Supervision of Curriculum in the Era of Covid-19 in Primary Schools: School Management Teams' Experiences

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This article sought to explore the School Management Team's experiences in the supervision of curriculum during the Covid-19 pandemic in rural primary schools. In the South African context, all schools have been partially opened for teaching and learning as a precautionary measure to protect learners and teachers from contracting coronavirus. The paper adopted a qualitative approach to generate and analyse data to answer the main research question and is underpinned by two theories namely: Democratic Human Supervision and Fiedler's Contingency Theories. Three SMT members from three rural schools in the KwaDlangezwa area, one SMT member from a private school in Empangeni, two SMT members from two ex-model C schools in Richardsbay, and two SMT members two sub-urban from two primary schools in Esikhaleni participated in the data generation process. All the primary schools operate under King Cetshwayo District. These participants were purposively selected to participate in virtual semi-structured interviews as part of the data generation process, through WhatsApp and Zoom platforms. We analysed data using an inductive thematic framework following Braun and Clarke's (2006) approach. The following themes emerged from the analysis: supervising curriculum in an abnormal rural situation, online learning and the digital divide, teacher resilience, and adaptation to new normal and the needed support for teachers.

Keywords: *Principals, curriculum, supervision, experiences, online learning.*

1. Introduction

Curriculum supervision during Covid-19 has exacerbated anxiety amongst the SMT's members to implement curriculum supervision virtually. Despite their worst fears, curriculum supervision could not be completely suspended during the lockdown due to the urgent need for curriculum delivery (Khoza 2015; Naidoo & Paideya 2015). During the start of lockdown when the rate of infections was rising fast, the department paused curriculum supervision. However, the severe impact of this pandemic took a toll for the worse on learners, parents, and other stakeholders which forced the Department of Basic Education to open schools under strict social distancing protocol, adjusted timetable schedule. The Curriculum and Assessment Policy Statement (CAPS) envisaged the use of science and technology effectively and critically showing responsibility towards the environment and the health of others.

This principle anticipates massive benefits derived from the integration of science and technology (4IR) during an emergency to strengthen curriculum supervision and minimise unnecessary disruption to education. ICT provided epistemology of using technological resources, containing professional development of teachers (human resources), mobilising resources necessary for the supervision of curriculum (Khoza, 2015). Currently, the CAPS follows clear guidelines outlining how the SMTs ought to supervise curriculum professionally, socially, and personally delivered through Face-Face, blended and online approaches. However, the Covid-19 pandemic impacts curriculum supervision and this brought confusion and frustration to the SMTs main key role function. This suggests that SMT needs to be proactive during the future crisis to guard curriculum supervision during a similar pandemic.

Moreover, Bakari, Mbwette, and Salaam (2010), Ngubane-Mokiwa and Khoza (2016), Prensky (2001), revealed that the department of education tried to disentangle these challenges by providing technological resources such as smart boards, laptops, and tablets, etc. However, fierce resistance and opposition by teacher unions meant that digital evolution and innovation had to be indefinitely sidelined. Currently, the entire education sector is grappling with the threat posed by the Covid-19 pandemic with no plausible alternative solution to speed up ICT integration as a result of poor investment in hardware resources (computers, laptops, mobile phones, and others), and software applications. In the event these resources are provided and utilised to aid curriculum supervision then teachers will have the freedom to access supervision information anytime and anywhere, irrespective of challenges posed by the pandemic outbreak – provided they have access to these fundamental resources (Mpungose, 2020).

The study conducted by Mohamed and Ahmad (2019) expressed the need for heightened integration of ICT among teachers to aid curriculum implementation using resources drawn from formal experience (professional supervision) to achieve the goal of the curriculum. It is against this background that this study explores SMTs' experiences in the supervision of the curriculum in primary schools in the era of Covid -19.

2. Review of Literature: Curriculum supervision and challenges during Covid-19

The curriculum is derived from the Latin word 'currere' which means to run (Hiadley and Jansen, 2013). Embedding ICT into the curriculum is seen as a national strategy by developing countries to improve online learning and curriculum supervision (Mpungose, 2020). The curriculum is a dynamic process designed for teachers and learners to plan and improve knowledge and skills for learning and simple put (Thijs & Van der Akker, 2009) defined curriculum as:

> *the overall dynamic educational plan embraced by an educational institution for a given training system. It includes the training goals and objectives, content and structure of the program, teaching and learning methods, as well as learning environment, assessment processes, and program evaluation processes.*

Most studies agree that curriculum involves all teacher activities including curriculum supervision performed at school to improve teaching and learning including the use of ICT (Harris, Wise & Busher, 2001; Sigilai & Bett, 2013). The study conducted by Khoza (2018), draws parallel relationships between educational experiences, life histories, identity, technology, and social construction as the fundamental basis for curriculum supervision. These relationships form the basis for the implementation of curriculum supervision influencing the schooling system (Khoza, 2015).

This debate emanates from the argument advanced by Glickman, Gordon, and Gordon (2014) which clarifies the universal objective of schools. Schools provide learners with the fundamental gains of knowledge, skills, and attitude by focusing on the learner's learning process. The policy is clear on who to supervise curriculum, Ozdemir, and Sahin (2020) redefine supervision philosophy during the Covid-19 pandemic to mean unique supervision experiences, beliefs, and educational milieu adopted to minimise risks associated with Covid-19 pandemic and adherence to physical distancing guidelines during academic supervision. This educational milieu is highly regarded for its superior technological advancement in evaluating teachers during the education process (both during teaching and lesson preparation) while maximise learners' achievement on one end (Khoza, 2020; Mpungose, 2020; Dube, 2020).

Several studies done in education reveal that curriculum supervision is a mandatory process as curriculum change demands new approaches (Bakari, Mbwette & Salaam, 2010; Ngubane-Mokiwa & Khoza, 2016). The department of Higher Education tried to disentangle these challenges by providing technological resources such as smart boards, laptops, and tablets, etc (Mpungose, 2019). These resources were provided to assist teachers and learners to upgrade their knowledge and having the most current information available at their disposal in real-time (Ngubane-Mokiwa & Khoza, 2019). However, the study conducted by Falvo and Johnson

(2007) discovered that the DoE provided these resources 'hardware resources and software resources' while HoDs members, on the other hand, are not drawing much from formal experience to supervise the curriculum in the era of 4IR which further contribute to the deterioration in the quality of education system. The study conducted by Mohamed and Ahmad (2019) on redesigning continuing professional development training (CPDT) in Higher Education focused on enhancing ICT integration among high school teachers in urban areas allow supervision of the curriculum using these resources based on formal experience (professional supervision) to achieve the goal of the curriculum (Khoza, 2018; Mpungose, 2019).

The process of teaching and learning in times of emergency demands extra caution to save the lives of all vulnerable employees in a school. During the Covid-19 pandemic, the school principals in both developed and developing countries shifted their supervision protocols towards IT-based (Fendi, Hanafi, Monia, Sudarman & Taufiq, 2020). This shift was necessary to allow heads of schools and curriculum managers within schools ample opportunity to maintain and even improve the quality of education and learning (Mette, 2020). The Department of Health developed Covid-19 health protocols (wearing of a mask, sainting hands, and social distancing) guiding schools and they have to adhere to and implemented by DBE during curriculum supervision. One of those notable recommendations was to use IT to carry out curriculum supervision in which virtual teaching and learning have become been directed towards digital-based learning. This finding was supported by Eya and Chukwu (2012) who argue that SMT must restructure the technology and networks to suit the needs of teachers and learners. It was noted that having technology resources is not equal to technological competence but SMT has the responsibility to understand how to apply the process of supervision properly in the context of a digital charge (Fendi et al. 2021). The Covid-19 pandemic in Indonesia stimulated fresh ideas and innovation technologically on a scale never seen before whereby principals and their deputies involved local experts to programme and configure technology that will allow them to facilitate their work as academic supervisors.

The availability of an IT-based academic supervision model opens new possibilities for SMT to train teachers and guide their daily professional practice during Covid-19 and beyond. The study conducted by Ozdemir and Sahin (2020) claim that initially teachers fiercely fought against the use of IT and opted for direct and face-to-face supervision of curriculum. In essence, most of these teachers and SMT raised genuine concern about the use of high-tech software without proper training, poor connectivity, memory gadget, and laptops. However, the severity of Covid-19 related complications pushed the government to implement high technology for academic supervision as an alternative form of the supervision process and the solution to the implementation of curriculum supervision. The rise of these diverse academic platforms widened the choice over World Wide Web technology in terms of processing teaching material, teaching strategies, manuals, and improve grievance platforms and support for teachers. This discussion from literature has given assurance to all stakeholders that online supervision

methods can be an alternative game-changer to the current risky face-to-face supervision model in the midst of the Covid-19 pandemic.

Educational supervision in recent times needs configuration to enhance personal and professional efficiency thereby contributing to learners' learning. A case study done during Covid-19 by Fendi (2021) reveals that instructional supervision elevates the teachers' quality for quality assurance and enhances the outlook of a particular school (Mette, 2020). Most SMT believes that the menu prescribed for teachers needs to be delivered in a uniform and predictable fashion despite the forced deviation imposed by the pandemic.

Supervision of curriculum happened across the education spectrum to allow SMT space to exercise their authority but also use their discretion (Harrichand, Litam & Ausloos, 2021). In South African schools, curriculum supervision takes two forms, individual and group supervision techniques. An interesting case was made using individual supervision via Zoom and skype for his school as part of classroom observation, personal conversation techniques, class visits, self-assessments, and collegial supervision techniques (Diacopoulos & Butler, 2020). Arndt (2016) identifies the second technique which involves group techniques in supervision includes joint meetings, group discussions, teacher working groups designed to promote problem-solving, negotiations to find solutions. The study conducted by Pratiwi et al., 2020 emphasise the need for using group discussion that can enhance personal experiences that are empowering and motivational to others during the period of crisis.

The report produced by NEEDU (2013) acknowledges that SMT including principals are competent in their core function which is curriculum supervision using personal experience as instructional leaders. However, the report notes that despite their conversant with personal curriculum supervision there is an urgent need to shift towards a professional approach to curriculum supervision as anticipated by CAPS (Abera, 2020). The latter requires that schools invest in sophisticated technological resources such as smart boards, laptops, and tablets to improve curriculum supervision. Huge resistance from SMT as noted in a study conducted by Mpungose (2019) infers that personal supervision matches the character of teachers, much more convenient, and lack of appetite from senior leaders and policymakers for its urgency.

The study conducted by van Deursen and van Dijk (2019) defines the digital divide as the gap between those who have access to basic technological resources, skills who are known as digital migrants and do not have access to resources limiting their participation in online learning/e-learning. Access heightens the digital divide but Mpofu (2020) further identified socio-economic factors, gender, race and class, age, geographical area, and low level of literacy as major obstacles towards technological acceptance in schools. This glaring digital divide among racial lines is more entrenched and well documented in the South African context with schools catering to the majority of black South African learners and teachers worse affected by the digital divide. Furthermore, the digital divide is caused by gross inequalities between

private and ex-model C schools on one side and, sub-urban and rural schools on the other. This is in line with what various researchers have posited (Mpofu 2020; Le Grange 2020; Devakumar, Shannon, Bhopal, & Abubakar, 2020). The majority of ex-model V schools conduct classes through zoom meetings, WhatsApp communication even developed online lessons while the learners from poorly resourced schools were left behind (McCoy 2020; Le Grange 2020; Ellis 2020).

It is worth noting that the resilience teachers portrayed in affluent schools was partly dependent on the availability of resources and partly on the teachers' competence. These faultlines seem insurmountable given the earlier intervention by the government to address this digital divide through various programmes and policies with very little success. Certain schools were earmarked as centres of excellence furnished with state of the art computer laboratories, hardware (desktops, servers, and even laptops) while others received support from local industries in the form of mobile computer centres and other technological devices to service SMT. Lack of security in most government schools exposed these facilities to vandalism, theft, and poor maintenance. Mpungose (2020) has revealed that very little evidence exists to suggests that DBE has capacitated SMT with technical skills to address these challenges (digital divide) that always persist unhinged from accessing e-learning from home.

3. This study is underpinned by the following objectives:

1. To establish the nature of supervision by School Management Teams during Covid-19 in Kwa-Dlangezwa township, Esikhawini, Empangeni, and Richardsbay primary schools.
2. To determine factors that enabled or constrained curriculum supervision by SMTs in different primary schools during Covid-19.
3. To highlight the learners' and teachers' ability to access technology and the internet during the Covid 19 pandemic?
4. To assess the kind of support needed by SMTs in supervising the curriculum during and post Covid-19 pandemic.

4. Theoretical framework

According to Bolin & Panaritis (1992:31), the key concept that underpins instructional supervision is the concern for supervision which is the enhancement of classroom practice for the good of the learners regardless of anything else that may be entailed and irrespective of who carries it out. One or a combination of management methods affects how instructional monitoring is carried out. As a result, managers turn their attention to various facets of supervision. As a consequence, two theories, Democratic Human Supervision and Fiedler's Contingency Theory underpin this research.

The democratic human approach emphasizes the importance of contact and engagement in decision-making at all levels of an organization (school), with the supervisor acting as an informal leader. It promotes democratic leadership in which "every worker has a voice" (Evans, 1991:83). 'Teachers will do their utmost in a friendly atmosphere,' is the key underlying presumption (Tracy 1995:323). Supervisors are required to have a welcoming atmosphere by concentrating on the personal satisfaction of teachers. Under the democratic human approach, supervision is synonymous with instruction that honors human personality and promotes supervisor-supervised collaboration (Aifonso et al., 1981). It means that when teachers and managers collaborate, successful supervision can be accomplished (Lucio & McNeil 1969; Sergiovanni & Starratt, 2002). The idea behind supervision is that it helps teachers to supervise curriculum professionally and enhance their teaching skills. Darling-Hammond (1997:293) supports this viewpoint and asserts that "what matters the most during curriculum supervision is inculcating professional skills, and capacities to teachers to remain relevant and effective practitioners."

Commitments, skills, and strengths are assumed to be discussed through professional growth and development under this strategy. Fiedler's Contingency Theory, which explains managing organisations as based on the premise that there is no one right way to handle it, is the second theory that underpins the analysis. The word "contingency" refers to the current situation's immediate dependencies. Planning, guiding, and managing in successful organisations must be adapted to their circumstances. Managers should specify the requirements of a task, the specifics of the management work, and the people involved as part of a complete management scenario. The leaders must then strive to combine all of these elements into a solution that is best suited to the situation. The contingency theory searches for links between endogenous and exogenous variables (van de Grift & Houtveen, 2006). It is founded on the idea that an organization's (such as a school) effectiveness is influenced by internal and external contingency factors (van de Grift & Houtveen, 2007). The complexity of a school's surroundings and issues in rural communities that affect school performance, such as the school's socio-economic factors, the existence of parents, poverty, infrastructure, services, and rural culture and values, are examples of external contingency factors. Internal contingency refers to problems that occur within a school and impact school performance in rural areas. These factors include resources, infrastructure, the quality, and training level of teachers, curriculum, leadership and management; school policies, school organization, and the school board (Langa, 2013). Schools should seek the best match between their internal and external contingency variables, according to the contingency theory. The actions of principals, teachers, and school boards, according to this theory, reconcile the instructional process and the school's situational variables (Creemers, Scheerens & Reynolds, 2000).

5. Research methodology

The research question was answered using a qualitative study. A qualitative approach focuses on the interpretations, values, perceptions, and insights that participants attribute to a social phenomenon (Nieuwenhuis, 2020). This study aimed to learn more about SMTs' experiences supervising the curriculum amid the Covid-19 pandemic in primary schools. This research included eight participants, four of whom were HoDs and four of whom were principals.

Purposive sampling was used to identify and SMT members who held information-rich and practical experiences of generating ideas for the supervision of the curriculum in the era of the Covid-19 pandemic in primary schools. The participants were chosen based on the following criteria: a primary school SMT member (HOD and Principal). The data was gathered using WhatsApp and Zoom tools to conduct a simulated semi-structured interview. As suggested by Kvale and Brinkmann (2009), the interview was conducted in a conversational manner. The following main questions guided the interviews:

- What is the nature of curriculum supervision during Covid-19 in primary schools in Kwa-Dlangezwa, Esikhawini, Empangeni, and Richardsbay primary schools?
- In your view, what have been enablers and constraints in executing your duties as curriculum supervised during Covid-19 in your schools?
- What are your views about your learners' and teachers' ability to access technology and the internet during the Covid 19 pandemic?
- What support do you think SMTs, teachers, and learners need during and after a post-Covid-19 pandemic.

The semi-structured interviews were recorded using the Zoom App and the digital recorders. The interview discussion was then transcribed and later analysed. Data were thematically analysed using Braun and Clarke's (2006) thematic analysis framework. Braun and Clarke (2006) note: "Thematic analysis can be an essentialist or realist method, which reports the experiences, meanings, and reality of the participants."

SMT MEMBERS	SCHOOL TYPE	GENDER	AGE
SMT 1	Rural school	Female	43
SMT 2	Private school	Male	55
SMT 3	Ex-model C school	Female	39
SMT 4	Rural school	Female	57
SMT 5	Sub-urban school	Male	28
SMT 6	Rural school	Female	46
SMT 7	Ex-model C school	Male	52
SMT 8	Sub-urban school	Female	34

6.   Findings

The study undertook to discover SMTs' experiences on curriculum supervision during the Covid-19 Era. After collecting and analysing the collected data, four themes emerged.

6.1 Theme 1: Supervising curriculum in an abnormal situation

Although there have been pandemics over the years, the Covid-19 pandemic was the one that attacked the whole world at once, causing a lot of confusion and injecting a lot of fear to teachers, learners, and parents. When schools re-opened after lockdown SMT members had various supervision experiences. SMT 6 related the abnormality of the situation thus:

> *"First and foremost, the whole nation was affected. Parents were afraid to bring their children to school just in case they contracted the virus. Supervising roles escalated as we had to supervise teachers on observing Covid protocols. For example, they had to supervise whether learners washed their hands, wore their masks, sanitise and observe social distancing.*

In primary school, that was a daunting task.

> *We had challenges with resources where books, water, classrooms, and furniture were not enough".*

> *Apart from physical resources, schools had to deal with financial and human resources.* SMT 4 added on the abnormality by saying:

> *"The situation was abnormal indeed. The teaching timetable had to be arranged since teachers with comorbidities could not join the staff. Yo yo yo, those who could teach absented themselves and produced a lot of sick notes. Whereas private schools, simply employed teachers using their financial resources without waiting for the department as we do. Both teachers and learners were affected psychologically since many of them had experienced death first hand in their families".*

6.2 Theme 2: Online learning and the digital divide

Teachers that had been used to teaching children face to face and had to teach them remotely using online education. Likewise, SMT members who were used to supervising teachers closely had to supervise at a distance. This presented a huge problem since schools were not on the same par. SMT 8 asserted:

"*Our schools were a disaster. The ex-model C schools were better off since they have manageable classroom sizes before the lockdown. They were well off financially and did not struggle with the use of technology.*

In rural schools, things were really bad. For example, some of our schools took months to send work to learners through WhatsApp or never did anything, yet the ex-model C and private schools never struggled. They continued as usual".

It is apparent that teachers were also failing to teach learners through zoom. To attest to this, SMT 1 added:

"*While privileged schools continued to teach learners by zoom, Whatsapp and prepare online lessons, our teachers did not have laptops and could not prepare online lessons. While other parents were busy disciplining and motivating their children to do school work, learners from our schools were busy watching TV non-stop, some playing different games and some just loitering around*".

6.3 Theme 3: Teacher resilience and adaptation to new normal

While rural and township schools had nothing to do, the privileged school SMTs applaud their teachers for adapting quickly to the Covid 19 situations. SMT 7 from the ex-model C school had this to say:

"*I commend our teachers who show amazing resilience during this traumatizing time. They worked so hard. They sent homework to learners through WhatsApp, created group chats, developed online lesson plans, conducted zoom lessons where learners participated. Yaah, they adapted and faced challenges head-on. As an SMT member, supervising teachers was not a train smash*"

Contrary to such a good report, SMT 5 said:

"*you know, our learners do not have smartphones, so they cannot receive school work. Even if they have them, our teachers cannot even design online lessons, they do not possess lab-tops, they are technologically challenged.*

They helplessly waited for schools to reopen so that they could meet learners face to face. Yes, that's what I can say. No funds, no technological equipment, no development from teachers, you know what? No nothing.

6.4 Theme 4: The needed support for teachers

Having given their views, teachers, especially from the disadvantaged schools expressed that they need assistance. SMT 2 from the private school had this to say:

> *" Regardless of where the school is situated, I think also teachers need assistance of some kind. For example, even though our teachers did their best, they still need psychological support because they also lost their loved ones, are afraid and some are still sick since they are recovering from Covid related ailments or other comorbidities".*

The response from a rural school SMT 6 members showed a considerable difference. This is what she said:

> *" I don't think it is fair that some schools have all the resources and some don't. They must be treated equally in terms of finances, teaching staff, technological resources. Another point is that the school management must be fully trained to function well even in difficult times.*

7. Discussions

Findings in this study relate to issues pertaining to CAPS curriculum supervision by SMTs in primary schools during the Covid-19 era. As stated earlier in the literature, CAPS demands the availability of technological resources, the readiness of teachers, and all the resources needed for curriculum supervision (Khoza, 2015). This study aimed at exploring enablers and constraints of curriculum supervision during this Covid-19 era where curriculum supervision and teaching had to be both virtual and face-to-face. Regarding rural schools, SMTs reported that learners stayed at home without receiving any teaching (virtual or face-to-face) and homework since they had no smartphones for receiving homework. Those with smartphones struggled to access important software platforms (D6, D6+) for school as their schools do not participate in these platforms. D6 is an innovative technology that consists of a comprehensive communication tool between the school and its parents, and also D6+, a fully integrated cloud-based school administration, curriculum, finance and communication system. Together these two products support more than 2,500 schools throughout South Africa and abroad (DBE, 2018).

The findings suggest that most parents could not supervise their kids. A lot of teaching and learning time was lost during the lockdown. Even when learners were allowed to attend classes due to the shortage of books, water, classrooms, furniture, finances, and teachers. The shortage of resources was inevitable considering that the number of learners enrolled outweigh available spaces. However, reports emerged that during the lockdown, barbaric incidents of vandalism, burglary, and destruction of schools across several provinces since the Covid-19 lockdown

started (South African Government News Agency, 2020). Learners had to alternate coming to school which posed a big problem to primary school learners since lesson continuity was disturbed.

Despite these challenges, SMTs collaborated with teachers in deciding how the teaching-learning situation could be handled to take place under adverse conditions. They had to rearrange timetables, determine the number of classes to be used on certain days and see how they could use the meager resources available. This is in line with the democratic human approach which emphasises the importance of contact and engagement in decision-making at all levels of an organization where the supervisor acts as an informal leader and in a friendly manner (Evans, 1991; Tracy 1995). This finding is also in line with Fiedler's Contingency Theory (van de Grift & Houtveen, 2007), where schools had to deal with internal and external contingency factors that adversely affect teaching and learning during the Covid-19 era. While findings reveal that online teaching and learning in rural and township schools was impossible, their private school and ex-model C school counterparts continued with online teaching and learning. As a result, SMT participants in private and ex-model C schools commended their teachers for adapting easily to changes imposed by the Covid-19 pandemic and the resilience they exhibited during the difficult time.

Based on the findings, it is also evident that there is a digital divide that is caused by gross inequalities between private and ex-model C schools on one side and, sub-urban and rural schools on the other. This is in line with what various researchers have posited (Mpofu 2020; Le Grange 2020; Devakumar, Shannon, Bhopal, & Abubakar, 2020). The vast digital divide was portrayed by the ability of private and ex-model C schools through online teaching and learning resources. They successfully conducted classes through zoom meetings, WhatsApp communication even developed online lessons while the learners from poorly resourced schools were left behind (McCoy 2020; Le Grange 2020; Ellis 2020). It is worth noting that the resilience teachers portrayed in affluent schools was partly dependent on the availability of resources and partly on the teachers' competence.

In line with the democratic human approach that promotes supervisor-supervised collaboration (Aifonso et al., 1981), findings reveal that SMTs encountered challenges in supervising teachers. Supervisor-supervised collaborations were seriously hampered. SMTs, as supervisors were used to supervising curriculum in a face-to-face situation. Neither were they prepared for the turbulent times where they had to part with learners unceremoniously. Since teachers had to respond to health risks associated with physical contact, the supervision protocols had to swiftly change towards being technologically based (Fendi et al 2020). The swift move was difficult since most teachers, especially, in rural and township schools could not have access to technological resources. Although according to Ngubane-Mokiwa and Khoza (2016), the department of education has tried to provide these resources in 2007, they were not enough.

Moreover, during the pandemic, the dwindling of the South African economy, which was even relegated to the junk status, made matters even worse as far as providing the required resources.

Findings revealed that teachers were not adequately prepared since they were not trained to use technological resources. Furthermore, apart from the teachers' non-use of the resources, the SMTs have no formal experience on how to supervise curriculum during the 4IR era, especially during the Covid-19 period (Mpungose 2020). Consequently, findings revealed that with the poorly resourced schools, it was difficult to conclude that all their teachers are technologically incompetent. This is in line with the 2004 White Paper on e-Education as issued and detailed by the Department of Basic Education as its vision in a document called Guidelines on e-Safety in Schools: Educating Towards Responsible, Accountable and Ethical Use of Information and Communication Technology in Education and Guidelines for Teacher Training and Professional Development in Information and Communication Technology. This finding is contrary to Darling-Hammond's (1997), suggesting that the engagement, skills, and capacities of teachers matter most for the teaching–learning encounter. This warrants that teachers are professionally developed to improve their teaching skills thus enhance their confidence.

Lastly, findings revealed that, regardless of where the schools were located, both teachers and learners were affected psychologically (Robbinson 2020; McCoy 2020). They had lost a lot of their relatives, including parents and spouses. Even when schools were well reopened, learners suffered since not all teachers returned due to comorbidities, psychological trauma, sicknesses, and fright. These factors affected the supervision procedures immensely. The SMTs who were not trained in counselling had to do it, listen to the hurting while they were in the same predicament.

8. Recommendation and conclusion

Uniformity in terms of educational execution and curriculum supervision is of utmost importance. Based on the findings on health matters, it is recommended that educational programmes on guiding teachers on healthy lifestyles be instituted. For South African communities to be strengthened, South Africa needs to radically reconfigure the provision of resources for the desired attainment of outcomes. For the attainment of the desired educational goals, there is no other way but for the government to capacitate public schools through addressing inequalities in line with national development goals. The DBE should prioritise high-speed broadband to be readily available and incorporated into the design of schools. This will enable greater use of technology in education and enhance the classroom experience for both teachers and students.

The entire CPTD phenomenon is uncoordinated in South Africa threatening technological acceptance, online learning, and the recruitment of higher calibre SMT candidates. The Integrated Strategic Planning Framework for Teacher Education and Development in South

Africa 2011–2025, provides a useful framework. It needs to be strengthened and there should be incentives to ensure it is implemented effectively. The study recommends that government use National Development Plan 2030 to address the digital divide which continues to hinder SMT towards realising the full potential of e-learning, yet teachers still want to engage with learners in a face-to-face mode to submit assessment tasks. With semi-urban and rural schools using face-to-face learning, teachers with comorbidities are becoming vulnerable to the Ccovid-19 pandemic and other challenges which result in a shutdown of schools, alternatives need to be sought to allow SMT and teachers, particularly disadvantaged SMT, to realise e-learning.

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