Digital technologies and youth mobility in rural Zimbabwe

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Abstract

The adoption and use of digital technologies (DTs) in rural communities have an impact on several aspects of the society. Using empirical evidence from selected villages of Beitbridge district in Zimbabwe, this study examines the relationship between DTs and youth mobility. The different types, causes, and motifs associated with youth mobilities are explored using qualitative research methods including focus group discussions and community visioning workshops. Study findings reveal challenges facing youths in trying to be mobile including social (mainly gender) inequalities. Thus, women were found to be less mobile. Lack of infrastructure was found to be another key challenge impacting youth mobility. The study however found that DTs are being adopted and this has led to virtual mobilities, which is redefining youth mobility. The opportunities and challenges of integrating virtual mobilities and physical mobilities were explored. The study findings are critical to various actors including ICT, education, and other sectors in that they show opportunities that need to be expropriated to enhance youth mobility, which is key to socio-economic well-being of youths, as well as the challenges that can be faced through the ubiquity of DTs.

1 | Introduction

Digital technologies (DTs) are part of the modern-day societies in the 21st century (Steenbruggen, Nijkamp, & van der Vlist, 2014). Nearly every aspect of our contemporary life has become linked to some form of technology, even in the least-developed communities (Porter, 2016). Many studies show that the digital divide in developing countries is disappearing, with others critiquing its existence (James, 2008). However, perspectives on the digital divide can only be in context (Hayes & Westrup, 2012), as these vary according to the positionality of the researcher. Also, the continuous emergence of new DTs incessantly creates digital divides even though some are only momentary in that there is always someone lagging on technology adoption and use (Wilhelm, 2002; Xia & Lu, 2008). This is not a technology issue but rather an issue entrenched in the societal inequalities.

The accessibility of DTs is revolutionary to most rural communities especially in Africa. For many years, studies have suggested that the adoption and use of DTs have implications for and on societal well-being (Gregor, Imran, & Turner, 2014; Hamelink, 1997). Existing evidence, even though debated, show how the adoption and use of DTs (eg, mobile financial services, m-Health, and e-Agriculture) positively contribute to the transformation of societies (Aker &

Ksoll, 2015). On the contrary, other studies, eg, Wyche, Simiyu, and Othieno (2016), show that the adoption and use of DTs in societies have, to some extent, led to the undoing of development in rural communities, for example, by exacerbating social inequalities. These contrasting technology affordances are the proponents of the social determinism approach, which argues that DTs' impacts on societies are not predetermined; thus, technologies can have either desired or undesired impact depending on how societies appropriate the DTs (Luna-Reyes & Gil-Garcia, 2014). In support of this, the Social Shaping of Technology theory also suggests that the impacts of DTs on society are shaped by the social processes within a society (Williams & Edge, 1996).

Existing studies on DTs' impacts on society have focused on a range of areas such as education, health, agriculture, and politics. Heeks (2014), like Walsham (2017), shows the extent to which ICT studies on these different sectors has been done over the past decade. Considering Heeks' (2014) and Walsham's (2017) perspectives, this paper attempts to contribute to the scholarship on the impacts of DTs on societies by focusing on a fairly less-studied area—particularly in the context of the study area—which is the youth mobilities paradigm (cf Barker, Kraftl, Horton, & Tucker, 2009; Milbourne & Kitchen, 2014; Taipale, 2014). Despite several perceptions on what the term "mobilities" refers to, Buscher and Urry (2009) as well as Hannam, Butler, and Paris (2014) concur that mobilities refer to the movements of people, objects, information, and ideas—or broadly, *movement of things*. However, this study focuses on the movement of young persons in rural communities—referred to as youth mobility (King, Lulle, Morosanu, & Williams, 2016). The study focuses on rural youths considering that this group faces many challenges including limited socio-economic opportunities and yet "... being mobile is essential for taking part in social and economic life" Noack (2011, p. 79).

The adoption and use of DTs impact several aspects of a society to an extent that it is contributing to a shift in the movement of people, objects, information, and ideas by creating new ways of coordination among people (Büscher, 2006). Specifically, recent technological innovations such as mobile applications, mainly targeting young people, impact the movement of youths staying in both rural and urban areas. While physical movement has been the focus of many studies on mobilities, emerging technologies such as virtual reality (VR) and interactive technologies call for an extension of focus from physical to virtual mobilities. For instance, Guttentag (2010, p. 638) shows mobilities in VR showing that in VR, one has the "... ability to move around and explore" as well as "... select and move objects." Therefore, it can be argued that DTs have created new spaces for movement known as the virtual environment enabling new type of mobilities known as virtual mobilities (Milbourne & Kitchen, 2014).

With continuous innovation, it is prudent to accept that newer DTs that can impact the mobilities of young people both in rural and urban areas will emerge. These DTs, like any other technologies, will not have predetermined impacts; thus, these can present both new challenges as well as opportunities within the mobilities paradigm. However, these challenges can best be met and the opportunities best exploited through a "... more widespread and complete understanding of the relationships" between the emerging DTs and youth mobilities (Guttentag, 2010, p. 648). As such, this paper explores the relationship

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between DTs and youth mobility in rural areas particularly to understand the new challenges and opportunities presented by DTs and how these can best be overcome and met respectively.

2 | Research Context

Existing studies on mobilities are biased towards developed countries as well as urban areas with limited studies available focusing on rural communities such as Beitbridge, which are often inaccessible to many researchers. This research is a response to calls for diverse studies on mobilities in varying contexts, eg, focusing on rural communities, marginalised groups, or even young people (Norman et al., 2015) and complementing limited existing research on the relationship between DTs and mobilities (Van Wee, 2015). In the 21st century, young persons (also youths), for this study, between the ages 16 to 35 years, are facing numerous socio-economic, environmental, and political challenges and need to be on the move (mobile) to look for opportunities (King et al., 2016; Langevang & Gough, 2009; Noack, 2011). Further to this, modern societies in which the youths are growing are inundated and dependent on DTs, which can constrict or enhance the mobility of the youths (Le Vine, Latinopoulos, & Polak, 2014, 2016) since youths adopt modern technologies quicker than older people. The impacts of DTs such as mobile phones on the mobilities of youth and even the elderly in rural communities are still emerging and complex (Norman et al., 2015; Porter, 2016). However, this research is even interesting considering that other researchers have emphasised that new ICT services and applications do not yet have a clear-cut functional equivalence in the "physical" world (Van Wee, Geurs, & Chorus, 2013). Therefore, based on the arguments presented above, this study specifically aims to explore and generate knowledge on the relationship between DTs and youth mobilities, and related complexities, in rural communities. The study provides an overview of the profile of youth in the selected rural community of Beitbridge in Zimbabwe. An analysis of the mobility of youth mobility in digital age is also provided. Further to this, the study provides similarities and contrasts between digital and physical mobilities. The study also explores the concept of mobility surveillance before developing a conclusion.

3 | Research Method
3.1 | The research site—Beitbridge

This study is situated in the Beitbridge district of Zimbabwe focusing on selected villages within the district. As depicted in Figure 1, the study area is located at the border of Zimbabwe, Botswana, and South Africa. Due to its location, the study area is a hub of socio-economic activities due to many people in transit between South Africa and Zimbabwe every day. The socio-economic activities in this area are diverse, but the majority of these revolve around services linked to the border—including legal and illegal. Beitbridge falls under the "rurban" banner as it has both the characteristics of rural and urban set-up, and in this study, the term "rural" is not meant to create "imagined geographies" (Norman et al., 2015) but simply refer to resource constrained societies with limited contemporary infrastructure.

In Zimbabwe, districts are administrative areas that are further subdivided into wards, which are also further divided into villages. This study was conducted in 4 purposively selected villages of ward 15,

which are Mapayi, Shabwe, Dumba, and Old Nuli. The proximity of these areas to physical borders (Beitbridge border post) as well as the Limpopo River that divides Zimbabwe and South Africa also encouraged their selection. Data for this study were collected from November 2015 as part of a larger ongoing interdisciplinary project in Beitbridge. The ethical clearance for the project—Mobile Solution for Marginalised Communities (MOSMAC)—was granted by the University of Pretoria. Further clearances for the research were also obtained from the local gatekeepers, ie, the District Administrator's office, the Rural District Council, and the District Police office. The local traditional leadership also provided clearances to collect data within their areas.
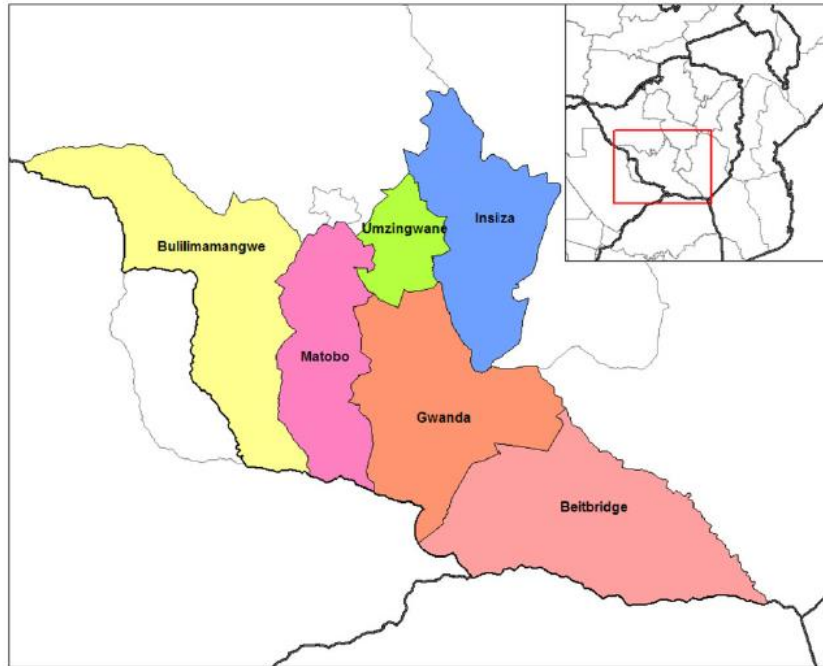
FIGURE 1   Map of Beitbridge, Zimbabwe (Source: Google Maps, 2016)

3.2 | Research method

Studying complexity concepts such as mobilities requires well-thought research methods. Fortuitously, there are many studies on mobilities and this study profited from the research methods in these previous studies (cf Buscher & Urry, 2009; Langevang & Gough, 2009; Porter et al., 2010; Porter, Hampshire, Munthali, & Robson, 2011). Overall, the ethnographic techniques were applied in conducting this research (see Kannisto, 2016). The study uses a case study approach following Dufty-Jones' (2015) indication of how limited case studies on rural mobility studies are. To collect data, the researcher conducted community visioning workshops in the study area. Three workshops were conducted at Mapayi, Shabwe (combined with Old Nuli), and Dumba. Essentially, community visioning refers to "... a process involving a group of people coming together to develop common ideas about what they would like their community to be like in future and to plan how to achieve it" (Chitakira, Torquebiau, & Ferguson, 2012). During the workshops, the researcher facilitated discussions on problems facing the youth, brainstorming potential solutions to these problems, and mapping out the youths' desired futures teasing out the positioning of DTs. From the community visioning workshops, research participants for the focus group discussions were identified. In terms of focus group discussions, a focus group guide was developed for the

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study. The discussions focused on youths, their role in the community, their desires, use of DTs, and everyday life practices. In these focus group discussions, the role of the author was to facilitate the discussions rather than influencing the discussions. In all, 3 focus group discussions have been conducted. A summary of the data collection is presented in Table 1.

Also, the researcher connected to some of the research participants using the social technologies (Facebook and WhatsApp), and this has enabled the researcher to *walk with* (virtually) the research participants and engage in conversations with the research participants in a more relaxed way. Furthermore, the researcher continues to participate in the community practices, for instance, attending livestock auction (Gwaka, 2017), attending local entertainment shows, and eating at the local eating places. By doing so, the researcher continues to interact with the research participants as a participant-researcher (Murthy, 2008). The involvement of the researcher in these practices may, to some extent, affect the data collection process due to "immersion" of the researcher in the situation. However, this can be overcome in several ways, eg, Krauss (2012) provides useful guidelines on how to attain "self-emancipation" while performing the research.

TABLE 1 Summary of data collection

Timeline	Data Collection Method	Data Collected	n
May 2016	Community visioning (CV) workshops (involved broader community)	Qualitative: The desired community, community challenges, potential solutions, and the role of mobilities in community	3 community visioning workshops (average participants = 15)
2 FGDs: May 2016 1 FGD: August 2017	Focus group discussions (only youths selected from the CV workshops)	Qualitative: Youth mobility, DTs adoption and use, community practices, and expectations on youths	3 FGDs (average participants = 9)
Nov 2015-2017	"Walking with"—Engaging in social networking activities	Qualitative: Observing and experiencing the societal dynamics, mobility patterns, and use of DTs	Multiple

Abbreviations: DT, digital technology; FGDs, Focus Group Discussions.

4 | Youth Mobility In Rural Areas
4.1 | Physical mobilities

The mobility of people is not a random activity but rather an activity influenced by needs and social ties (Jahromi, Zignani, Gaito, & Rossi, 2016). The use of DTs is transforming the practice of mobilities in communities, thus changing how *things* such as people, knowledge, material, power, and information move. There is consensus that DTs are shaped by society (Williams & Edge, 1996); however, these DTs, once domesticated in societies, become agents of change. Many examples exist showing how specific sectors of the society (eg, agriculture, education, and health) have been transformed in the process of adoption and use of DTs. However, to date, little is known on the impacts of DTs on the mobility of youths in the rural communities. Therefore, in this section, before exploring the intersection of DTs and youth mobilities, the study explores general youth mobility in rural communities specifically to understand the mobility patterns in rural communities.

Youth mobility in any community is centred on societal dynamics including social, economic, and environmental dynamics. Most of the youths in the study area, like any other community, are mainly involved in schools, and the dispersion of schools in rural communities means that many school-going youths walk considerable distances to school. On the other hand,

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unemployed school leavers, in search of economic opportunities, also walk to places with potential work opportunities such as townships (growth points) where often, short-term labour jobs are available. Further to this, there is a considerable number of youths who, with no purpose, roam around within the community—mostly hopeless and in despair. Thus, all youths, regardless of socio-economic class, are mobile. However, it was also observed that the physical movement of youths differs (frequency and nature) by the socio-economic level of the individual (whether in school, employed, or unemployed) as well as by gender (cf Noack, 2011). Particularly of interest in this study was the observation that unemployed male youths had the freedom to be or were expected to be frequently mobile in search of economic opportunities and yet, unemployed female youths were expected to be at home helping parents, occasionally mobile in search of economic opportunities (cf Hanson, 2010). During a focus group discussion, a female participant indicated that

As a female, my movements are mostly restricted as compared to male counterparts. I am expected to be at home at certain times, fetch water, and participate in community gardens and do most activities around food preparation. As a result, I do not have the same economic opportunities as male youths whose movements appear to be unrestricted.

In response to this, a male participant argued that

Women's restricted movement is for their own safety. For instance, recently, elephants have been spotted in the community and should one encounter these, men are able to flee, and women may not. Also, our culture dictates that a woman who loiters around is considered of loose moral than one who is always around the house. (cf Mason, Parkins, & Kaler, 2017)

Further discussions revealed that social inequalities remain entrenched in everyday practices including mobilities. Young women are less mobile in rural communities due to family restrictions (societal expectations of being grounded), and yet, for young men, they are expected to be mobile. Like Noack (2011) and Porter (2011), gender was found to be a critical determinant of the mobility pattern and mobility choices within the study area. Porter et al. (2011, p. 115) report that "local economic circumstances in both urban and rural areas of sub–Saharan Africa commonly require children's participation from an early age in a much broader range of productive and reproductive activities than is usual", and in this study, it was also found that often, school-going young women were expected to do extra chores at home after school. Cognizant of these imbalances, a donor-led intervention facilitated the distribution of bicycles prioritising girls (see Figure 2) to reduce the burden of walking long distances.

Furthermore, in the context of Beitbridge, it would be inadequate to discuss mobilities without examining border-related mobilities. The proximity of the study area to the Beitbridge border means that most of the youths within the study area interact with the border in several ways. Firstly, the border is used by many people in transit—some with limited knowledge on the operations at the border. This has created an economic opportunity

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for several youths who offer help to transiting people. However, there are also many people who use illegal routes (mainly Limpopo River) to cross into South Africa—known as border jumpers—and some youths in the study area are also involved in helping these border jumpers in return for an attractive payment. Apart from this, youths in the study area also frequently cross the border (legally and illegally) into South Africa for various reasons and key among these in search of economic opportunities. While women also cross into South Africa, those using illegal routes are vulnerable to abuse - physically and emotionally.

In all, youths within the study area engage in several physical mobilities. The study found that most youth mobilities within the community are driven by economic needs. Young people move around in search of economic opportunities, eg, going to school, border operation, or even illegal crossing. Also, there are mobilities driven by sociocultural needs, eg, visiting friends or travelling to participate in social gatherings. However, in all the discussions, despite the study area's erratic weather conditions, the youths did not cite environmental issues (drought and high temperatures) as causes of mobilities.

4.2 | Virtual mobilities

Despite most rural communities in developing countries lacking access to internet or mobile connection (Rey-Moreno, Blignaut, Tucker, & May, 2016), Foster, Graham, Mann, Waema, and Friederici (2018) suggest that there has been a massive improvement in the Internet access in developing countries.

FIGURE 2 School children riding their bicycles after school

Relating to the study area, Gwaka (2017) observed that most youths in the study area have knowledge of, have access to, and can use social media applications/services such as Facebook, WhatsApp, and Instagram. The use of DTs such as social technologies can serve a critical function of mobility—which is giving access. The affordances of DTs create virtual mobilities, which Kenyon, Lyons, and Rafferty (2002) define as "... accessing activities that traditionally

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require physical mobility, but … without recourse to physical travel." Often, in rural communities, the major challenges lie in resource access (eg, accessing the outside world, information, or ideas).

With the prices for mobile phone handsets reducing and access to cheaper models (Hahn & Kibora, 2008), it was found that most of the youths own or can access a mobile phone but only one respondent owns a computer. Thus, the main form of technology within the study area is the mobile phone. While connectivity to Zimbabwe mobile networks is extremely poor, most households in the study area use South African networks (Gwaka, 2017). During the study, participants were asked the ways in which they were making use of DTs (mobile phone) to support their daily practices and one respondent indicated that

We have a WhatsApp group for the boys in the community. We use this group to share many stories, jokes and job opportunities. The WhatsApp group even includes those who now stay in Botswana, Namibia and South Africa. The group is always active to an extent that I have decided to mute mine, but I always check what is being discussed. However, I do not always like the pictures and videos of my friends staying in other countries because at times, they make me feel that I am not advancing with my life.

Kenyon, Rafferty, and Lyons (2003) suggest that virtual mobility includes "… creating new and maintaining old social networks, formal and informal interactions," and it is evident from the responses obtained in the study that new DTs (social media in particular) such as WhatsApp are creating virtual mobilities of ideas, knowledge, and information among youths within the community. In this study, analysis of the responses show that youths—both staying at home and abroad—benefit extensively from the DTs. For instance, through media sharing (images or videos) in the WhatsApp group, those staying abroad get a sense of the current situation at home (which can stimulate emotions) while those at home always get to see and develop an idea of where their friends are staying and working (*this can create a desire to want to travel abroad as well—creating new physical mobilities*). Another respondent expressed this indicating that

From the time I started using Facebook, I have managed to create connections with my old friends as well as gaining new friends. I often view pictures and videos of my friends who stay in various places and of other areas (posted by my friends)—I can't afford to go to these places but the pictures and videos help me get a sense of where I would want to visit or not.

While the adoption and use of DTs in the study area remain poor, increased uptake of technologies will likely improve virtual mobility *of things* in the study area (cf Vilhelmson & Thulin, 2008). For instance, Foster et al. (2018) show that through improved internet connectivity, information and data flows within developing countries have altered. Also, the emergence of mobile money services such as Ecocash has transformed mobility of money (Gwaka, 2017). Through DTs, the concept of time and space in rural communities is

changing, but also, not all change is desirable, eg, when it negatively affects culture and social capital within the communities (cf Vilhelmson & Thulin, 2008). For instance, interactions of youths through DTs can result in adoption of new culture or increased isolation impacting culture and social capital. It is prudent therefore to suggest that the ubiquity of DTs creates opportunities and challenges for the mobility of youths in rural communities, and it is necessary to establish whether physical and virtual mobilities can support each to contribute to the improved well-being of young people in rural communities.

FIGURE 3   Road under maintenance in the study area

4.3 | Juxtaposing virtual and physical mobilities

In this section, the study attempts to develop an understanding of the opportunities for physical and virtual mobilities to support each other to contribute to the improved well-being of young people in rural communities. Responses gathered from the study show that youths mobilities in the study area are already based on integration of virtual and physical mobilities. There are many motivations for integrating virtual and physical mobilities in rural communities such as lack of infrastructure, resource constrains within household, and health risks, environmental pollution,   and safety issues (Steenbruggen et al., 2014).

The first focus of the section follows the findings showing that children in the study area walk long distances to attend school. These "sacrificial mobilities"* are premised on the promises of a better future that such mobilities bring (education and subsequent employment/business venture).   However, walking long distances to access education is a challenge often associated with poor school performances and vulnerability of children especially girls. To avoid walking long distances daily,

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school-going children in the study area rent places near schools but staying away from their parents has resulted in many girls falling pregnant. While there are efforts by the community members to organise transport for the children, the study area, like other rural communities, lacks physical infrastructure. In the study area, it was found that some of the villages have dilapidated roads and because of lack of funds within the local authorities, some roads have been under construction for many years—see, for example, Figure 3. Apart from poor roads, school-going children are sometimes also affected by extreme weather conditions, eg, flooding, and in seasons of rain, children often miss many classes.

In terms of education, many actors such as government, educators, and technology designers among others seem to converge on the idea of using emerging technologies in education. Many advances such as e-learning have occurred, and educational material is being disseminated using technological innovations. A key example is the free online courses such as those facilitated by Coursera. Therefore, while this is not the current case, DTs can be integrated in the education system and school-going youths in rural communities can take advantage of the DTs' affordances, eg, online learning to access education material. While substituting physical teacher contact remains contested, in days of extreme weather (floods), DTs can be a critical alternative to avoid loss of education time and children can access the material using DTs. In the same vein of education, many unemployed youths can also use the DTs to develop further skills, which can improve their chances of getting employed or starting a business venture. Furthermore, DTs can also be used by unemployed youths to search for job opportunities (beyond the physical confinements of the village). In terms of physical mobilities, in a bid to maintain the family social fabric, there are many women who illegally cross into South Africa (some with children) following men who would have migrated to South Africa. Even other parents express worry over youths who migrate without returning. However, technological advances, specifically social technologies such as Facebook and WhatsApp, can be helpful in maintaining family social fabric. Through DTs, interaction of individuals in different places has been transformed. Digital technology advances now enable individuals to relay recorded or live videos (eg, Facebook live), text, images, or even voice recordings. Therefore, it is the study's submission that, through these offerings, DTs are modifying the sociocultural mobilities in societies, eg, by reducing physical visits to friends and family while increasing interaction through DTs. With many youths staying in South Africa, parents (or remaining family) can indeed use the affordances of DTs to continually maintain contact.

Contrary to the belief that the coexistence of virtual and physical mobilities can result in reduced physical mobilities, existing evidence show that virtual mobilities can create additional physical mobilities (Freudendal-Pedersen, Hannam, & Kesselring, 2016). In the study area, most unemployed youths have friends who have migrated to other countries and maintain contact using DTs. Through these DTs, friends share videos, images, and ideas relating to their daily lives abroad. Through the sharing of such information, it is possible that one is stimulated to physically travel to the place they see in pictures and videos. Indeed, this has become the common practice even in tourism, eg, Figure 4, with many people getting inspiration from picture and videos to travel places (some previously unknown to them).

Furthermore, other DTs such as Google maps also enable one to develop a graphical memory of a place before they visit. Also, within the youth group, even the differently abled individuals are making use of assistive technologies to improve their mobility (cf Schlieder, Schmid, Munz, &

Stein, 2013). Therefore, it is the study's submission that DTs have already been integrated into the mobilities paradigm. What remains critical then is ensuring that the opportunities of increasing adoption and use of DTs are capitalised and challenged relating to or emerging from the DTs' adoption and use are mitigated.

4.4 | Opportunities and challenges

From the previous section, findings show that virtual mobilities and physical mobilities can support each, substitute each, or can be integrated to redefine the practice of mobilities within the rural communities. There are opportunities for the successful integration of virtual and physical mobilities, but challenges also exist. Despite rural communities still lagging in digitisation, there are some opportunities that can be exploited. The challenge then becomes successfully exploiting the opportunities while overcoming the different challenges.

In terms of opportunities, Rangaswamy and Cutrell (2012) show that youths within communities are taking to DTs with enthusiasm. There are several motivations on youths' enthusiasm over DTs including improved knowledge on the capabilities of technologies. The interests shown by youths towards adopting and using DTs provide an opportune moment to for newer DTs, which can redefine youths' mobilities, to penetrate societies. Furthermore, as youths become mobile, they are learning more about technologies and thus can be digital champions within communities. However, this opportunity needs cautious approach since technology developers can exploit this to "dump" market-driven and not needs-oriented technologies within rural communities.

Secondly, technological advances are promoting improved access to DTs (eg, connectivity) at considerably low costs. Over the years, the costs of owning a DT, eg, mobile phone or personal computer, have reduced. Furthermore, advances such as low-cost community networks (village telco) are significantly improving connectivity. This has been coupled with national and regional, such as PIDA, which are promoting the development of DT infrastructure. Other efforts also include initiatives such Murambinda Works, which offer training (to improve digital skills) using local champions. It is prudent to suggest that there are many efforts across the African communities geared towards improving access and digital skills. There initiatives present an opportunity to redefine daily life practices including mobilities.

However, this is not without challenges. Virtual mobility and participation in digital platforms have its own concerns such as cyberbullying. These concerns are also gender based with women considered to be more vulnerable. Apart from vulnerability, virtual mobility can promote undesirable behaviour such as promiscuity, and in Chigona, Kamkwenda, and Manjoo (2008), respondents—youths navigating in the digital space—were skeptical of meeting online with parents. Some platforms are extremely inappropriate, but the "privacy" provided by the DTs enable youths to navigate into such spaces without being noticed.

In addition, virtual mobilities have also been associated with psychological disorders among intense users. In Chigona et al. (2008), the issue of "addiction" to the mobile internet is raised. There are digital platforms that have been reported to be "addictive" and often result in youth

becoming antisocial. The influx of youth in the digital space has also attracted serial criminals who navigate these digital spaces looking for potential victims. There are incidences already were unsuspecting individuals have been lured into danger by someone they "met online." Therefore, while mobility in the digital space has become inevitable to the youth, there are also dangers that arise from navigating in the digital space.

FIGURE 4   Image captured from a Matopos promotional video

In the physical mobilities, children would be aware that a certain path poses danger and "would walk in groups" and/or avoid the path at all. However, in the digital space, there are many ways in which danger can arise. Youth especially are unsuspecting and can easily be endangered.

5 | Conclusion

Youths in rural communities such as Beitbridge have limited economic opportunities and being mobile to access better economic opportunities is critical. This paper has explored the intersection of DTs and youth mobilities in rural communities—particularly to understand the opportunities and challenges presented by the DTs as well as how these can be exploited and overcome, respectively. The study findings show that youths in the study area engage in mobilities in search of education, employment opportunities, or just roaming around (social). However, these mobilities are being redefined with the advent of DTs in rural communities, with even new forms of mobilities emerging. Empirical evidence obtained from the study show that DTs create new opportunities for young people to explore unfamiliar places—eg, through virtual mobilities (through social technologies) enabling them to save time and costs. However, DTs are being adopted and used in societies with pre-existing values, culture, and ethics. The success of these DTs will therefore be dependent on their alignment to the pre-existing dynamics. Also, findings reveal that while DTs have desirable affordances, they can also perpetuate social challenges such as inequality.

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Further to this, the study revealed that while DTs are supporting physical mobilities, physical mobilities will remain essential and cannot simply be substituted. The affordances of DTs are limited due to lack of complementary systems, eg, even if one uses DTs to obtain information such as market prices and even complete a transaction (purchase), the products will still need to be delivered physically and yet, rural communities lack such supporting systems (delivery systems or proper roads). Thus, if opportunities afforded by DTs are to be appropriated, there are preconditions that need to be satisfied. However, the increased uptake of DTs within the rural communities by the youths may prompt the emergence of complementary systems such as new services and products to complete DTs' transformation, eg, the study noted an increase in mobile phone repair shops. There are limitations to this study. For instance, the study's methodology can be improved and future studies can improve by modifying the selection of the research participants, for instance, following techniques in Yip, Forrest, and Xian (2016). Also, considering Murray's (2015) study, which focused on the mobility of aged people, future studies on mobilities in the study area can expand the focus to other age groups excluded from this study. It is hoped that this study inspires more studies on DTs and mobilities in rural areas. This is timely considering the ongoing extensive efforts across the globe to digitise rural communities such as Beitbridge. Beyond the limitations of this study, it is hoped that the outcomes of this study can help communities—ie, end users, developers, academics, and policy makers—critically reflect on how challenges and the opportunities tied to DTs on mobilities (as well as other aspects of the society) can best be met and exploited, respectively. In all, further work is indeed required to fully comprehend the relation between technology and mobility since "the gains in time, speed, and mobility it has brought still leave open questions of context and embodiment" (Kaplan, 2002, p. 38).

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