

Women school leaders' perceptions on online learning in disadvantaged secondary schools during crisis: Lessons for sustainability

¹Mpolokeng Rebecca Mongake and ^{2*}Chinaza Uleanya

Department of Education Leadership and Management

University of Johannesburg

Johannesburg, South Africa

rebeccamongake23@mail.com and chinazau@uj.ac.za

Abstract

This study investigated the challenges and opportunities of online learning in disadvantaged schools during the Covid-19 pandemic. This study was conducted using Qualitative method. The participants in the study includes a total of 12 women school leaders that were purposively selected in three public secondary schools that were selected. Amongst the 12 participants, there were two school principals, two deputy principals, three Head of Departments (HODs) and five grade head teachers. The data was collected using biographical questionnaires and individual semi-structured interviews. The data collected was analysed used Qualitative Data Analysis (QDA) Miner lite software. The findings of the study revealed that the challenges of online learning in disadvantaged schools included lack of teacher's ICT competencies and lack of communication with parents. The opportunities of online learning in disadvantaged schools according to the findings was learners independence in learning.

Key words: Online learning, Covid-19 pandemic, disadvantaged schools, women school leaders

Introduction

The Covid-19 pandemic was quite sudden, it changed a lot of our lives dynamics. The Covid-19 became more popular in 2020 as it started towards the end of 2019. Sagnelli, Ciccozzi, Terrinoni, Jiang, Wang and Bernardini (2020) state that in 2019, there was an outbreak of the coronavirus that is associated SARS-Cov which is the severe acute respiratory syndrome coronavirus 2 (SARS-CoV2). Sagnelli (ibid) further mention that due to the alarming death rate due to SARS-CoV2, the World Health Organisation declared this virus a global pandemic on the 12th of March 2020. The declaration of this virus as a pandemic meant that different countries devised strategies to prevent new infections and isolate those affected by the virus to avoid the disease spreading further. One of the most effective strategies that was established by many countries was to shut down a lot of institutions and day to day activities, this affected schools too as they had to close. The president of South Africa also implemented the lockdown measures on the 20th of March 2020 as there were already 1,017 confirmed positive Covid-19 cases and 11 deaths in the country. The lockdown for South Africans meant that the social, cultural, economic, and other activities were on a halt, these included school closures. Viner, Russell, Croker, Packer, Ward, Stansfield, Mytton, Bonell and Booy (2020) opined that the schools were closed based on the attestation and preconception from influenza outbreaks that they will eliminate physical contact between scholars and that would disturb the transmission of the virus. Upon school closures, schools considered migrating to online learning as means to ensure continuity in teaching and learning. The sudden change from traditional classrooms to online learning brought challenges and opportunities to the education sector. This study investigates the challenges and opportunities of online learning in the context of the Covid-19 pandemic with the focus on disadvantaged schools. In the context of this study, these disadvantaged schools are ranked Quintile 1.

In South Africa there is a Quintile ranking system that assists the education department at national and provincial level to categorise schools from rich to poor schools as means to allocate funds and resources in an equitable manner. Dyk and White (2019) states that in the South African context, schools are categorised in Quintile rankings according to the income, unemployment rate and literacy level in the area where the school is situated. The Quintile ranking starts from Quintile 1 to Quintile 5 schools. Ogbonnaya and Awuah (2019) state that schools ranked Quintiles 1 to 3 receive more funding from the state and

fees are not expected from learners in such schools, while the reverse is the case in schools ranked Quintiles 4 to 5 as fees are required from the learners. Therefore, the schools in lower Quintiles such as 1 to 3 are categorised as poor and disadvantaged, while those in the higher Quintiles such as 4 and 5 are assumed to be schools that are situated in wealthy areas. Poisson (2014) asserts that the system of Quintile ranking was created to target schools that are categorised as the poorest for them to receive a significant share of non-personnel funding. Marishane (2013) asserts that the norms and standards of funding schools is intended to correct historical apartheid injustices and inequities between wealthy and poor school communities in regard to school funding and are periodically amended to maintain the process of narrowing the existing inequality gap. As means to address these wide gaps in education, the education departments from the national and provincial level allocate certain funds to narrow the existing gaps by allocating more funds and resources to schools that are categorised as poor. Marishane (2013) states that the funds that are provided in South African schools are the responsibility of the national Department of Basic Education (DBE) and the provincial education departments (PEDs) across the nine provinces in South Africa. According to section 34 of the South African Schools Act (SASA), the State must fund public schools from public revenue on an equitable basis in order to ensure the proper exercise of the rights of learners to education and the redress of past inequalities in educational provision.

This study captures the perceptions of women leaders in terms of the challenges and opportunities of online learning in schools ranked Quintile 1. The study investigates schools in Quintile 1 to explore how the Covid-19 pandemic affected the process of learning in these schools positively and negatively. The aim of the study is to seek clarity on how online learning was experienced by those in Quintile 1 schools as opposed to those in Quintile 5. Educators and learners in Quintile 5 schools were more likely to have been exposed to online learning or blended learning prior to the pandemic due to the variety of resources and funds these schools have. This study is guided by two research questions:

- What are the perceptions of women leaders in the selected disadvantaged secondary schools on the challenges of online learning during covid-19 pandemic?
- What are the perceptions of women leaders in the selected disadvantaged secondary schools on the opportunities of online learning during covid-19 pandemic?

Characteristics of disadvantaged schools in South Africa before Covid-19

Some countries in Africa and other developing countries around the world experiences challenges in education that presents themselves as barriers to learning including South Africa. The South African education also had a fair share of challenges prior to the Covid-19, and they became vivid during the pandemic due to unending challenges experienced by those in the education system. Maringe, Masinire and Nkambule (2015) postulates that regardless of South Africa's prosperity, it remains as one of the most unequal communities globally where education takes form in a widely different context. Skelton (2014) expresses that schools in South Africa still lack proper structures as roofs are made of corrugated iron and the rainwater goes inside the classroom and that affect the children and the classroom equipment. Skelton (ibid) further elaborates that such schools also lack electricity, water, and hygienic sanitation as in some cases teachers and learners do not have toilets. Amsterdam (2019) expressed that educators and students in South African schools are concerned about poor sanitation facilities, lack sport equipment, issues of overcrowding and the desire for the schools to have computers for students. The disadvantaged schools in South Africa were already in no position to provide learners with adequate online learning facilities before the pandemic as these schools lacked the most basic facilities such well-built classrooms, running water and toilet facilities.

CHALLENGES OF ONLINE LEARNING IN DISADVANTAGED SCHOOLS

This section unpacks the challenges of online learning in disadvantaged schools during the Covid-19 pandemic.

Digital divide

Amongst the several social imbalances in different population groups both in small and larger scale, digital divide and digital inequality are one of the top intense inequalities during the Covid-19 pandemic (Cheshmehzangi, Zou, Su and Tang, 2022). Sparks (2013) define digital divide as access and use of digital resources and services, these mostly includes personal computers, access to internet in both physical connection and facility of use. Digital divide in the school context can affect the learners that do not have access to digital resources and services negatively especially during Covid-19 era because their access to learning can be limited or non-existent. Hohlfeld, Ritzhaupt, Barron and Kemker (2008) posits that digital divide can be categorised into three levels in which includes the school's ICT infrastructure, the use of ICT in the classroom by the teachers and learners; and the empowerment of the individual learners. Cheshmehzangi, Zou, Su and Tang (2022) indicate that lack of digital infrastructure as a result of socio-economic issues often lead to less digital availability, access and usage. Cheshmehzangi (ibid) also mentioned that due to lack of digital infrastructure, the students affected by that will be less likely to participate in online social platforms and educational activities. In the context of South Africa, digital divide in schools can be notable in schools that are in higher quintiles versus the ones in lower quintile schools. The schools that are in high quintiles are known to be resourceful with digitally equipped classrooms, while the schools in lower quintiles are faced with challenges ranging from poor ICT infrastructure to dilapidated classrooms. Moreover, research conducted in South Africa by Spaul (2013) shows a massive gap in school infrastructure; the learners in higher socio-economic households had great exposure as opposed to many learners in lower socio-economic backgrounds. Therefore, online learning seems to be an impossible task to execute in disadvantaged schools due to the vast effects of digital divide.

Poor learner motivation

Motivation is an important aspect of learning whether in traditional face to face settings, blended learning or even in fully online settings for learners. Rannastu-Avalos and Siiman (2020) expressed that it is necessary for learners to be independent during online learning. However, the Covid-19 pandemic and its nature led to online learning with little to no preparation for learners and that affected their levels of motivation as they were used to physical interactions with their teachers and peers. For those in developing countries, the issue of schools closing had brought challenges as learners struggled with poor motivation during Covid-19 as they come from low-income home families that were not literate (Tadesse & Muluye, 2020). Family can play a significant role by being supportive to learners and help them achieve academically, therefore, if they cannot assist it can be demotivating to keep learners focused with schoolwork at home. Knopik, Błaszczak, Maksymiuk and Oszwa (2021) also discovered that during online learning, learner motivation was affected by limited to no contact with their peers, real connections, and interactions with others especially at the beginning of the Covid-19 pandemic. Therefore, it was necessary for intense intervention from the school and home to motivate and remind learners of the main objectives of learning. It is crucial to help learners understand the importance of learning and improving learner motivation is essential during the Covid-19 pandemic period (Bestiantono, Agustina, & Cheng, 2020). Learners should understand the importance of learning in order for them to find purpose and meaning in learning, and that could improve their level of self-regulation and motivation. Khotimah (2020) argues that indeed online learning is a process that requires one to be self-regulated in order to thrive and be successful academically. However, not all learners are capable of being intrinsically motivated on their own with less intervention. Gilbert (2015) emphasises that online learning can be a challenge as learners may lack self-regulation to complete online programmes due to lack of independence. Bestiantono, Agustina and Cheng (2020) mentioned that there is a limitation with online learning that

affects learners such as not being able to share thoughts and information with others in real time. Due to such limitations, learner motivation can be regarded as a challenge to online learning during the pandemic and online learning era.

OPPORTUNITIES OF ONLINE LEARNING IN DISADVANTAGED SCHOOLS

Online learning also presented a set of new opportunities in the education sector. Lawrence and Fakuade noted several challenges that were identified in low- and middle-income African countries during Covid-19 and online learning era but these researchers also acknowledged the opportunities of online learning. Lawrence (ibid) iterates that the opportunity of online learning includes prompt learning and other innovative and creative opportunities to teachers and learners. According to Dhawan (2020), online learning can be easily accessed, it is cheaper, and it is a mode of learning that is flexible. Dhawan also confirms that online learning can reach a multitude and assist those on the schooling system to reduce the costs of transport and other expenses related to school activities. Similarly, Gilbert (2015) also confirms that there is flexibility in online learning and that students are more productive when they study at a time and place that is convenient of their needs. Jena (2020) mentioned that online learning was necessary as it is flexible, instantly available and it provided disadvantaged learners with improved learning experiences during Covid-19 without any physical interaction.

METHODOLOGY

This study employed the Qualitative research approach. Qualitative research was used in this study as the goal was to seek understanding of the participants experiences in the specified context. This study employed phenomenological design. Khaldi (2017) states that phenomenology seeks to describe individual's experiences about how they experienced a certain phenomenon. In the context of this study, women school leaders were chosen to describe the perceptions of the challenges and opportunities of online learning in disadvantaged secondary schools. The study employed purposive sampling and 12 participants from three schools in Quintile 1, the East of Johannesburg, in the

Gauteng province, South Africa. The participants in this study comprised of women school leaders in different positions in the school leadership category. There were two school principals, two deputy principals, three departmental heads and five grade head teachers. These participants were selected as means to provide a holistic view of the perceptions of the women school leaders about online learning in disadvantaged secondary schools. The selected participants were able to provide deep insights on how online learning was experienced by the schools ranked Quintile 1 from a grade head teacher, HOD, deputy principal and principal's perspective. Table 1 below captured the biographical information of participants from the data that was collected from the google form biographical questionnaires.

| Pseudonyms | Age | Race | School leadership position |
|-----------------|-----|-------|----------------------------|
| Bontle (P1) | 26 | Black | Grade Head Teacher |
| Matotoyi (P2) | 50 | Black | Principal |
| Cinderella (P3) | 38 | Black | Head of Department (HOD) |
| Motlatsi (P4) | 52 | Black | Principal |
| Koketso (P5) | 39 | Black | Deputy Principal |
| Desiree (P6) | 48 | Black | Head of Department (HOD) |
| Nicole (P7) | 29 | Black | Grade Head Teacher |
| Bettia (P8) | 50 | Black | Head of Department (HOD) |
| Dorcas (P9) | 34 | Black | Grade head teacher |
| Khubi (P10) | 28 | Black | Grade head teacher |
| Mbali (P11) | 30 | Black | Grade head teacher |
| Qiniso (P12) | 45 | Black | Deputy principal |

Data collection and methods. The first method of data collection used was biographical questionnaire which was shared with the participants through email and Whatsapp chat. The second method used was the individual semi-structured interviews that were

conducted with all the participants. These interviews were conducted online due to the Covid-19 restrictions at the time. These interviews were recorded using a cellphone and they were later transcribed using the Live Transcriber application.

Data analysis.

The study used thematic analysis, therefore, the computer-assisted qualitative data software used in this study was QDA Miner lite. The initial stages of data analysis included analysing the biographical data collected and tabulating that information using the responses from the Google form. The second stages of analysing data was to import all the interview transcript to the QDA Miner lite application. The QDA Miner lite was used to establish codes and categories, this application also had various useful functions that allowed users to make notes and color code similar themes.

Ethical considerations. The ethical clearance was obtained from the University. The aspect of anonymity and voluntary participation was well established at the initial stages of data collection. The participants were made aware that their participation is free, and it can be withdrawn at any stage of the study without any consequences imposed to them. The participants were also made aware that their identity and their workplace would be kept anonymous, this was achieved through using pseudonyms for the participants and fictional names for the names of the schools that they work for.

RESULTS AND DISCUSSIONS

Challenges of online learning

The results of the study are based on the following posed research question:

What are the challenges and opportunities of online learning in disadvantaged schools during the Covid 19 pandemic?

Theme 1: Lack of teacher's ICT competencies

One of the challenges that women school leaders experienced about the sudden change to online learning was the lack of preparation as many teachers in their schools were struggling to adapt to the online space. Participant 1 with a pseudonym Bontle was asked about the challenges of online learning, she then revealed that most of the teachers in her schools were not exposed to online learning before.

For a lot of teachers, it was a great challenge because a lot of our teachers were not given that opportunity to really experience online learning before. They were just thrown into the deep end because the idea of online teaching and learning was new to them. I feel that the requirements to teach online became a challenge as these teachers had to navigate online learning on their own with less support. We only had a minority of those teachers who had the privilege of going to University recently and learning just a little bit about it, but it was a problem to be honest.
Bontle (P1)

In the above excerpt, Bontle explains that most teachers experiences challenges with online learning because they did not get an opportunity to experience online learning before. She further mentioned that teachers were challenged to find their way with online learning and there was less support provided to them. Lastly, she mentioned that there was only a few teachers who were recently from university and they learned a bit about online learning but it remained a problem. In the excerpt below, Bettia also shared similar sentiments to Bontle as she mentioned that she felt like she was not ready for online learning.

I think changing to online learning was unexpected and it was abruptly, with no hint or notification. So, the greatest challenge for me was that I felt overwhelmed with change and my level of ICT literacy is not the greatest because I have never taught

my learners online or communicate with them outside the borders of the school, so the change was quite shocking for my learners and I think part of my dilemma was that I also never got a chance to find information as to whether my learners have devices that are fit for online learning. But I knew that they are highly likely to be excluded from online learning because of my observation about the area or the community the school is situated in. So to be precise, as much as the community that the school is situated in has many socio-economic challenges that affected the school and our learners badly, I still maintain that my poor internet technological skills also played a huge role. Bontle (P1)

In the above excerpt, Bettia mentioned that the change was not expected and she felt overwhelmed as her ICT literacy levels were not great. She also alluded that she has never used the online platform to teach and communicate with her learners. Bettia also expressed that she has not gathered information about her learners as to whether they had devices fit for online learning. However, she expressed that due to the situatedness of her school had many socio-economic challenges which had a negative effect on the school and learners. Lastly, she emphasises that her poor internet technological skills had a big role to play. Du Plessis (2021) claims that during COVID-19, schools faced difficulties navigating issues with online learning and questioning their readiness to implement technology and deal with difficulties in online teaching and learning. The unexpected shift from traditional face-to-face teaching and learning was felt mostly by the schools that were entirely reliant on traditional learning. Gustiani (2020) emphasises that teachers were challenged as they lacked the relevant online teaching skills and never mastered computer skills during their pre-service years. This implies that every educator should possess the relevant ICT competencies that complement their profession and specialisation because the integration of ICT in teaching and learning is gaining more popularity.

Theme 2: Lack of communication with parents

Communication with parents during Covid-19 was more important because learners were expected to learn online at home due to the restrictions of the pandemic. In the below excerpt, participant 2 with a pseudonym Matotoyi shared her views about the challenges of communication with parents during the first weeks of the Covid-19 lockdown.

The first few weeks weren't well especially because of communication; we couldn't communicate with parents because we don't use systems such as emails and so on. Some parents don't have phones, we struggled to let parents know about where we are and what we should do. We have a lot of problems, we do not even have connections sometimes, we cannot make calls because the connection is bad. Matotoyi (P2)

In the above excerpt Matotoyi expressed that the first weeks of the pandemic were challenging as there was no communication with parents because the school did not have an email system and some parents do not have cellphones. Therefore, the school was unable to update the parents about what needs to be done. Lastly, it was difficult to make calls due to bad connections. Similar to Matotoyi, Cinderella also stated her share of challenges that she experienced with communication.

We would normally communicate by meeting each other on the roads or the school premises since a lot of parents do not have smart phones so we cannot send emails. We struggle so much with communication, and we cannot even send messages on Whatsapp so we normally send word of mouth through learners or send letters. I think the strategy of using letters immediately fell away when we had to close our school doors. With that being said, we didn't even have the contact numbers of our learners, the only information we had that was about contacts was the information from the SASAMS which had the parents contact details. So yeah, we completely lost touch with parents, I also feel like more work should be done on the aspect of communication with parents because even under normal days,

there was no effective communication platform that we used successfully to communicate with parents. Cinderella (P3)

In the above excerpt, Cinderella mentioned that they would meet on the road in order to communicate with parents because these parents did not have smart phones, hence they could not send emails. She also mentioned that they were also unable to send messages on WhatsApp, they would therefore send word of mouth through learners or communicate via letters. Cinderella emphasised that the system of sending letters was not used anymore due to the schools closing and another issue was that the school only had parents contacts via SASAMS and not those of the learners. Lastly, this participant expressed that the aspect of communication has not been effective even on normal days. Lucas, Nelson and Sims (2020) argues that teachers that were in disadvantaged schools were in contact with fewer learners and these teachers also felt that the number of parents that were engaged were also fewer. Epstein (1987) mentions that schools must inform parents about school schedules and their children's development. Parental involvement with the focus of communication is crucial for the overall well-being and development of the child. However, one of the challenges faced by women school leaders in disadvantaged schools was poor communication between the school and the parents. In this study, participants mentioned encountering difficulties when conveying information to parents. Lack of communication during a global pandemic is complex; parents without access to school communication miss essential school announcements.

Research question 2: What are the perceptions of women leaders in the selected disadvantaged secondary schools on the opportunities of online learning during the Covid 19 pandemic?

Theme 3: Learners independence in learning

In this study, there was limited findings about the opportunities of online learning in disadvantaged schools. However, a few participants shared their views on the opportunities of online learning in their context. In the below excerpt, Bontle was

responding the questions posed to her, the question was: What are some of the opportunities of online learning in your context that you have observed so far?

I think for our kids, those who could have access, they could go Zoom and Google meet and it broaden their idea of learning as they became more independent and less reliant on the teachers. I think our learners used this experience to realise that their phones cannot be used for entertainment only by the could be used for learning as well. I introduced my learners to different educational sites and they used the effectively, well this was for the children who could have access. Bontle (P1)

In the above excerpt, Bontle mentioned that for learners who had access were able to visit Zoom and Google meet as means to widen their idea of learning and for them to be independent. She also expressed that her learners were able to come to a realisation that their devices can be used for educational purposes too, this was for learners who had access. In the below excerpt, Koketso also made contributions about her views on the opportunities of online learning.

The only positive thing about online learning was that our learners got to feel a sense of responsibility towards their work even though vast amount of motivation from teachers and parents were necessary. Koketso (P9)

In the above excerpt Koketso narrated that the single positive aspect about online learning was that the learners in their school felt responsible however, she also mentioned that teachers and parents had to motivate were needed. Helm and Huber (2022) asserts that indeed school closures and online learning were linked to substantial freedom and increased responsibility. Therefore, the school closures and online learning encouraged learners to be more independent and self-regulated in their studies.

Conclusion and recommendations

Online learning during the pandemic was a new experience to many, especially those that are in disadvantaged schools who have not been exposed to online learning or even blended learning. This experience had challenges and opportunities which were discussed in this study. According to the findings of the study with regards to the challenges of online learning, the following findings were captured: lack of teacher's ICT competencies and lack of communication with parents. According to the findings of the opportunities of online learning, there was one theme that was identified which is learners independence in learning. The limitations in this study was that there were limited responses about the opportunities of online learning in disadvantaged schools. Moreover, the challenges of online learning were slightly more than the opportunities of online learning in disadvantaged contexts. Based on the findings of the study, the following recommendations are made, especially to ensure sustainability:

- The Department of Education in South African schools should empower school principals, deputy principals, teachers and learners should be empowered to use digital tools and services for learning effectively. The targeted schools should be mostly those in lower quintiles. The department of education should also offer extensive support with the schools' ICT's infrastructure as it plays an important role in online learning.
- The school principals and the School Governing Body (SGB) should work together to ensure that there is an effective way to communicate during times of disaster because the parental aspect in education is of paramount importance. In addition, the school should encourage parental involvement by constantly involving parents in their children's learning through constant communication and meetings.
- School principals should create a conducive environment that fosters continuous learning to teachers through initiating professional development programmes that
-

are aimed at improving the educators' curriculum development and teaching methods.

Conflict of interest

The authors declare that there is no conflict of interest.

Data availability

Data associated with this study has been presented as part of the findings.

REFERENCES

- Amsterdam, C. (2010). School Infrastructure in South Africa: Views and experiences of educators and learners. *ResearchGate*.
https://www.researchgate.net/publication/259290274_School_Infrastructure_in_South_Africa_Views_and_experiences_of_educators_and_learners
- Bestiantono, D. S., Agustina, P. Z. R., & Cheng, T. H. (2020). How Students' Perspectives about Online Learning Amid the COVID-19 Pandemic? *Studies in Learning and Teaching*, 1(3), 133–139. <https://doi.org/10.46627/silet.v1i3.46>
- Cheshmehzangi, A., Zou, T., Su, Z., & Tang, T. (2022). The growing digital divide in education among primary and secondary children during the COVID-19 pandemic: An overview of social exclusion and education equality issues. *Journal of Human Behavior in the Social Environment*, 33(3), 434–449.
<https://doi.org/10.1080/10911359.2022.2062515>
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22.
<https://doi.org/10.1177/0047239520934018>
- Gilbert, B. (2015, April). *Online Learning Revealing the Benefits and Challenges* (No. 303). Fisher Digital Publications.
https://fisherpub.sjfc.edu/education_ETD_masters/303
- Gustiani, S. (2020). STUDENTS' MOTIVATION IN ONLINE LEARNING DURING COVID-19 PANDEMIC ERA: A CASE STUDY. *Holistics*, 12(2).
- Helm, C., & Huber, S. M. (2022). Predictors of Central Student Learning Outcomes in Times of COVID-19: Students', parents', and teachers' Perspectives during School closure in 2020—A Multiple Informant Relative Weight analysis. *Frontiers in Education*, 7. <https://doi.org/10.3389/feduc.2022.743770>

- Hohlfeld, T. N., Ritzhaupt, A. D., Barron, A. E., & Kemker, K. (2008). Examining the digital divide in K-12 public schools: Four-year trends for supporting ICT literacy in Florida. *Computers & Education*, 51(4), 1648–1663.
<https://doi.org/10.1016/j.compedu.2008.04.002>
- Jena, P. K. (2020). Online learning during lockdown period for covid-19 in India. *International Journal of Multidisciplinary Educational Research (IJMER)*, 9(5).
- Khalidi, K. (2017). Quantitative, Qualitative or Mixed Research: Which Research Paradigm to Use? *Journal of Educational and Social Research*, 7(2), 15–24.
<https://doi.org/10.5901/jesr.2017.v7n2p15>
- Khotimah, K. (2020). Exploring Online Learning Experiences During the Covid-19 Pandemic. In *Proceedings of the International Joint Conference on Arts and Humanities (IJCAH 2020)*. <https://doi.org/10.2991/assehr.k.201201.012>
- Knopik, T., Błaszczak, A., Maksymiuk, R., & Oszwa, U. (2021). Parental involvement in remote learning during the COVID-19 pandemic—Dominant approaches and their diverse implications. *European Journal of Education*, 56(4), 623–640.
<https://doi.org/10.1111/ejed.12474>
- LaPan, C. (2013). Review of QDA Miner. *Social Science Computer Review*, 31(6), 774–778. <https://doi.org/10.1177/0894439313492711>
- Lawrence, K. C., & Fakuade, O. V. (2021). Parental involvement, learning participation and online learning commitment of adolescent learners during the COVID-19 lockdown. *Research in Learning Technology*, 29.
<https://doi.org/10.25304/rlt.v29.2544>
- Lucas, M., Nelson, J., & Sims, D. (2020). Schools' Responses to COVID-19: Pupil Engagement in Remote Learning. National Foundation for Educational Research.

- Maringe, F., Masinire, A., & Nkambule, T. (2015). Distinctive features of schools in multiple deprived communities in South Africa. *Educational Management Administration & Leadership*, 43(3), 363–385.
<https://doi.org/10.1177/1741143215570303>
- Marishane, R. N. (2013). Management of School Infrastructure in the Context of a No-Fee Schools Policy in Rural South African Schools: Lessons from the Field. *International Journal of Education Policy and Leadership*, 8(5).
<https://doi.org/10.22230/ijepl.2013v8n5a425>
- Ogbonnaya, U. I., & Awuah, F. K. (2019). Quintile ranking of schools in South Africa and learners' achievement in probability. *Statistics education research journal*, 18(1), 106–119. <https://doi.org/10.52041/serj.v18i1.153>
- Poisson, M. (2014). *Achieving transparency in pro-poor education incentives*.
<https://akb.au.int/handle/AKB/66492>
- Rannastu-Avalos, M., & Siiman, L. A. (2020). Challenges for distance learning and online collaboration in the time of COVID-19: Interviews with science teachers. *In International Conference on Collaboration Technologies and Social Computing*, 128–142. https://doi.org/10.1007/978-3-030-58157-2_9
- Sagnelli, C., Ciccozzi, M., Terrinoni, A., Jiang, W. G., Wang, C. B., & Bernardini, S. (2020). The COVID-19 pandemic. *Critical Reviews in Clinical Laboratory Sciences*, 57(6), 365–388. <https://doi.org/10.1080/10408363.2020.1783198>
- Skelton, A. (2014). Leveraging funds for school infrastructure: The South African 'mud schools' case study. *International Journal of Educational Development*, 39, 59–63. <https://doi.org/10.1016/j.ijedudev.2014.07.008>
- South Africa 1996. *The South African Schools Act. No. 84 of 1996*. Pretoria: Government Printers.
- Sparks, C. (2013). What is the “Digital Divide” and why is it Important? *Javnost-the Public*, 20(2), 27–46. <https://doi.org/10.1080/13183222.2013.11009113>

- Spaull, N. (2013). Poverty & privilege: Primary school inequality in South Africa. *International Journal of Educational Development*, 33(5), 436–447. <https://doi.org/10.1016/j.ijedudev.2012.09.009>
- Tadesse, S., & Muluye, W. (2020). The Impact of COVID-19 Pandemic on Education System in Developing Countries: A Review. *Open Journal of Social Sciences*, 08(10), 159–170. <https://doi.org/10.4236/jss.2020.810011>
- van Dyk, H., & White, C. (2019). Theory and practice of the quintile ranking of schools in South Africa: A financial management perspective. *South African Journal of Education*, 39(Supplement1), S1–S9. <https://doi.org/10.15700/saje.v39ns1a1820>
- Viner, R., Russell, S., Croker, H., Packer, J., Ward, J., Stansfield, C., Mytton, O., Bonell, C., & Booy, R. (2020). School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. *The Lancet Child & Adolescent Health*, 4(5), 397–404. [https://doi.org/10.1016/s2352-4642\(20\)30095-x](https://doi.org/10.1016/s2352-4642(20)30095-x)
- Ward, M. (2020). South Africa's COVID-19 lockdown dilemma. *Emerald Emerging Markets Case Studies*, 10(3), 1–10. <https://doi.org/10.1108/eemcs-05-2020-0146>