

Education in the New Normal: A Need for Alternative Strategies in Supporting Teaching and Learning in South African Schools in the Post-COVID-19 Era



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ABSTRACT

The outbreak of the COVID-19 pandemic has negatively impacted the educational system all over the world in many ways, including teaching and learning. Schools had to abandon face-to-face teaching and learning and adopt online teaching approaches. This means that teaching through mobile digital tools and blended approaches is to be enhanced post-COVID-19 era. This paper critically reviewed the literature on the strategies used to support teaching and learning in South African schools during the post-COVID-19 era amid the challenges experienced by the education system in South Africa. The literature review approach was adopted to gather literature on strategies to support teaching and learning in South African schools. Having considered teaching and learning in South African schools which is primarily based on face-to-face traditional pedagogical strategies before the outbreak of COVID-19 and the challenges experienced during the pandemic. The paper argues the need for educational planners to rethink how teaching and learning could be enhanced in the new normal. The digital learning, blended teaching, and eLearning/online learning approaches response of South Africa during the outbreak of the pandemic should be sustained. It emerged from the literature that although teachers and learners have embraced technology, there is no clear policy on how ICT should integrate with teaching, learning and assessment. Therefore, this study recommends that the Department of Basic Education develop an ICT integration policy providing a clear strategy that will accommodate both rural and urban schools. Furthermore, it is recommended that increased funding on education resources and the provision of continuous teacher professional development program be considered.

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INTRODUCTION

The outbreak of the COVID-19 pandemic has massively affected teaching and learning all over the world¹ and it has resulted in the closure of educational institutions, including schools.² This has necessitated a paradigm shift from traditional teaching and learning to a more technological approach (ICT) that will bring teachers and learners together through online teaching and e-learning platforms. Like all other countries, South Africa was unprepared for this abrupt shift from face-to-face teaching and learning to online learning. This means that the South African educational system faced enormous challenges such as inadequate teaching and learning resources and poor internet connectivity and had to endure the pressure brought by the emergence of the pandemic. This new normal forced the country to employ online teaching and learning methodologies and blended teaching and learning approaches,³ yet teachers and learners were not prepared for this new normal. The closure of schools was unavoidable and the loss of teaching and learning hours became a strain on education managers as they had to think about alternative online strategies. Recovering this lost time became the main agenda item in education managers' plans. Therefore, this paper seeks to investigate education in the new normal to suggest alternative strategies that could be used to support teaching and learning in South African schools during the post-COVID-19 era.

In most parts of the world, including China, Nigeria, and South Africa, the outbreak of the pandemic necessitated the administration of teaching and learning in line with the reality on the ground by providing a mechanism that will enhance teaching and learning in educational institutions.⁴ These mechanisms are intended to allow affected nations to develop an online strategy that will facilitate teaching, learning, and assessment in schools since educational institutions were already closed due to the outbreak of the COVID-19 pandemic. Developing countries were the hardest hit as they struggled with digital resources. This means that the coronavirus outbreak, accompanied by stringent COVID-19 protocols, exposed the digital inequalities in the schooling system. Educational authorities were compelled to devise teaching and learning pedagogy to mitigate the challenges brought about by COVID-19.⁵

After the announcement of the closure of schools by the president on 23rd March 2020, all schools, including primary and secondary, were closed down; therefore, teaching, learning and

¹ Pravat Kumar Jena, "Impact of Pandemic COVID-19 on Education in India," *International Journal of Current Research* 12, no. 7 (2020): 12582–86, <https://doi.org/10.24941/ijcr.39209.07.2020>; Michaela Martin and Uliana Furiv, "COVID-19 Shows the Need to Make Learning More Flexible," *University World News*, March 28, 2020, <https://www.universityworldnews.com/post.php?story=20200324115802272>.

² Fernando M. Reimers, "Learning from a Pandemic. The Impact of COVID-19 on Education Around the World," in *Primary and Secondary Education During Covid-19: Disruptions to Educational Opportunity During a Pandemic*, ed. Fernando M Reimers (Cham: Springer International Publishing, 2022), 1–37, https://doi.org/10.1007/978-3-030-81500-4_1; Martins & Furi, "COVID-19 shows the need to make learning more flexible."; Nasir Mustapha, "Impact of the 2019–20 Coronavirus Pandemic on Education," *International Journal of Health Preferences Research* 4, no. 1 (April 2020): 25–30, https://www.researchgate.net/publication/340849956_Impact_of_the_2019-20_coronavirus_pandemic_on_education.

³ Mahaye Ngogi Emmanuel, "The Impact of COVID-19 Pandemic on South African Education : Navigating Forward the Pedagogy of Blended Learning," 2020, https://www.researchgate.net/publication/340899662_The_Impact_of_COVID-19_Pandemic_on_South_African_Education_Navigating_Forward_the_Pedagogy_of_Blended_Learning; Gregorio S. Ochavillo, "A Paradigm Shift of Learning in Maritime Education amidst COVID-19 Pandemic.," *International Journal of Higher Education* 9, no. 6 (2020): 164–77.

⁴ Bunmi Isaiah Omodan and Olugbenga A. Ige, "University Students' Perceptions of Curriculum Content Delivery during COVID-19 New Normal in South Africa.," *Qualitative Research in Education* 10, no. 2 (June 2021): 204–27, <https://doi.org/10.17583/qre.2021.7446>.

⁵ Temitayo Deborah Oyedotun, "Sudden Change of Pedagogy in Education Driven by COVID-19: Perspectives and Evaluation from a Developing Country," *Research in Globalization* 2 (December 2020): 100029, <https://doi.org/10.1016/j.resglo.2020.100029>.

assessment were put on hold and replaced with an online mode of instruction.⁶ The virtual platform replaced the traditional face-to-face pedagogical system, which was entirely new for both teachers and learners.⁷ These developments prompted researchers and educational practitioners worldwide to debate the need to switch to online teaching, learning, and assessment, replacing face-to-face education.⁸ The sudden shift from the traditional face-to-face teaching, learning, and assessment was strongly resisted by both teachers and learners because they were not used to the technological mode of instruction and, as such, not prepared to accept it.⁹ However, it has become expedient to shift from a normal way of teaching and learning to a new normal (ICT) as it is being experienced all over the world.¹⁰ Seemingly, this situation has expedited a movement towards Fourth Industrial technologies and it has now become the responsibility of countries all over the world to employ the use of ICT and a blended teaching and learning approach to facilitate learning in educational institutions. For this reason, this paper sought to investigate how teaching and learning in South African schools are supported during the post-COVID-19 era and which alternative strategies could be used to support teaching and learning.

Blended learning has also been considered as another strategy to mitigate the COVID-19 challenges. Blended learning is the combination of online and face-to-face modes of teaching and learning. Norberg, Dziuban, and Moskal believe that blended learning is a combination of a classroom and an online digital method. In this mode of learning, teachers and learners are in close contact in a classroom. This mode of teaching and learning is adjudged to be the best approach in the post-COVID-19 new normal in that it provides the way out for teaching and learning in the heart of the COVID-19 pandemic that affected the world.¹¹ In developing countries, including South Africa, Cahapay reiterated that the blended teaching and pedagogical learning practice was the available method to keep the school system going. Then blended teaching and learning provided an avenue for teachers and learners to engage while the COVID-19 pandemic was still in force in developing countries.¹² Implementing this pedagogical approach, however, requires technologically inclined educators.¹³ This is rather a problem in South Africa as many educators are not technologically inclined. Some of them are aged and were unwilling to get technological skills to help them drive the blended teaching and learning approach in the post-COVID-19 new normal era.¹⁴ Social distancing in school setups is still in force in the new normal. Also, group work approaches that will necessitate methods like cooperative learning and peer instruction should be discouraged or eliminated as much as possible. The COVID-19 pandemic has redefined the mode of instruction in the new normal from the traditional face-to-face

⁶ Veena Shenoy, Sheetal Mahendra, and Navita Vijay, "COVID 19 – Lockdown: Technology Adaption, Teaching, Learning, Students Engagement and Faculty Experience," *Mukt Shabd Journal* 9, no. 4 (2020): 698–702, <http://shabdbooks.com/gallery/78-april2020.pdf>.

⁷ David Mhlanga and Tankiso Moloi, "COVID-19 and the Digital Transformation of Education: What Are We Learning on 4IR in South Africa?," *Education Sciences* 10, no. 7 (July 9, 2020): 180, <https://doi.org/10.3390/educsci10070180>.

⁸ Jane Chiodini, "Online Learning in the Time of COVID-19," *Travel Medicine and Infectious Disease* 34 (March 2020): 101669, <https://doi.org/10.1016/j.tmaid.2020.101669>; Adekunle Oke and Fatima Araujo Pereira Fernandes, "Innovations in Teaching and Learning: Exploring the Perceptions of the Education Sector on the 4th Industrial Revolution (4IR)," *Journal of Open Innovation: Technology, Market, and Complexity* 6, no. 2 (April 27, 2020): 31, <https://doi.org/10.3390/joitmc6020031>.

⁹ Oke, and Fernandes, "Innovations in teaching and learning," 31.

¹⁰ Omodan, and Ige, "University students' perceptions of curriculum content delivery during Covid-19 new normal in South Africa." 204-227.

¹¹ Anders Norberg, Charles D. Dziuban, and Patsy D. Moskal, "A Time-based Blended Learning Model," *On the Horizon* 19, no. 3 (August 16, 2011): 207–16, <https://doi.org/10.1108/10748121111163913>.

¹² Michael B. Cahapay, "Rethinking Education in the New Normal Post-COVID-19 Era: A Curriculum Studies Perspective," *Aquademia* 4, no. 2 (June 3, 2020): ep20018, <https://doi.org/10.29333/aquademia/8315>.

¹³ Norberg, Dziuban, and Moskal, "A time-based blended learning model." 207-216; Jitendra Singh, Keely Steele, and Lovely Singh, "Combining the Best of Online and Face-to-Face Learning: Hybrid and Blended Learning Approach for COVID-19, Post Vaccine, & Post-Pandemic World," *Journal of Educational Technology Systems* 50, no. 2 (October 20, 2021): 140–71, <https://doi.org/10.1177/00472395211047865>.

¹⁴ Cahapay, "Rethinking Education in the New Normal Post-Covid-19 Era."

approach to a more technological one, which also comes with challenges. Some of the challenges of this mode of instruction include poor connectivity, lack of adequate space for blended teaching and learning, incessant load shedding, and readiness of educators to drive the process.¹⁵ In the new normal, a blended approach is best undertaken by the lecture or direct method in which students are kept less active.

As the outbreak of the COVID-19 pandemic has brought about the closure of schools (primary, secondary, and tertiary institutions) all over the world, a need for the adjustment in the school curriculum in South Africa became imminent and syllabus catch-up strategy dominated the agenda of the Department of Education authorities including South Africa. Apart from this, serious concerns about evaluation strategies can be adopted since teaching and learning are carried out via the online platform. Although teachers and lecturers had started adopting a different method of online teaching and learning like Zoom, WhatsApp, Google Meet, and smartphones, there were no policies to guide e-learning in schools. Assessment was also affected as learners and teachers were not well versed with online assessment strategies. Teachers were left to decide on the type of evaluation system to be adopted during the pandemic, which mostly involved sending school work and assessments to learners or engaging them online.¹⁶ On assessment, some authors favour the qualitative mode of evaluation in the new normal while some were of the view that assessment should be qualitative where learners are graded in either fail or pass mode of grading.¹⁷ In the new normal, the qualitative assessment practice seems adequate, but it was argued that the system might discourage learners' interest in this global crisis. However, assessment is being tailored to favour the qualitative lenient model where teachers are seen to be gorgeous while giving marks to learners to motivate them to strive for high grades in the new normal COVID-19 era.¹⁸ This is necessary because of the massive migration from the face-to-face assessment practice to an online mode of grading system where educators are expected to maintain a high-quality assessment in the COVID-19 new normal era.¹⁹

METHODOLOGY

This paper utilized the integrative literature review approach to collect data. This research methodology approach involves reading through, analyzing and sorting out literature in order to identify the essential attribute of materials.²⁰ It is a non-contact method that also critiques the existing literature about a topic understudy and does not involve objects or persons. It employs rigorous methods which involve a detailed search of the literature based upon a focused purpose of the study.²¹ A researcher is compelled to obtain all studies published on the topic and under study by searching multiple databases. In this paper, the focus of the study was identified and the sources that can clearly respond to the objectives and purpose were sought after. Thirty-one journal articles were reviewed and sourced from different databases such as Google Scholar, Eric, Science Direct, ResearchGate and Scopus to research peer-reviewed journals. These journal articles were published between 2019 and 2022 and focused on how teaching and learning are supported in South African schools during the post-COVID-19 era. This review is categorized into integrating ICT into teaching and learning in the

¹⁵ Singh, Steele, and Singh, "Combining the best of online and face-to-face learning" 140-171.

¹⁶ Julia Liberman, Victoria Levin, and Diego Luna-Bazaldua, "Are Students Still Learning during COVID-19? Formative Assessment Can Provide the Answer – Evidence Library – The EdTech Hub," World Bank Blogs, 2020, <https://docs.edtechhub.org/lib/JDX9HQKE>.

¹⁷ Robert Farrington, "Colleges Go To Pass-Fail Due To Coronavirus Concerns: What Does This Mean For Students," Forbes, Personal Finance, 2020, <https://www.forbes.com/sites/robertfarrington/2020/03/30/colleges-go-to-pass-fail-due-to-coronavirus-concerns-what-does-this-mean-for-students/?sh=5c6e91277eaa>.

¹⁸ Farrington, "Colleges go to pass-fail due to Coronavirus concerns."

¹⁹ Cahapay, "Rethinking Education in the New Normal Post-Covid-19 Era."

²⁰ Guijuan Lin, "Higher Education Research Methodology-Literature Method.," *International Education Studies* 2, no. 4 (November 2009): 179–81; Hannah Snyder, "Literature Review as a Research Methodology: An Overview and Guidelines," *Journal of Business Research* 104 (November 2019): 333–39, <https://doi.org/10.1016/j.jbusres.2019.07.039>.

²¹ Snyder, "Literature Review as a research methodology," 333-339.

new normal and challenges facing the integration of online modes of teaching and learning in South Africa.

DISCUSSION OF FINDINGS

Integration of ICT into teaching and learning in the new normal

The advent of COVID-19 all over the world has brought about a change in the mode of delivery of teaching and learning in schools worldwide.²² In South Africa, the story was the same as schools opted for full digitalization of the mode of teaching.²³ In some cases, the blended approach was adopted during the pandemic and is still in use today. This abrupt shift to online and e-learning required schools to integrate ICT into teaching and learning, yet most schools in South Africa are not fully equipped with digital resources. This situation created a challenge for the Department of Basic Education as it has to devise mechanisms to continue teaching and learning during the coronavirus. Shava opined that traditional classroom teaching and learning approaches have to pave the way for the introduction of technology due to the COVID-19 pandemic.²⁴ This means that the outbreak of COVID-19 has triggered education authorities to rethink teaching and learning approaches and consider expediting action on integrating ICT into the educational system at all levels of basic education (primary and secondary schooling). Learning from the above debate about the challenges brought about by COVID-19, it seems that the education authorities in South Africa need to move with speed in developing policies that govern online learning in schools. This should be accompanied by clear strategies to integrate ICT into teaching and learning.

Since the new normal is a term used to describe something that was initially unusual but has now become commonplace,²⁵ the new approaches to teaching and learning have been with us since 2020 and will be difficult to discard²⁶ as it is now gaining traction in schools. It is evident that the coronavirus outbreak has bolstered learners' attitude towards ICT and they are now getting to the same level as their counterparts at university who had been exposed, though with challenges, before COVID-19, in terms of understanding of ICT.²⁷ However, the integration of ICT into teaching and learning is bringing some challenges ranging from social, technological, and pedagogical challenges.²⁸ These challenges are, in most cases, along the digital divide and are affecting the full integration of ICT into the curriculum in the new normal.²⁹ Most of these challenges are more pronounced in primary and secondary schools while the institutions of higher learning are coping with the trend. Although there is no acceptable framework for integrating ICT into teaching and learning in schools, teachers adopt

²² Aneela Maqsood et al., "The Paradigm Shift for Educational System Continuance in the Advent of COVID-19 Pandemic: Mental Health Challenges and Reflections," *Current Research in Behavioral Sciences* 2 (November 2021): 100011, <https://doi.org/10.1016/j.crbeha.2020.100011>.

²³ S. Motala, and K. Menon, "In search of the new normal': Reflections on teaching and learning during Covid-19 in a South African University." *Southern African Review of Education with Education with Production*, 26(1), (2020): 80-99; E. Shava, "Reinforcing the Role of ICT in Enhancing Teaching and Learning Post-COVID-19 in Tertiary Institutions in South Africa." *Journal of Culture and Values in Education*, 5(1), (2022): 78-91.

²⁴ Shava, "Reinforcing the Role of ICT in Enhancing Teaching and Learning Post-COVID-19 in Tertiary Institutions in South Africa." 78-91.

²⁵ Charles Dziuban et al., "Blended Learning: The New Normal and Emerging Technologies," *International Journal of Educational Technology in Higher Education* 15, no. 1 (December 15, 2018): 3, <https://doi.org/10.1186/s41239-017-0087-5>.

²⁶ Shava, "Reinforcing the Role of ICT in Enhancing Teaching and Learning Post-COVID-19 in Tertiary Institutions in South Africa." 78-91.

²⁷ Fazil Abdullah and Rupert Ward, "Developing a General Extended Technology Acceptance Model for E-Learning (GETAMEL) by Analysing Commonly Used External Factors," *Computers in Human Behavior* 56 (March 2016): 238-56, <https://doi.org/10.1016/j.chb.2015.11.036>; Chrysi Rapanta et al., "Balancing Technology, Pedagogy and the New Normal: Post-Pandemic Challenges for Higher Education," *Postdigital Science and Education* 3, no. 3 (October 9, 2021): 715-42, <https://doi.org/10.1007/s42438-021-00249-1>.

²⁸ Abdullah, and Ward, "Developing a General Extended Technology Acceptance Model for E-Learning," 238-256.

²⁹ Shava, "Reinforcing the role of ICT in enhancing teaching and learning post-COVID-19 in tertiary institutions in South Africa." 78-91.

different approaches suitable for their context.³⁰ This requires the Department of Basic Education to develop a strategy that will accommodate all learners from different socio-economic backgrounds. Since ICT integration in teaching and learning enhances the capacity of learners in technology utilization and academic performance, the political will of the government officials is paramount when it comes to the full integration of ICT into teaching and learning in the new normal, especially in township schools, and this will require funding for the government to provide the ICT tools in schools.³¹

In other African countries like Nigeria and Kenya, the story is the same. Learners are excluded from schools due largely to inadequate ICT resources for teaching and learning during the COVID-19 era. The problems are more pronounced in rural areas than the urban areas. In the view of Oyediran et al., issues of corruption, lack of political will on the part of government and poor infrastructure are some of the problems that hinder the effective integration of ICT in the education system of African countries, including South Africa. It is, however, argued that to integrate ICT into the educational system in South Africa, the government will be required to have the political will to commit a huge sum of money to the provision of infrastructure that will drive the implementation of the program. This is particularly in rural areas where there are reports of poor connectivity and a shortage of ICT devices and gadgets in secondary schools.³²

To sustain the success achieved in the integration of ICT into the educational system during the COVID-19 era, there is a need to ensure that the Department of Basic Education, Higher Education, and Training, as well as other stakeholders in the education sector, double their commitment to electronic teaching and learning in the new normal. According to Moloi and Salawu, this will assist the country's effort at attaining Fourth Industrial Revolutions (4IRs) which depend on technological advancement and promote ICT literate students in South Africa.³³

Challenges facing the integration of online modes of teaching and learning in South Africa

The important role of ICT in educational development all over the world cannot be over-emphasized. These roles have challenges that hindered the full integration of ICT into teaching, learning, and assessment during and after the COVID-19 pandemic in Africa.³⁴ These are, among others, high cost, inadequate infrastructure, and lack of ICT skills.

With regard to high cost, it has emerged that the major hindrances to the integration of ICT into the educational system in South Africa and indeed all over the world is the high cost of provision of facilities that will drive online teaching and learning mode during the post-COVID-19 era.³⁵ In the view of Motala and Menon, the lockdown occasioned by the outbreak of COVID-19 in South Africa affected the implementation of budgetary allocation to the infrastructure facilities in the telecommunication sector as most of the funds were channeled to the prevention of the spread of the pandemic.³⁶ There is also the problem of unpreparedness on the part of the government to address the

³⁰ Michael Agyemang Adarkwah, "I'm Not against Online Teaching, but What about Us?": ICT in Ghana Post Covid-19," *Education and Information Technologies* 26, no. 2 (March 16, 2021): 1665–85, <https://doi.org/10.1007/s10639-020-10331-z>.

³¹ Themba Ralph Mkhize and Mogamat Noor Davids, "Towards a Digital Resource Mobilisation Approach for Digital Inclusion During COVID-19 and Beyond: A Case of a Township School in South Africa," *Educational Research for Social Change* 10, no. 2 (September 12, 2021): 1–15, <https://doi.org/10.17159/2221-4070/2021/v10i2a2>.

³² Wasiu Oyeleke Oyediran et al., "Prospects and Limitations of E-Learning Application in Private Tertiary Institutions amidst COVID-19 Lockdown in Nigeria," *Heliyon* 6, no. 11 (November 2020): e05457, <https://doi.org/10.1016/j.heliyon.2020.e05457>.

³³ Tankiso Moloi and Mary Kehinde Salawu, "Institutionalizing Technologies in South African Universities towards the Fourth Industrial Revolution," *International Journal of Emerging Technologies in Learning (IJET)* 17, no. 03 (February 18, 2022): 204–27, <https://doi.org/10.3991/IJET.V17I03.25631>.

³⁴ Adarkwah, "I'm not against online teaching, but what about us? ICT in Ghana post-COVID-19." 1665-1685.

³⁵ Fernando Ferri, Patrizia Grifoni, and Tiziana Guzzo, "Online Learning and Emergency Remote Teaching: Opportunities and Challenges in Emergency Situations," *Societies* 10, no. 4 (November 13, 2020): 86, <https://doi.org/10.3390/soc10040086>.

³⁶ Motala, and Menon, "In search of the new normal," 80-99.

challenges occasioned by the closure of schools in the COVID-19 era because the outbreak of the pandemic was not envisaged by countries all over the world including South Africa.³⁷ This is more pronounced in rural and township schools, where there is an acute shortage of ICT facilities in schools. Research findings in higher educational institutions reveal that some schools are finding it difficult to utilize the online teaching platform due to inadequate funding and infrastructure.³⁸ Some schools can provide laptops and data to enhance e-learning, but such facilities require a huge amount of funds which most schools in South Africa are not prepared to expend in the post-COVID-19 era. This means that the Department of Basic Education needs to find ways that are cost-effective to address the issue of inadequate digital tools in rural schools.

In South Africa and elsewhere in Africa, infrastructure in telecommunication is grossly inadequate.³⁹ The outbreak of COVID-19 and the closure of schools to prevent the transmission of the virus exposed the inadequacy of infrastructure in South Africa. This problem is more pronounced in rural areas than in cities. Students in tertiary institutions are finding it difficult to learn during the COVID-19 era and, indeed, in the new normal due to the lack of internet connectivity in their local areas.⁴⁰ In recent years, research findings have shown that while students in the urban areas have good internet connectivity, their rural counterparts are having problems connecting to the internet and are therefore excluded from school.⁴¹ Kanyemba and Hofisi are of the view that supporting institutions to adopt technological-induced teaching and learning requires tertiary institutions e-ready in that their systems and infrastructure should be in place to avoid delay or derailing of students' progress. They further argue that using ICT-related virtual platforms (computers, cell phones, projectors, etc.) requires adequate preparation in the new normal to prepare for full integration of e-learning in the educational sectors. Adequate infrastructure should be provided to prepare schools in South Africa for digital teaching and learning.⁴² In the view of Egielewa et al., in Nigeria and other developing countries like Kenya, ICT infrastructure was grossly inadequate in the rural areas, so is the problem of poor connectivity. Government and other critical stakeholders should, as a matter of urgency, provide findings and necessary expertise to address these challenges in the post-COVID-19 era. Funding is crucial to the success of any education reform all over the world. In Africa, much emphasis has not been given to funding technology-induced teaching and learning in educational institutions across nations. In some countries like Nigeria, there has been incidents of trade dispute occasioned by poor funding of the education system.⁴³

CONCLUSION

The review of literature carried out by the authors reveals that during the COVID-19 pandemic, schools, especially higher institutions, embraced ICT to facilitate teaching and learning. This trend has grown tremendously and is widely accepted as the way forward in terms of the pandemic in South Africa. However, there are challenges associated with integrating ICT into the educational system, including the poor network connection, high cost of ICT equipment that will drive the implementation of the policy, poor infrastructural facilities, and inadequate education funding. Countries all over the world including South Africa did not envisage the outbreak of the COVID-19 pandemic and were

³⁷ Shava, "Reinforcing the Role of ICT in Enhancing Teaching and Learning Post-COVID-19 in Tertiary Institutions in South Africa." 78-91.

³⁸ Peter Egielewa et al., "COVID-19 and Digitized Education: Analysis of Online Learning in Nigerian Higher Education," *E-Learning and Digital Media* 19, no. 1 (January 15, 2022): 19–35, <https://doi.org/10.1177/20427530211022808>.

³⁹ Jiska De Groot and Charlotte Lemanski, "COVID-19 Responses: Infrastructure Inequality and Privileged Capacity to Transform Everyday Life in South Africa," *Environment and Urbanization* 33, no. 1 (April 16, 2021): 255–72, <https://doi.org/10.1177/0956247820970094>.

⁴⁰ Groot, and Lemanski, "COVID-19 responses," 255-272.

⁴¹ Dorothy Kanyemba and Costa Hofisi, "E-Government Innovation for Improved Service Delivery," *Journal of Public Administration* 54, no. 2 (2019): 207–22.

⁴² Kanyemba, and Hofisi, "e-Government innovation for improved service delivery." 207-222.

⁴³ Adarkwah, "I'm not against online teaching, but what about us? ICT in Ghana post-COVID-19." 1665-1685.

caught unaware. Literature also reveals that educators resorted to a blended approach to teaching and learning as a way of curtailing the spread of the virus among learners. It also emerges from the literature that majority of schools are experiencing connectivity problems and are not fully equipped with digital resources in South Africa making it difficult to fully integrate ICT into teaching and learning at the basic education level.

RECOMMENDATIONS

The following recommendations were made:

Government should have a political will to address the challenges facing teaching and learning as a result of the COVID-19 pandemic. By increasing funding/budget provision, the government can help update facilities that support online teaching and learning in schools. Appropriate funding should be provided for continuous teacher professional development for educators on ICT at the basic education level. This can come in the form of workshops, seminars, conferences, and in-service training. This will go a long way toward promoting online teaching at the basic education level. As part of the effort to prove ICT skills for educators, learners at the basic education schools should also be supported in using ICT to meet the demand for online education. The Department of Basic Education should develop a strategy that will accommodate all the learners from different socio-economic backgrounds while integrating ICT into the basic education in South Africa. This strategy should address the lopsidedness experienced in distributing ICT equipment and connectivity between the urban and rural areas in South Africa.

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