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Towards a Digital Resource Mobilisation Approach for Digital Inclusion During COVID-19 and Beyond: A Case of a Township School in South Africa¹

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Abstract

COVID-19 is affecting the functioning of most countries globally, creating a situation now described as the “new normal”—a time of unexpected educational change. The national lockdown, accompanied by the closure of educational institutions, brought economic hardship and deepened the digital divide between the rich and the poor. Educational institutions capable of transitioning to an online mode of delivery made that shift, while the majority of South Africa’s schools remained excluded due to poverty and lack of technological infrastructure. The educational sector is at wits’ end to find strategies to curtail the growing digital divide. This paper offers a digital resource mobilisation approach as framework to keep schools on the path to achieving the National Development Plan’s aim of ICT capacitation. To consider developmental possibilities and respond to the digital exclusion of township schools, we asked the question: “What are the online teaching and learning experiences of school stakeholders?” Responses to this question assisted development of a digital resource mobilisation theory that is offered as a viable approach to digital inclusion and social change. Data were collected by telephonic interviews with three teachers, three learners, three school governing body parents, and one school principal. Based on the findings, recommendations for digital inclusion are suggested.

Keywords: COVID-19, digital exclusion, township schools, digital divide, resource mobilisation

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Introduction

COVID-19 has impacted most societies in the world, particularly exposing the educational inequalities between the rich and poor—as demonstrated in their responses to the pandemic and the resultant growing digital divide (Sayed & Singh, 2020). In a country like South Africa that is faced with multiple challenges of poverty, inequality, and unemployment, quality education has a critical role to play in eliminating poverty and bringing about economic transformation (Mahaye, 2020). Educational leadership remains responsible for managing educational change and the deepening digital divide during the COVID-19 pandemic. Agency and social change are paramount because quality education is part of the main goal of the National Development Plan (NDP) that was designed to catalyse the dynamics for socioeconomic transformation (National Planning Commission, 2011). South Africa subscribes to the United Nations (2015) Sustainable Development Goals (SDGs), which highlight access to information and communication technologies (ICTs) as important for human development. Furthermore, the Agenda 2063 of the African Union (2015) implored African countries to acknowledge well-resourced education as important for human capital development and quality education. Unfortunately, despite the adoption of progressive treaties including a democratic constitution after the fall of apartheid in 1994, South Africa remains one of the most unequal societies, globally (McKeever, 2017). In South Africa, where township and rural schools lag behind in online learning, the inequality between rich and poor communities will increase. The purposes of this paper are to highlight the need for school stakeholders to be sensitised to online learning challenges that township schools are facing, and to suggest a resource mobilisation approach for online learning. The social and economic changes that communities are experiencing during this pandemic directly influence current policies and practices in the educational sector. Therefore, this paper intends to contribute to a better understanding of the changes that schools will have to make in order to mitigate the negative consequences of socioeconomic changes and digital exclusion (Mack, 2010).

On announcement of a national lockdown by President Cyril Ramaphosa on 26 March 2020, more than 14 million learners in the country became temporarily out of school (Mahaye, 2020). To alleviate the educational effects of COVID-19 lockdowns, well-resourced schools migrated to online learning and continued curriculum delivery after adjusting the school programme. Learners attending these schools generally come from families who have the means to support online learning. On the other hand, most South African families live in apartheid-created rural and township communities and their children attend township schools that are under-resourced. In South Africa, the term “township” refers to under-developed urban areas that were established for “non-whites” during the apartheid era (Mampane & Bouwer, 2011; Mupira & Ramnarain, 2018). Schools in townships lack online learning infrastructure and are deprived of online learning devices such as computers and a sustainable internet connection. According to Bashman (2020), COVID-19 exposed an additional reality of educational inequality: the digital divide, also known as the digital exclusion of the poor. The development of a postapartheid educational system cannot ignore the imperative of working towards a digitally inclusive society to allay threats of a growing gulf between rich and poor.

To remain true to their mandate to contribute to improved social conditions, researchers confronted the educational challenges posed by the pandemic, head-on. During the early stage of COVID-19, a group of scholars were proactive in sharing their ideas and imaginings of a post-COVID-19 educational future to engender informed predictions grounded on an ethics of possibilities (Peters et al., 2020). In South Africa, this urgency was evidenced by some accredited journals’ special editions dedicated to

COVID-19: *Southern African Review of Education (SARE)*, *Alternation, Yesterday & Today* (all 2020 editions), to mention a few. These journals sought to tap the intellectual capital of researchers to best respond to an unexpected tsunami last experienced during the Spanish Flu of 1918. Little memory of the educational devastation caused by the Spanish Flu remained in the public domain (Phillips, 1987). The 1918 pandemic infected over 500 million people and caused an estimated 50 million deaths, worldwide, with about 675,000 occurring in the United States (Mamelund, 2018).

During the COVID-19 pandemic, educational researchers have responded by considering how best to adapt to an uncertain educational future. Ideas about theoretical and policy perspectives were explored with limited work done empirically (Badroodien & Fataar, 2020). This lack of empirical work on COVID-19 is understandable given the contemporaneous nature of the pandemic and because lockdown restrictions, such as social distancing and travel bans, are raising new ethical and methodological concerns are central to the research enterprise. As participants of another project not reported on here, the authors encountered a disturbingly poor uptake of technology and curriculum integration during Covid-19, which supports the need to research the technological challenges that schools experience. In this paper, we report on an investigation of one school's experience of teaching and learning under COVID-19 conditions. We hope to harness this on-the-ground experience to develop a feasible response to navigate education in poor township schools that are, arguably, under threat of becoming more disadvantaged compared to their privileged counterparts. In developmental terms, these schools will be left behind in the country's race for national digital inclusion as envisaged, for example, by South Africa's NDP (National Planning Commission, 2011). The NDP defined clear ICT targets for the educational sector to achieve by 2030. Given the negative impact of COVID-19, the meagre resources that township communities struggled to muster have gradually eroded.

Regrettably, the South African government's initiative, Operation Phakisa, to address the digital divide in South African township and rural schools, will also be affected (Department of Planning Monitoring and Evaluation, 2019). Operation Phakisa had ambitious aims to roll out broadband internet connectivity to all schools by 2020. South Africa now finds itself in 2021, yet township schools remain marginalised and digitally excluded to this day. Because of COVID-19, school governing bodies (SGBs) are saddled with the additional task of saving their institutions from sliding into further mediocrity. Given the lack of ICT infrastructure, the growing digital divide will deepen the level of inequality that exists in the educational sector.

With COVID-19 conditions on our hands, we argue that there is an urgent need for governance to respond to the advancement of fourth industrial revolution (4IR) technological innovation that promises to bring social change through digital inclusion (Penprase, 2018). With full attention on digital inclusion for all, the COVID-19 moment should be turned into an opportunity to bring about positive educational and social change for now and beyond. Therefore, the very act of engaging in educational research with a view to effecting positive change may prove to be educationally beneficial for participants and researchers (Koen, 2021). This article unfolds under the following sections. First, we explore digital exclusion in township schools. Second, a brief explanation of the theoretical framework and third, a note on the methodology, are presented. Fourthly, a discussion of the findings is presented to support our argument for a digital resource mobilisation approach that could provide a framework for digital inclusion and social amelioration. The article ends with some conclusions and recommendations.

Digital Exclusion in Township Schools During COVID-19

National commitments to ICTs that were to be aligned to the NDP remain unfulfilled intentions in the light of the continued digital exclusion of poor and marginalised communities in townships and rural areas. The National Development Plan (2011, p. 170) provided a framework in which to realise South

Africa's vision that "by 2030, ICT will underpin the development of a dynamic information society and knowledge economy that is more inclusive and prosperous."

According to Philip (2010), structural inequality in South Africa has its origins in the key legacies of apartheid. These legacies include centralised monopoly of the core economy, the highly skewed distribution of assets such as land and capital and the impacts of migrant labour, the spatial legacy of Bantustans and apartheid cities, and the deep inequalities in the development of human resources (Philip, 2010). We argue that the interface between the structure of the economy and issues of socioeconomic inequality and digital access, made worse by COVID-19, are important in understanding the nature of economic marginalisation and digital exclusion. We maintain that even today these forms of structural inequality continue to entrench digital exclusion of impoverished schools and learners in South Africa. While imposing old forms of economic marginalisation, it seems that new forms of discrimination are appearing. Brown and Czerniewicz (2010) identified that those who are socially disadvantaged (like township schools in this study) are more likely to be digitally excluded. According to Naidoo and Raju (2012, p. 34) "the digital divide refers to the gap that exists between those with ready access to information and communication technology tools and those without such access or skills to enable access." Thus, digital exclusion describes "a situation where a discrete sector of the population suffers significant and possibly indefinite lags in its adoption of ICT through circumstances beyond its immediate control" (Warren, 2007, p. 375).

This paper acknowledges that the government is considering how to adjust the education system to meet the competency needs of a smart society across school levels, including developing curricula for coding and robotics for Grades R to 9 (Motshekga, 2019). However, we caution that these developments will be meaningless if technology integration at classroom level is not addressed as a matter of urgency. The introduction of coding and robotics will require appropriate teacher training and resources for this project to deliver the intended outcomes. Not only the NDP but also COVID-19 should be harnessed to address a potentially undermining digital divide. We propose a digitally informed approach to navigate the consequences of COVID-19 on education—in the form of a digital resource mobilisation theory as discussed next.

Towards a Digital Resource Mobilisation Theory

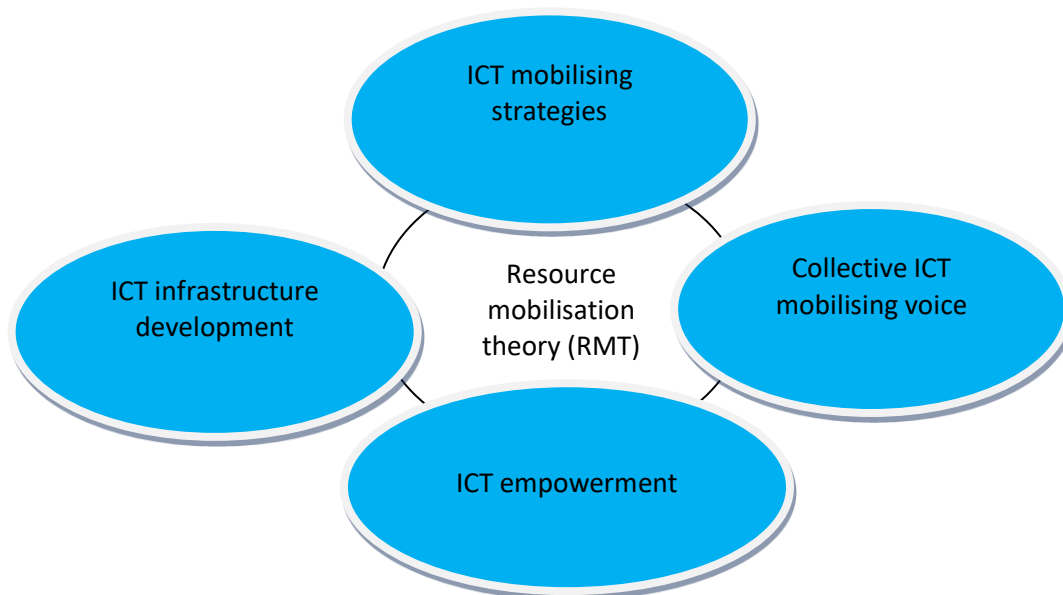
Digital resource mobilisation theory has its origin in the resource mobilisation theory (RMT) that emerged in the 1970s (Edwards & Kane, 2014). The key idea of RMT is that the capability to mobilise and drive collective action is facilitated by the presence of certain social structures and resources (Zald & McCarthy, 1987; Zald, 2017). McCarthy and Zald (1977) pioneered research that showed movements have the potential to organise and expand their activities through external financial resources and skills as well as increase formalisation of their protest actions. RMT acknowledges the role that can be played by social movements (SMOs) in advocating, expressing, and addressing challenges of resource scarcity in township schools. For example, Kendal (2006) and Manky (2018) argued that social movements succeed through efficient mobilisation of resources and the creation of both economic and political opportunities for members. Kendal (2006) and Manky (2018) further maintained that movements could mobilise material and non-material resources. Material resources include money, organisations, human resources, technology, means of communication, and digital and print media, and non-material resources include legitimacy, honesty, relationships, social networks, public attention, authority, moral commitment, and unity. Resource mobilisation therefore, stresses the ability of a movement's members to acquire resources and to mobilise people towards accomplishing the movement's goals. School stakeholders and SMOs may have access to different resources identified by RMT such as material resources, human resources, social-organisational resources, cultural resources, and moral resources (Kendal, 2006; Manky, 2018). Resource mobilisation theorists (Kane, 2013; Koch, 2010; Zald, 2017) have advised that new and existing networks, partnerships, and affiliations to effective

organisations that advance the mobilisation of resources are critical for social movements and organisations like schools to thrive, and to enable a collective mobilising action and voice. We argue here for resource mobilisation theory that is rooted in an asset-based approach (Kretzmann & McKnight, 1993) rather than in deficit thinking that limits school stakeholders to underestimate their capabilities to mobilise ICT resources and facilitate social change in their context.

We suggest adding the concept *digital* to resource mobilisation to accommodate digitality as a resource (Mkhize, 2018). Digital resources refer to hard- and software resources and connectivity to the internet. COVID-19 accelerated the need for digital integration for education by highlighting the realities of digital inclusion as opposed to digital exclusion. When considering strategies to develop sustainable resourceful communities, a bridging of the digital divide should aim at providing equal access to digital resources to provide all learners equal opportunity to perform optimally (Khoza & Manik, 2015). Our study investigates experiences of online teaching and learning in a KwaZulu-Natal township school during the COVID-19 pandemic to better understand digital exclusion. To answer the research question: “What are the digital experiences of participants working under COVID-19 conditions at a Kwazulu-Natal primary school?” we adopted a case study design that we explain in the methodology section below. We employed digital resource mobilisation theory derived from resource mobilisation theory (Mkhize, 2018) to integrate digitality as a resource for development. Figure 1 is a diagrammatic representation of our theoretical framework and illustrates the intersections between resource mobilisation theory and various dimensions of an ICT infrastructure.

Figure 1

Digital Resource Mobilisation Theory



Methodology

A qualitative case study design was used to investigate the experiences of a convenient sample of stakeholders in a bounded context of one school. According to Liebenberg et al. (2019, p. 30), “critical theory is concerned with personal agency to effect change in situations that are oppressive and unjust,” which is relevant to our study given its apartheid background as history. We reviewed the resources mobilisation theory to explore and interpret data gathered from a school in Umlazi township, KwaZulu-Natal. This school was selected because of its location in the township context. The

school was also selected for its accessibility and convenience to conduct this study. Considering COVID-19 health protocols, data were collected using telephone interviews with one principal, three parents, three SGB teachers, and two learners. Telephone Interviews allowed participants to share their experiences freely while also providing in-depth data that might inform change in their context (Asghar, 2013; Farooq, 2015). The researchers and participants were cooperative communicators creating a space where they jointly and critically reflected on issues to effect social transformation (Kemmis et al., 2014). Interviews were transcribed and analysed to identify and develop emerging themes. Pseudonyms were used to conceal the identities of participants.

Ethical Considerations

According to Bless et al. (2006), research ethics assists in avoiding research pitfalls and misuse; it also promotes the accountability of researchers, who need to be guided by, and respect, ethics. Permission to conduct the study was granted by the institution ethical clearance committee in the College of Education. Further approval for conducting the research was obtained from the Department of Basic Education in KwaZulu-Natal. The study is informed by ethical principles that include non-maleficence, autonomy of research participants, informed consent, anonymity, and confidentiality (Creswell, 2007; Merriam, 2009).

Findings and Discussion

The findings of this study emerged during data analysis and support the argument for a digital resource mobilisation approach for digital inclusion. Five main findings are critically discussed with supporting citations as evidence and with reference to relevant research conducted in the field.

Structural Inequality as Historical Legacy

Data sources revealed that township schools are situated in communities faced with socioeconomic challenges that exacerbate inequality and digital exclusion. These inequalities have their origin in the apartheid legacy of unequal educational provision. For example, the principal, Mr Zikhona, had this to say:

Most learners are from poor backgrounds. That is why we made sure that the DBE [Department of Basic Education] provides a nutrition programme. Even Grade 12 when they have afternoon extra classes they get something for the stomach. The school falls under Quintile 3. This is a non-fee paying school.

Another participant, Mr Sibanye, a member of the SGB, concurred with the principal and explained the socioeconomic challenges faced by learners and educators that hindered their efforts to move to online learning. He said:

Some parents cannot afford to buy learners smartphones. Some learners will not have access. Sometimes you have learners who are bright at school but due to poor financial background, parents cannot buy smartphones and laptops. These learners will be left behind and end up being discouraged should we move to online learning without making sure that they can at least have access to online platforms through the school.

The achievement of digital inclusion requires action and the hard facts of the past, which impact directly on the present, cannot be ignored. According to Tapala et al. (2020), socioeconomic environment is matched to the school, learner, and community in a hierarchy according to access to wealth, power, and social status. In addressing socioeconomic challenges and a digital divide, theories of social movements (e.g., resource mobilisation theory in this paper) emphasise the importance of

action. According to Koch (2010), the success of social movements depends largely on their ability to act and mobilise people to acquire resources that enable them to achieve their goals. Therefore, this paper argues that, to tackle this socioeconomic and digital exclusion, collective action as proposed in resource mobilisation theory is of critical importance and is a necessary strategy for social change (Edwards & Kane, 2014).

Digital Exclusion of Township Learners

COVID-19 exposed the digital divide when township schools were not able to transition to online teaching. Township school stakeholders recounted the non-responsiveness of the DBE in providing support to enable online learning and ensure continuity of teaching and learning during the pandemic. For example, Mr Ngusi, chairperson of the SGB, expressed his disappointment at the lack of action on the part of DBE to address imbalances of the past and digital exclusion in township schools. He had this to say:

Our learners wish to be like those in urban or previously Model C schools where they will also be able to learn using new technology like laptops, smartphones etc. Government seem to be ignoring township schools when it comes to providing these new ways of learning. I do not know why.

Teacher Mr Khazi confirmed the inability of DBE to respond to resource scarcity and inequality in the provision of ICT and learning resources in township schools. He said:

When we said we need ICT resources and assistance, DBE said: "Use what you have." They said just swim the best way you can. No tangible support.

Another educator, Mr Kuboni, noted inaction on the part of government in addressing the digital divide and had this to say:

Learners cannot afford online tools like laptops and smartphones. Parents are unemployed and poor. DBE need to act and ensure that township schools have ICT infrastructure.

We argue in this paper that DBE non-responsiveness to digital exclusion does not stem from a lack of ICT policy but, rather, from poor political leadership to mobilise resources, and poor policy implementation. Effective transition to online teaching and learning requires digital devices and infrastructure such as internet connection and appropriate software programmes. Without ICT resources, learners attending township schools will always be disadvantaged. In addressing the challenge of ICT access at home, the authors concur with Chisango and Marongwe (2021) that all learners should be provided with ICT devices such as tablets and computers, and should receive subsidised data.

School stakeholders should face up to this challenge despite the odds that may weigh against them under COVID-19 conditions. The task may seem daunting but a delay in raising this matter at an appropriate management level will result in an inevitable growth in the existing digital divide. Given the potential that a digital resource mobilisation approach offers to school management and leadership teams (Edwards and Kane, 2014), community mobilisation should be initiated for all to put shoulder to the wheel and become serious about providing quality education. Needless to say, poverty reduction should also be addressed urgently to minimise digital marginalisation and offer hope for a better future (Mbele, 2020).

Lack of ICT Infrastructure

A lack of ICT infrastructure during the COVID-19 pandemic was exposed as the main challenge in advancing online teaching and learning. Principal Mr Zikhona had this to say about lack of ICT infrastructure in township schools:

Truth be told, we do have a challenge when it comes to ICT and online learning. We are a township school. We are different to the ex-Model C schools. The ICT gap was apparent during quarantine period and school closure period because the learning platforms that were used by Model C schools were not available to us. Remember, being a township school, our learners do not have resources. Some stay with their grandmothers, data is a problem, and even access to the phone itself is a problem.

One learner stressed the importance of developing strategies for mobilising ICT resources and said:

We need support to get online necessities for our school. We do not like the fact that we are left behind when it comes to online learning.

Another learner expressed the challenges arising from a lack of ICT infrastructure. She had this to say:

Learners don't have laptops and at school there are no computers or laptops. We do not even have internet both at home and at school.

Another teacher's response confirms the lack of ICT resources as a challenge:

The kind of learners we deal with are from poor backgrounds. Most of them are from the shacks around the school. Some don't have access to a cell phone let alone a laptop. Even our school is not fully equipped with ICT to cater for all learners.

Economic inequality in South Africa, as shown in the excerpts above, will continue to deprive learners in township schools. Dube (2020) recommended that the DBE provide learners and teachers with devices they can use for online learning. These devices could include smartphones, tablets, or general phones that support the installation of software learning packages such as Blackboard. Reimers and Schleicher (2020) confirmed that without devices, internet connectivity, and simple physically conducive environments, it is a challenge for children to learn.

This article argues that ICT deprivation also promotes feelings of inadequacy, thereby maintaining the status quo and narrative of township people as passive recipients of government aid rather than active participants in determining their future. Resource mobilisation theory (Edwards & Kane, 2014) identifies the role of the private sector as a dynamic contributor to services and infrastructure development. Therefore, resource mobilisation theory argues that schools should identify and mobilise their own material and human resources to address digital exclusion in township communities (Edwards & Kane, 2014).

Paucity of Digital Literacy Skills

An integral part of ICT infrastructure is the ICT capability of the teaching staff. The lack of the school's teachers' and learners' ICT skills highlights a need for skills development to promote digital inclusion for school improvement. In this regard, a teacher commented that:

Some of our teachers are familiar with IT but the majority will need to be really trained.

Another participant, Mr Sibeko an SGB member, added similar sentiments on the importance of ICT empowerment and said:

Our teachers are not fully trained on ICT. Younger educators are the ones who welcome ICT better.

Although access remains a condition for the use of ICTs, even after barriers to access are diminished, inequalities regarding skills and usage patterns remain. As Witte and Mannon (2010, p. 147) have clarified:

In the end, poor and rich alike might have access to the Internet, but only a privileged few are able to turn to the Internet as an asset, a lifestyle, and an incentive, unless people are capacitated to effectively utilise ICT.

Digital literacy skills facilitate technology integration in education, and a paucity of digital literacy skills becomes a barrier to making the shift to online teaching and learning. The lack of appropriate skills to bring technology alive at a classroom level was clearly evident during COVID-19 when teachers showed that they were not qualified to navigate the route to online teaching. Studies focusing on the effects of technology on pedagogy have shown that educational technology contributes tremendously to the quality of teaching of all subjects, and to all students (Bashman, 2020; Peters et al., 2020; Winn, 2002). However, we argue that the advancement of online learning can only be fully achieved once teachers and learners integrate and embrace technology in their pedagogy. Graham et al. (2020) recommended a fundamental shift in teacher pedagogy that can be attained through professional development programmes that model functional pedagogical changes to teachers and education in South Africa.

Thus, empowerment and participation in educational advancement are the main goals of digital inclusion (Stewart et al., 2013). According to Chetty et al. (2018), digital skills provide the poor with a catalyst to break out of the cycle of poverty and to empower themselves. The monopoly on knowledge and information are weapons to keep the status quo of unemployment, inequality, and poverty in place (Mahaye, 2020). Sikwebu and van Greunen (2020) also noted that the digital divide in under-resourced schools is worsened by the lack of ICT-trained teachers.

This article argues that the need for capacity building remains a valid concern, especially in the area of mobilising ICT resources in township schools. At the centre of resource mobilisation theory (McCarthy & Zald, 1987; Zald, 2017), is empowerment and capacity building, which provide the main reason as to why this theory anchors this study. Resource mobilisation theory (Manky, 2018; Tilly, 1998; Zald, 2017) sees a lack of training as a challenge for social movement organisations in mobilising resources such as digital access resources. Human resources in digital resource mobilisation theory are viewed as critical to capacitate and canvass for effective implementation of ICT and social change (Zald, 2017).

Stakeholders' Voices as Resource Agent

In this study, the voices of school stakeholders suggested a strong need for a collective voice to mobilise against online learning resource scarcity and advocate for the interests of all schools in township contexts. The principal, Mr Zikhona, highlighted the need for a collective voice for social change and said:

In this township, we have schools that have ICT and those that do not have. As school principals, we need to speak with one voice and fight for change in all schools to bring ICT resources and training.

Mr Khazi (a teacher) had this to say about mobilising resources as collective township school stakeholders:

We cannot move online at this stage. The circumstances we are currently in do not allow us. We must make sure that the school has online resources. Schools must come together and bring change.

Mrs Dumani, SGB member, added the importance of formulating different strategies for mobilising for online resources and said:

We have started to talk about online teaching and learning since this COVID-19 crisis started. We say as a leader within the SGB, take the letter and take it to the business you know and request assistance.

We argue that through the collective voice of school stakeholders, strategies for mobilising resources for digital inclusion in township schools can be brought into play. Mkhize (2018) found that resource mobilisation strategies, such as creating sustainable partnerships, multi-stakeholder engagement, building on the rich past, and income generating projects, were key strategies for mobilising resources in deprived school contexts such as rural and township schools. Digital resource mobilisation theory calls for the collective framing of issues, which include digital exclusion. Thus, we argue that participation is important in unlocking resources. If township communities and school stakeholders have no political voice, the transformation and social change agenda will suffer, widening the digital divide and leaving already disadvantaged schools further behind.

Conclusion

As a qualitative study conducted in one school within the context of a township, our findings cannot be extended to other schools. However, we argue that the intention of this study was not to generalise its findings but, rather, to understand a real case that can be used to open debate about the state of technology in township schools and to suggest practical ways to address the digital divide.

In response to the research question formulated to guide this study, and based on our findings, we conclude that COVID-19 exposed and exacerbated long-existing inequalities in the South African education system. Educational stakeholders have called for the technological support of township schools. We suggest a broad digital resource mobilisation (DRM) approach as a management framework. DRM incorporates Paulo Freire's (1974) philosophies of critical conscientisation and critical pedagogy. According to Freire (1974), people reflect on their social situation to conceptualise individual and collective actions that can be pursued to emancipate themselves from oppressive social conditions. We endorse Freire's advocacy of education for emancipation as being related to digital resource mobilisation (Edwards & Kane, 2014). In this context, the concept of *agency* is evident because social change remains a guiding thread in the study (Evans, 2007). In practice, agency is manifested as a capacity to imagine alternative possibilities (as expounded in this study), which offer DRM as a way forward and towards digital inclusion (Emirbayer & Mische, 1998).

The insufficient ICT support experienced by stakeholders presented another concern to be addressed by the school leadership. School stakeholders should, for example, capitalise on the strategic capability of the school, in terms of its resources and competences, to provide competitive advantages and

create new possibilities for mobilising resources (Zafar et al., 2013). We recommend creating sustainable partnerships, multi-stakeholder engagements, and building on the past as income generating projects (Mkhize, 2018). We advocate that every learner at school be provided with an appropriate device and that township schools provide internet connection to teachers and learners on a permanent basis. However, we argue that ICT resources mobilised and provided to teachers and learners should be managed and cared for. The case of 55,000 missing Samsung tables that were loaned to the Eastern Cape DBE for the matric class of 2020 provides a good example of mismanagement of available resources that must be avoided to ensure sustainability of resources (Dayimani, 2021). Munje and Jita (2020) cautioned that in some instances resources in the classroom are either non-utilised or under-utilised, with negative implications for teaching and learning.

An absence of ICT infrastructure militates against a progressive digital literacy environment at schools. We recommend the employment of DRM that involves the use of material resources, human resources, social-organisational resources, community-cultural and moral resources that could be harnessed by school stakeholders for digital inclusion. The need for teachers to become fully trained in digital literacies, and for stakeholder involvement to be mobilised, form an integral part of the solution in terms of a digital resource mobilisation approach. Thus, DRM, as suggested in this article, requires the reimagining of a post-COVID-19 future that embraces digital inclusion for all, where teachers and learners are fully trained and capacitated to participate fully in ICT technologies and be part of the 4IR. Needless to say, these noble intentions require active leadership that shows commitment and activism in mobilising all conceivable resources in the fight against the digital exclusion of township and rural schools.

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