational purposes (Vosloo 2012) and it makes adopting mobile reading difficult (Wang et al. 2009). A study done by Xu et al. (2020) finds that mobile reading resources enhance global literacy by providing learners with cheaper access to written material.

### Influence of Mobile Reading

There has been a gradual shift in the way learners access information as they prefer to access information on the go, anywhere, and anytime (Martin, McGill, and Sudweeks 2013). Today's learners have been labelled "digital natives" or the "internet generation" as they have been surrounded by digital technologies since birth and have readily embraced new technologies (Prensky 2010). A survey done by Mtebe and Raisimo (2014) in Tanzania found that the attitudes and perceptions of learners using mobile gadgets had significantly positive effects on learners' mobile reading acceptance. As shown in research by Akanda, Hoq, and Hasan (2013) in Gabon, mobile gadgets are a good place to read books, magazines, and newspapers. It can be surmised that with different sources of information availed by the internet, mobile gadgets can play a supplementary role in increasing the reading interest of the learners rather than diminishing it (Akanda, Hoq, and Hasan 2013).

One of the negative perceptions of adopting mobile gadgets, as Shabo and Udofia (2009) point out, is that the reading culture of learners has decreased because of the evolution of mobile applications, especially the advent of social media. One of the principal causes of the dwindling speed at which learners read is because of the invasion of social media (Shabo and Udofia 2009). A study done by Nkomo (2020) in Zimbabwe supports Shabo and Udofia, as she found that most secondary school learners spend much of their time on social media for the purposes of entertainment rather than reading. A study using e-readers with 481 learners in Ghana had positive effects on fourth-grade learners' reading scores, particularly when the children received support through an after-school programme (ILC Africa and World Reader 2012). The programme was popular with learners and teachers, despite these implementation issues, and learners who received the e-readers often shared what they read with their family members and friends, thereby creating a multiplier effect (ILC Africa and World Reader 2012).

## Methodology

The researchers opted for a qualitative research approach. A multiple case study research design was adopted using different rural secondary schools in Beitbridge District in Matabeleland South, Zimbabwe, and Vhembe District in Limpopo, South Africa. A multiple case study allowed the researchers to achieve a level of saturation that ultimately revealed common issues and themes regarding the adoption of mobile gadgets. According to Yin (2009), a multiple case study yields more robust results than a single case study; it builds up a general explanation model that fits each of the cases in the study and provides a means of comparison. The other advantage of this design was that the researchers managed to use the results to compare and come up with relevant conclusions. Vannoni (2014) maintains that the multiple case study design enables researchers to compare the results from each case and provide the literature with an important influence from contrast and similarities supported.

Limpopo has five districts, which are controlled by 22 municipalities: Capricorn, Mopani, Sekhukhune, Vhembe, and Waterberg (Statistics South Africa 2011). Matabeleland South has seven districts: Beitbridge, Bulilima, Gwanda, Insiza, Mangwe, Matobo, and Umzingwane (ZIMSTATS 2012). The Vhembe and Beitbridge districts were purposely chosen for this study because they are close to each other and in the proximity of the researchers.

Forms four and five (Grades 10 and 11 in South Africa) were selected for this study. To find cases, or units, the researchers used quota sampling. Quota sampling was conducted in two stages: firstly, to draw secondary schools included in the study, and, secondly, to draw secondary school learners. Using quota sampling ensures that a sample group represents certain characteristics of the population chosen by the researcher (Saunders, Lewis, and Thornhill 2012). From the population, data was collected only from five secondary schools in Malamulele (in Vhembe) and five schools in Beitbridge. In total, there were 14 focus groups and 210 learners who participated in the study. Focus group interviews, an interaction among one or more experts and more than one individual with the intention of gathering data (Morgan 1998, 5), were used with the rural secondary school learners. Interviews were audio recorded with the permission of the participants.

## Ethical Clearance

The University of South Africa approved the ethical clearance: 2016_IS57431663_043. Participation in the study was done voluntarily and anonymously with the learners' consent.

## Data Analysis

To analyse the data, the researchers used latent thematic analysis, which involves identifying meaningful codes, categories, and concepts that adequately reflect the textual data (Clarke and Braun 2014). Data was then coded, and two themes emerged from the accounts of focus group interviews: access and use of mobile gadgets by rural readers, and influence of mobile reading.

## Findings

The discussion centred on the following aims: to determine the access and use of mobile reading by rural secondary school learners in Southern Africa, to ascertain the factors that influence the adoption of mobile reading by rural secondary school learners in Southern Africa, and to develop an integrated framework that could be embraced by rural secondary school learners in Southern Africa to nurture their reading habits. Questions were asked to find out more about the purpose of using mobile gadgets, frequency of use, infrastructure (connectivity and gadgets), the barriers faced, and the positive and negative effects of reading on mobile gadgets. Table 1 shows the categorisation of schools in Beitbridge and Malamulele. Schools were categorised from

B1/ML1 to B5/ML5, which helped to identify the participants from a particular school and also to preserve the anonymity of the participants.

**Table 1:** Categorisation of schools in Beitbridge and Malamulele

| **Beitbridge schools** | **Malamulele schools** |
|---|---|
| B1 | ML1 |
| B2 | ML2 |
| B3 | ML3 |
| B4 | ML4 |
| B5 | ML5 |

## Access and Use of Mobile Gadgets by Rural Readers

Some of the learners in B1 to B5 and ML1 to ML5 had mobile gadgets. The researchers were disappointed to find out that most learners in schools B1 to B5 did not have personal mobile gadgets; those few who had them shared them with their families. One participant in B1 said:

> We are six in our family, and we have only one mobile gadget, so it is difficult for me to do anything personal using that device. There is no privacy and I only access it for a limited time. I only have access to the mobile device when I am checking notes sent by our teachers on the WhatsApp platform.

Another participant in B4 said, "I have a mobile gadget, but it is just for calls and messages, it has no camera, internet access, and not too many applications." Other learners in B2 and B3 indicated that their parents or guardians bought them mobile gadgets. Most learners in ML1 to ML5 had personal mobile gadgets. One participant in ML2 said: "I gave my mobile gadget a name, it is called Luvha, a Venda name which means a flower. I love my flower so much. I am with it all the time." With the advent of the internet and its sophisticated search engines, mobile gadgets ensure that accessing information is as easy as lifting a finger (Nkomo and Matli 2022; Sparrow, Liu, and Wegner 2011).

During the focus group interviews in B1 to B5 and in ML1 to ML5, learners were asked about the purpose of having mobile gadgets and the frequency of access. Their responses are summarised in table 2.

**Table 2:** Purpose of using and frequency of accessing mobile gadgets

| **Purpose of using mobile gadgets** |
|---|
| Listening to music |
| Watching movies |
| For accessing social media |
| Reading newspapers |
| Reading gossip |
| Accessing my school notes and homework |
| Communicating with friends and classmates |
| **Frequency of accessing mobile gadgets** |
| Always |
| Most of the time |
| 24/7 |
| Two to three hours daily |
| Always |
| When there is a need |

One participant from ML3 school said, "I read newspapers from online sources every day, unless when I do not have data." Learners mentioned that they were using their mobile gadgets mostly to be on social media. They mentioned that they were accessing social media applications including WhatsApp, Facebook, YouTube, Instagram, Twitter, Pinterest, and Snapchat. Faizi (2018) attributes this growing popularity of social networking applications among secondary school learners to the freedom of content creation, and the sharing and viewing capabilities offered by these mobile applications. Furthermore, data charges for social media applications like Facebook and WhatsApp are relatively cheaper. This enables the learners to connect to their peers with unlimited access. One learner in ML5 said: "I use Facebook, YouTube, Instagram, and Twitter." When the researchers asked the learners if they knew any mobile applications for reading purposes like Wattpad, Pinterest, and e-readers, most learners were surprised to find out applications such as Wattpad exist. Some learners in ML5 mentioned that they knew of or used Pinterest for downloading fashion designs.

During the focus group interviews, participants also highlighted that they made use of pre-installed mobile gadget application functions such as cameras, music players, video players, and games. One of the participants in ML4 remarked: "I take a lot of pictures with my device and listen to a lot of music of all genres." Another participant at ML1 said: "I do not have books on my gadget. I usually use TikTok to watch videos because I hate reading. If only reading materials were available on TikTok and gaming I was going to read."

Some learners at BL3 mentioned using WhatsApp most of the time even though they faced the problem of sharing their mobile gadgets with everyone at home. To capitalise on mobile applications, learners need to first understand the types of mobile applications that are available and their various features to best use them for specific purposes (Nkomo and Matli 2022; Papadakis and Kalogiannakis 2017).

**Factors Influencing the Adoption of Mobile Reading**

Factors influencing the behaviour of the learners towards the adoption of mobile gadgets to improve their reading include reasons for reading on mobile gadgets, infrastructure (connectivity and gadgets), the barriers faced, and positive and negative effects of doing so. During the focus group interviews, learners were asked why they read on their mobile gadgets; their reasons included convenience, affordability, access, and being able to share with others. Some learners from ML3 said, "It is very convenient for us to read from our mobile gadgets as we always have them." Other learners said, "It is more affordable to read on our mobile gadgets, we get some of the books for free and at a lesser cost, especially when we use our mobile applications." Another participant said, "I prefer reading on my mobile gadgets to reading physical books." Some learners mentioned that it was easier to share reading materials using their mobile gadgets. A participant from ML5 said:

> We love reading novels so we joined a WhatsApp group so that we could download them. We used to read novels from Facebook as we had joined a writer's group, but the novels were only written in English and some of us understand the Tsonga language more than English, and this was a big challenge.

Participants had positive attitudes towards and perceptions of using mobile gadgets for reading purposes. More than two-thirds of the participants read on their mobile gadgets. The majority believed that they could access the text quite easily. Some learners in B4 said, "It is easier for us to read the text on our mobile gadgets, although we would have loved the text to be in Venda as we understand it more than English."

According to participants in B3, "There are no libraries at school or in the community, so mobile gadgets are helping us to read, especially our newspapers. We love sport, so almost every day we read news related to sport." The other positive impacts include downloading and uploading novels on social media applications such as WhatsApp, Facebook, and Pinterest. During the focus group interviews, some learners in ML1 mentioned that using mobile gadgets with social media applications had influenced them to read. One learner said: "I used to hate reading and my friends used to brag about the novels they have read on their WhatsApp group, which motivated me to read so that I would also share with others." A group of learners in ML5 said: "One of our friends informed us about Facebook where we could read some romantic novels, which we love to read. From that day we have continued downloading novels and sharing what we have read through WhatsApp." Ngugi and Mbeira (2014) recommend that because of these new technologies, schools should now incorporate mobile applications to

stimulate the reading habits of learners. Some learners in ML4 said, "Mobile applications allow people like us living in rural areas to access news anytime, anywhere, since there are no other alternative sources for news access, besides the mobile gadget."

During the focus group interviews, learners were asked about the barriers they face for using mobile gadgets for reading. They mentioned various reasons such as the small screens of their mobile gadgets, network challenges, and disturbances like chatting with friends instead of reading. Some learners at B2 mentioned that they faced network challenges to read and download reading materials. The learners mentioned that sometimes they end up using South African mobile networks. These learners in B2 mentioned that there was no internet at their schools. This is consistent with a research by Porter et al. (2012), who observed that participants in rural areas often walked long distances and climbed hilltops to find a signal. Similarly, studies conducted by Baro and Endouware (2013) in the Niger Delta region revealed that 57 per cent of the participants highlighted network failure and congestion as major hindrances to mobile gadget usage in rural areas. A Zimbabwean government minister revealed that communities situated ten kilometres from Beitbridge were using MTN and Cell-C networks from South Africa, due to the unavailability of signals from Zimbabwe (Kawere 2016). This is consistent with the Zimbabwean National ICT Policy report, which indicated that most rural communities were not connected to the high-speed network, thus increasing the digital divide (Kawere 2016).

There were some negative attitudes towards and perceptions of using mobile gadgets for reading. During the focus group interviews, some learners in ML1 stated that the social media applications found on their mobile gadgets were destructive as they spent most of their time chatting with their friends on WhatsApp and Facebook, and this had a negative impact on their reading habits. During focus group interviews, a group of learners in ML4 said: "We spend 70 per cent of our time on social media updating statuses, photographs and chatting amongst ourselves, then 30 per cent reading for exams so we don't have time for using mobile gadgets to read for leisure."

A learner in ML4 said: "When it comes to social media, we don't have discipline, we have different accounts, and we want to check them every time. We can be on Facebook and WhatsApp at the same time and be downloading music and movies on YouTube, especially when we are using our school Wi-Fi." One learner in B3 boastfully revealed: "We use our mobile gadgets to be on social media for entertainment; it is tiresome to read, so being on social media eases the pressure."

## Integrated Framework

Based on the challenges associated with the effective and successful implementation of the measures discussed in this paper, it seemed almost impossible to reach out to all learners. From the literature review, several authors used both qualitative and quantitative approaches to collect data for their research. Issues around mobile gadgets improving the education of learners were also discussed. However, the researchers left

a gap on how mobile gadgets could be adopted by learners for reading purposes. Thus, the aim of this research sought to bridge that gap by investigating how mobile gadgets could be embraced to nurture the reading habits of rural secondary school learners in Southern Africa. From the findings, some learners mentioned the barriers to access, destruction, and shortage of reading materials.

To also cover the gap from the literature and from the findings, the researchers proposed the framework shown in figure 1. The proposed framework provides suggestions for possible solutions so that learners can embrace their mobile gadgets to nurture their reading habits. The proposed framework has eight pillars including users/learners, stakeholders, and authors/publishers. As illustrated in figure 1, there are different types of reading materials available on mobile gadgets. These evolve, they are not stagnant, and that is why the model processes are in a cycle. According to Robinson, Saldanha, and Mckoy (2011), frameworks can evolve, and some steps need to be followed to design one. These steps include an extensive literature review, conducting research, and identifying the gap to be filled.

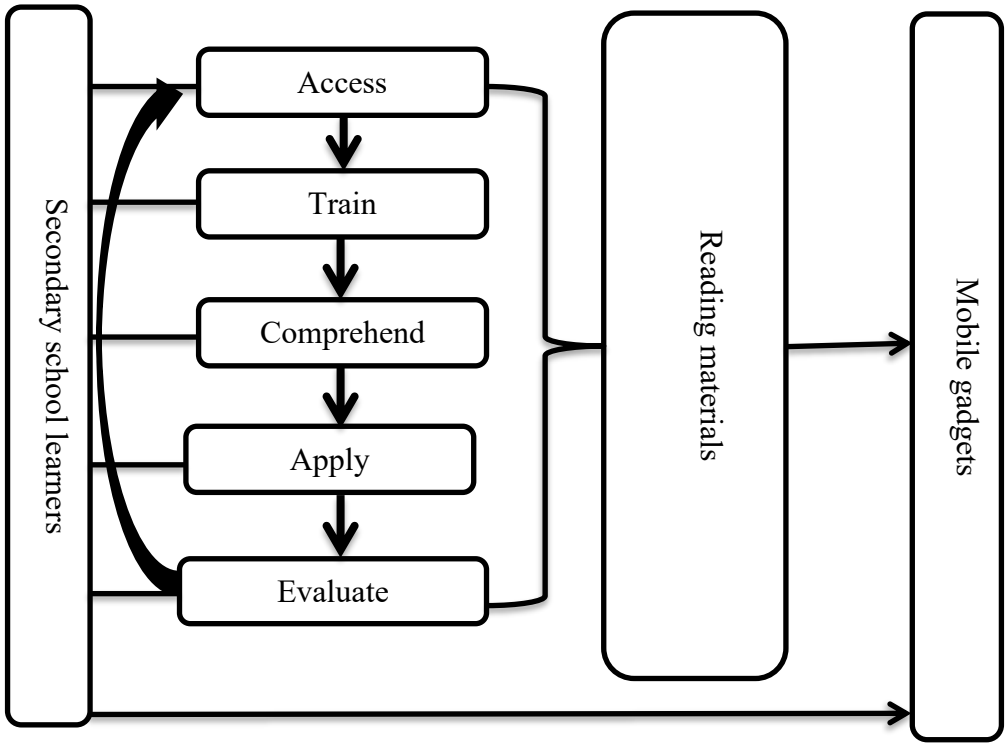


**Figure 1:** Adoption of mobile gadgets model (synthesised by the researchers from literature and participants' responses)

*Access*

Learners need to access reading materials on their mobile gadgets so that they are able to use them to improve their reading habits. Therefore, some schools and community libraries need to change their policies and offer free Wi-Fi so that learners can use their mobile gadgets to download and access some reading materials. These schools and community libraries should limit access times and content so that learners have discipline when using gadgets. Learners need to discipline themselves in order to manage the use of mobile gadgets.

*Train*

Learners need to be trained on how best to use mobile gadgets for reading. Teachers can train the learners — if learners are trained, it will be easier for them to use mobile gadgets for reading. Learners need to be trained first so that they can select the mobile technologies that are best suited to them in improving their reading habits. After that, they can choose the best technology to use so that their reading habits improve. Learners need to research the chosen mobile technology. Having knowledge will be helpful in engaging and adopting these mobile technologies, and proper knowledge of web 2.0 technologies will provide social interaction with their peers in the learning process, and enable learners to work at the conceptual level of understanding on authentic reading materials where they can read, discover relationships, discern patterns, and develop a deep understanding of content and collaboratively build knowledge and ultimately cultivate their reading habits.

*Comprehend*

Learners need to understand what the whole process is all about. Learners will have the ability to process the mobile technologies chosen, understand their meaning, and integrate them with what they already know. Comprehension is influenced by the learners' skills and their abilities to process the information.

*Apply*

When the learners have understood everything about mobile technologies, they will need to implement what they have been trained to do. Learners will then choose the mobile technology they feel is the best for their use so that they incorporate it into their reading schedules. By application, it would mean that they have done all the groundwork of knowing, training, and evaluating those technologies.

*Evaluate*

Not everything found in mobile technologies is of value. When the learners are knowledgeable about which mobile technology to adopt, they need to evaluate the advantages and disadvantages of that particular mobile technology. By evaluating technologies, learners will also have discipline when using that mobile technology.

## Conclusions and Recommendations

The study concludes that most learners knew that they could use their mobile gadgets for reading. From the focus group interviews, it came out that more learners were familiar with social media applications like WhatsApp, Facebook, and Pinterest. Some learners were also familiar with e-news applications, although at first, they did not know that these were types of mobile applications. From the findings, the researchers also conclude that some learners in Beitbridge had challenges of not having personal mobile gadgets as they shared with other family members, so it was challenging for them to access the mobile applications to improve their reading habits. From the findings, we conclude that there is a need for mobile gadgets to be available in rural areas, especially for learners so that they can use these gadgets to improve their reading habits. From the study, the researchers also conclude that learners in Malamulele secondary schools had access to the internet both at their homes and at school, and they had their own mobile gadgets.

There appears to be a demand for mobile reading applications with text in local languages, so future studies could be done to encourage learners to write their own stories in their own local languages.

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