



The effectiveness of online learning in adult education: A comparative analysis of traditional classroom- based learning and online learning in a South African Rural context

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ABSTRACT

This study critically examines the effectiveness of online learning in adult education through a comparative analysis of traditional classroom-based learning and online learning within rural South African contexts. Grounded in Digital Divide Theory, Social Constructivism, and Adult Learning Theory, the study explores how adult learners and educators experience, negotiate, and evaluate different modes of learning amid persistent structural inequalities affecting rural communities. A qualitative research approach was employed, with data generated through semi-structured interviews involving purposively selected adult learners and educators from selected rural areas in South Africa. The findings reveal that online learning remains constrained by inadequate technological infrastructure, high data costs, digital illiteracy, unstable connectivity, and limited opportunities for interactive engagement. However, participants also acknowledged that online learning provides flexibility, expands access for working adults, and ensures continuity of learning during the COVID-19 pandemic. In contrast, traditional classroom-based learning was perceived to promote immediate feedback, collaborative learning, peer interaction, and stronger learner support systems, although geographical distance and transport-related challenges limited accessibility. The study concludes that the effectiveness of learning is shaped less by the mode of delivery itself and more by contextual realities, learner preparedness, institutional support, and access to resources. The paper recommends the adoption of blended learning models, targeted rural digital infrastructure development, comprehensive digital literacy programmes, and context-responsive policy interventions to strengthen adult education in rural communities. The study contributes to ongoing scholarly debates on equitable, inclusive, and sustainable lifelong learning in developing contexts.

Keywords: Online learning, Adult education, Rural South Africa, Digital divide, Classroom-based learning.

INTRODUCTION

Adult education is a crucial element of South Africa's social and economic development post-apartheid agenda, which has at its core the facilitation of redress, social inclusion, and furtherance of

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lifelong learning.¹ The Post School Education and Training (PSET) system has at its disposal a gamut of formal and informal education opportunities for adults represented by Adult Education and Training (AET) programmes, Community Learning Centres, and Technical and Vocational Education and Training (TVET) colleges.² Despite the policy framework which is intended to open access to education, learners in rural areas who are adults find themselves facing barriers that are quite different from those experienced by their counterparts in urban areas; the barriers are deeply rooted in the history of inequalities, spatial marginalisation, infrastructural deficiencies, and the socioeconomic status of the area.³

South Africa's adult learning sector has, for the most part, depended on classroom-based delivery that inherently has structured pedagogy, instructor-learner interaction in real time, and collaborative learning space. Classroom learning can serve as an effective means of obtaining immediate feedback as well as fostering social learning; nevertheless, the geographical distance, transportation costs, facilities shortage, and the rigidity of the timetables are among the limiting factors for its effectiveness. Rural learners bear the greatest strain of these factors, and this is so because they mostly have to balance their education with work and family responsibilities.⁴ For these reasons, educational administrators have been on the lookout for other means, such as online learning, that would not only be a replacement but also a complement to the traditional classroom learning mode.

Distance and e-learning (ODEL) have freed up the time and space of learners, notably in remote and rural places.⁵ The advantages of online learning that should be most appreciated include i) the flexibility it offers, ii) participation remotely without apprehension of time, and iii) the capacity to reach those desperate for learning whose reasons might be due to their location or time being restrictive. Besides that, going online unveiled and perpetuated, at times, the inequalities of the structure since rural users were the ones who had the most unreliable and slow internet, expensive data, less availability of gadgets, and reduced digital literacy.⁶

The COVID-19 pandemic literally fast-tracked online learning, whereby educators had to be innovative with emergency remote teaching. Notwithstanding the fact that these approaches just about sustained the system, they were, however, lacking in the revelation of the delicate nature of the digital infrastructures as well as the diverse ability or capacity of the adult learners to engage meaningfully with the online modalities. Research undertaken both in South Africa and the Global South at large attests to the fact that, despite the fact that online learning opens up new vistas for one to study anywhere, anytime, it does have the potential of diminishing students' involvement and interaction, as well as the acquisition of higher-order cognitive skills, especially in the absence of proper care.⁷

Considering everything that has been said so far, the present study seeks to investigate the extent to which online learning is effective compared to that of traditional classroom-based learning in rural South African adult education contexts. It examines the lived experiences of the learners as well as the educators, and through these, it uncovers how learning outcomes are influenced by structural, technological, and pedagogical factors. Thus, the study is built around the following research question:

¹ Robert A Rhoads and Melissa L Millora, "Learning in the Global Era: International Perspectives on Globalization and Education," *The Review of Higher Education* 32, no. 4 (2009): 552–54.

² DHET, *Policy on Adult Education and Training in South Africa* (Department of Higher Education and Training, 2013).

³ H. Pillay and R. Erasmus, "Adult Education in South Africa: Historical Legacies and Contemporary Challenges," *South African Journal of Higher Education* 34, no. 3 (2020): 1–18.

⁴ I. Baatjes and V. McKay, "Adult Learning in South Africa: Challenges and Prospects," *South African Journal of Education* 36, no. 2 (2016): 1–10.

⁵ P. Zwane and T. Mudau, "Implementing E-Learning for Adult Learners in Rural South Africa: Opportunities and Challenges," *South African Journal of Education* 44, no. 1 (2024): 1–12.

⁶ Laura Czerniewicz et al., "A Wake-up Call: Equity, Inequality and Covid-19 Emergency Remote Teaching and Learning," *Postdigital Science and Education* 2, no. 3 (2020): 946–67; M. Maphalala and O. Ajani, "Online Learning Readiness among Adult Learners in Rural South Africa," *Education and Information Technologies* 28 (2023): 2301–19; S Duma, M Maphalala, and R Nkosi, "Digital Literacy and Online Learning in Rural South African Adult Education," *International Journal of Educational Development* 102 (2024): 102–15.

⁷ N. Moonasamy and R. Naidoo, "Assessing the Effectiveness of E-Learning in Adult Education in South African Rural Contexts," *International Review of Education* 71 (2025): 165–88; E. M Mulenga and J. M Marbán, "Impact of Online Learning on Adult Education in the Global South," *Education and Information Technologies* 25, no. 3 (2020): 1965–86.

How do the rural adult learners and educators in South Africa experience and hence evaluate the effectiveness of online learning versus traditional classroom-based education?

Through the practical application of theories such as Digital Divide Theory, Social Constructivism, and Adult Learning Theory in combination with empirical data, this investigation unravels the intricate dynamics between the mode of learning, the setting, and the learner's agency. It is hoped that the results of this investigation will be used by policymakers and practitioners to figure out ways of designing/integrating blended learning approaches, developing infrastructure, and uncovering adult education interventions that are in line with the challenges and possibilities existing in rural South Africa and, by extension, other communities in the Global South.

THEORETICAL FRAMEWORK

Digital Divide Theory

Digital Divide Theory offers a perspective that helps to explain inequalities not only in access to digital technologies but also in the skills to use these technologies and the ability to engage effectively in online education.⁸ In South African rural areas, digital inequalities arise due to various factors such as the scarcity of broadband coverage, the irregular electricity supply, the high cost of data, and the lack of access to devices.⁹

Notably, Digital Divide Theory highlights that where technology is not only available, there is no guarantee that the learning process will be effective; besides access to technology, learners need further elements such as digital literacy, supportive school policies, and socio-economic resources to be able to make meaningful use of the technology.¹⁰ This study uses Digital Divide Theory to focus on how the infrastructural and socio-economic disparities of the system affect the ability of adult learners to engage in online education and, in addition, how these disparities can be used pedagogically.

Social Constructivism

Social Constructivism holds that knowledge is an active, socially mediated process which is gained through interaction, collaboration, and dialogue.¹¹ This theoretical standpoint can be very appropriate to adult education because adult learners are considered to have diverse backgrounds and knowledge which they contribute to the learning environment. There are differences between online and classroom-based learning as far as social learning is concerned: classroom-based learning allows learners to immediately get feedback, discuss and work with peers, while online learning limits interaction, hence less reliance on the construction of shared understanding.¹² By adopting Social Constructivism to this paper, the author will find ways in which the presence or absence of social interaction affects engagement, understanding, and learner confidence in both online and face-to-face modes of learning.

Adult Learning Theory (Andragogy)

Adult Learning Theory, or andragogy, refers to the assumption that adults are self-directed learners who use their previous experience, are motivated more by the value of the learning to their life, and prefer to learn what will be most helpful to their immediate needs and goals.¹³ This is a useful theory in that it helps to see how adult learners are continuously balancing the demands of their work, family, and education. It also helps in the assessment of the two modes of learning (online and face-to-face) by highlighting the significance of flexibility, learner autonomy, and linking learning to practical real-world scenarios.

⁸ Jan A G M Van Dijk, *The Deepening Divide: Inequality in the Information Society* (SAGE Publications, Inc., 2005).

⁹ Duma, Maphalala, and Nkosi, "Digital Literacy and Online Learning in Rural South African Adult Education."

¹⁰ N. Selwyn, *Education and Technology: Key Issues and Debates*, 2nd ed. (Bloomsbury, 2016).

¹¹ Lev S Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*, vol. 86 (Harvard university press, 1978).

¹² Anna Ya Ni, "Comparing the Effectiveness of Classroom and Online Learning: Teaching Research Methods," *Journal of Public Affairs Education* 19, no. 2 (2013): 199–215.

¹³ Malcolm Shepherd Knowles, *The Modern Practice of Adult Education: From Pedagogy to Andragogy*, vol. 2 (Cambridge Adult Education Englewood Cliffs, NJ, 1980); Papia Bawa, "Retention in Online Courses: Exploring Issues and Solutions—A Literature Review," *Sage Open* 6, no. 1 (2016): 2158244015621777.

In rural South African contexts, how adult learners experience education depends largely on their own circumstances and the kind of support they receive from the institution. Supports in this case encompass not only digital literacy training but also availability of resources and opportunities for meaningful engagement. By incorporating Adult Learning Theory, this research analyses how well online and classroom-based modalities respond to the self-directed and experiential needs of adult learners.

Integrated Framework for Analysis

The combination of Digital Divide Theory, Social Constructivism, and Adult Learning Theory results in a complete theoretical framework to study the effectiveness of the learning conditions for adult education in rural areas. Digital Divide Theory addresses social and infrastructural problems, Social Constructivism dwells on the social and cooperative elements of learning, while Adult Learning Theory sheds light on learner characteristics, motives and contextual needs. The set of these three theories makes it possible to perform an in-depth analysis of the technological, pedagogical and socio-economic factors interacting to produce the behaviour, experiences, and learning outcomes of adult learners in both online and classroom-based environments.

LITERATURE REVIEW

Online Learning in South Africa

Online learning has increasingly become a major driver for extending the reach of adult education in South Africa, especially to areas that are remote and rural. Studies show that digital platforms significantly enhance the flexibility factor, thus making it possible for adult learners to juggle between their educational pursuits and the demands of their work and family.¹⁴ The advent of online learning in the South African scene is generally uneven due to the persistently faced problems of infrastructural breakdown, lack of adequate teacher training, and the uneven distribution of skills in technology among learners.¹⁵ The use of Open Distance and e-Learning (ODEL) platforms has resulted in a widened reach, but learners' experiences depend largely on their readiness to use technology and the kind of support they get from the institution.¹⁶

Digital Inequality and Its Implications

Digital inequality involves a wider range of issues than just access to devices and connectivity; it includes the knowledge, skills, and socio-economic capital that facilitate the effective use of these resources.¹⁷ In rural South Africa, the already existing inequalities in broadband coverage, stability of electricity, and availability of devices worsen the differences in education.¹⁸ Studies have found that an adult learner with low digital literacy is most likely to struggle with using an online platform, e. g., they may not know how to participate in a video discussion or submit assignments, which may demotivate them, eventually resulting in dropout.¹⁹

Global South Perspectives on Adult Online Learning

The frustrations that are faced in South Africa are equally experienced and documented in the works of researchers from other Global South countries. For example, sub-Saharan Africa, India, and Latin America share common features of structural and socio-cultural barriers such as the lack of access

¹⁴ Czerniewicz et al., "A Wake-up Call: Equity, Inequality and Covid-19 Emergency Remote Teaching and Learning"; Maphalala and Ajani, "Online Learning Readiness among Adult Learners in Rural South Africa"; Duma, Maphalala, and Nkosi, "Digital Literacy and Online Learning in Rural South African Adult Education."

¹⁵ Moonasamy and Naidoo, "Assessing the Effectiveness of E-Learning in Adult Education in South African Rural Contexts"; Mulenga and Marbán, "Impact of Online Learning on Adult Education in the Global South."

¹⁶ Zwane and Mudau, "Implementing E-Learning for Adult Learners in Rural South Africa: Opportunities and Challenges."

¹⁷ Van Dijk, *The Deepening Divide: Inequality in the Information Society*; Selwyn, *Education and Technology: Key Issues and Debates*.

¹⁸ Duma, Maphalala, and Nkosi, "Digital Literacy and Online Learning in Rural South African Adult Education"; H Pillay and R Erasmus, "Adult Education in South Africa: Historical Legacies and Contemporary Challenges," *South African Journal of Higher Education* 34, no. 3 (2020): 1–18.

¹⁹ Maphalala and Ajani, "Online Learning Readiness among Adult Learners in Rural South Africa"; Moonasamy and Naidoo, "Assessing the Effectiveness of E-Learning in Adult Education in South African Rural Contexts."

to technological devices, poor digital skills, and pressure brought about by the socio-economic situation.²⁰ Also, a cross-country study shows that if online education models transplanted from developed countries ignore the local socio-cultural living conditions and infrastructural availability, they are bound to fail. Therefore, to make online adult education programs effective and fair, we need services that are context-sensitive in terms of instructional design, community participation, and support systems.²¹

Traditional Classroom-Based Adult Education

Classroom-based adult education still has the upper hand, especially in instances where social learning is the key; for example, when it is about receiving immediate feedback and support from the instructor or when the instructor structures the learning activities.²² Adult learners in the countryside mostly appreciate the face-to-face learning setting and the opportunity it offers for peer support and mentorship. The harsh reality, however, is that their participation and engagement are limited due to factors such as travel time, transport costs, inflexible schedules, and inadequate infrastructure.²³ It is argued in the literature that whereas face-to-face learning is pedagogically sound, the problems of its accessibility call for the use of complementary ways to achieve equity and inclusivity in rural adult education.

Blended Learning and Hybrid Modalities

Blended learning, which integrates online and classroom-based learning methods, continues to be proposed as a way forward that turns the weaknesses of each one into strengths.²⁴ Research points to the fact that blended methods can use the flexibility and accessibility offered by the online mode while still preserving the elements of interaction and collaboration in the classroom-based mode. Besides, blended learning enables teachers to offer different types of tasks or activities to cater for the individual needs of learners having varied capabilities and levels of knowledge, and at the same time promote social interaction and peer learning. The implementation of blended learning approaches in South Africa's rural areas calls for deliberate policy focus, infrastructure upgrading, and continuous digital literacy skills development to provide fair and meaningful learning experiences for all.

Policy and Institutional Context

Policy documents from the South African government, such as the DHET's AET and TVET guidelines, are clear on the need to expand access to education, promote a culture of lifelong learning, and achieve fairness in education.²⁵ The literature, however, raises a few concerns, such as the glaring discrepancies between the ambitions of the policies and the realities on the ground, especially in the rural areas where there is hardly any infrastructure and resources to provide for the execution of the policies. Studies suggest the desirability of woven plans that integrate technology, pedagogy, and sociocultural factors to improve the effectiveness of adult learning, especially among the disadvantaged rural population. It is also recommended that policy-driven blended learning projects be supported with strong monitoring and evaluation frameworks so that rural adult learners may have access to quality education that is flexible and socially engaging at the same time.

²⁰ Mulenga and Marbán, "Impact of Online Learning on Adult Education in the Global South"; C Janse van Rensburg and B Oguttu, "Challenges of Online Learning in Sub-Saharan Africa: A South African Case Study," *African Journal of Information and Communication* 29 (2022): 1–21; R Heeks and A. V Ospina, "Understanding E-Learning and ICT in the Global South," *Information Technology for Development* 24, no. 1 (2018): 1–16.

²¹ Janse van Rensburg and Oguttu, "Challenges of Online Learning in Sub-Saharan Africa: A South African Case Study"; Czerniewicz et al., "A Wake-up Call: Equity, Inequality and Covid-19 Emergency Remote Teaching and Learning."

²² Baatjes and McKay, "Adult Learning in South Africa: Challenges and Prospects."

²³ Pillay and Erasmus, "Adult Education in South Africa: Historical Legacies and Contemporary Challenges"; DHET, *Policy on Adult Education and Training in South Africa*.

²⁴ Czerniewicz et al., "A Wake-up Call: Equity, Inequality and Covid-19 Emergency Remote Teaching and Learning."

²⁵ DHET, *Policy on Adult Education and Training in South Africa*; Moonasamy and Naidoo, "Assessing the Effectiveness of E-Learning in Adult Education in South African Rural Contexts."

RESEARCH METHODS

Research Design

A qualitative case study was a fitting choice for the research as it sought to examine the experiences and perceptions of educators and adult learners at a level close to the real situation in the case of rural South Africa.²⁶ Case study approaches are geared toward providing such detailed information about the context, and it is through such details that the researcher can bring out the facets of the effectiveness of learning as impacted by the socio-economic and infrastructural variables of the environment.

Population and Sampling

The study population comprised adult learners and educators drawn from selected rural Adult Education and Training Centres and Technical and Vocational Education and Training Colleges across three South African provinces. The provinces were purposively selected because they represent rural communities characterised by varying levels of digital infrastructure, socioeconomic inequality, and access to adult education opportunities, thereby enabling a broader comparative understanding of online and classroom-based learning experiences within rural contexts.

Purposive and criterion-based sampling techniques were employed to identify information-rich participants with direct experience in both online and traditional classroom-based learning environments.²⁷ Criterion-based sampling ensured that only participants who had actively engaged with both learning modalities were included in the study, thereby enhancing the relevance and credibility of the data generated.

The sample consisted of 25 adult learners between the ages of 25 and 55 years and 10 adult education educators. Participants were selected from diverse socioeconomic and educational backgrounds to ensure variation in experiences related to gender, prior educational attainment, employment status, geographical location, and levels of digital literacy. The sample size was considered adequate because it enabled an in-depth exploration of participants' lived experiences and perspectives, while data saturation was reached during the interview process when no substantially new themes emerged.

Data Collection

Through semi-structured interviews, the researchers collected a wide variety of experiences, which were

as detailed as possible, from the participants. Where possible, face-to-face interviews were preferred, and when the participants had to travel, interviews were conducted through Zoom or WhatsApp video calls.²⁸ To make sure that every interview covered the same subject matter, an interview guide was utilized; the subjects that were discussed included access to education, technological difficulties, learning preferences, ways of engaging, and the perceived effectiveness. Additionally, the interviewers tried to note gestures and emotions of participants and situational factors during face-to-face interviews.

Data Analysis

The recorded interviews were first transcribed and then examined for key points by applying Braun and Clarke's six-step thematic analysis method.²⁹ The researchers began with open coding followed by axial and selective coding to search for themes through several iterations. To sort and arrange the data, they employed NVivo software, which also advanced the reliability and auditability of the coding

²⁶ J. W. Creswell and C. N. Poth, *Qualitative Inquiry and Research Design: Choosing among Five Approaches (4th Ed.)* (Sage, 2018); Robert K. Yin, *Case Study Research and Applications*, 6th ed. (Los Angeles: Sage, 2018).

²⁷ Lawrence A Palinkas et al., "Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research," *Administration and Policy in Mental Health and Mental Health Services Research* 42, no. 5 (2015): 533–44.

²⁸ Raymond Opendakker, "Advantages and Disadvantages of Four Interview Techniques in Qualitative Research," in *Forum: Qualitative Social Research*, vol. 7 (Freie Universität Berlin, 2006).

²⁹ Virginia Braun and Victoria Clarke, "Using Thematic Analysis in Psychology," *Qualitative Research in Psychology* 3, no. 2 (2006): 77–101.

process. The researchers made the effort to further verify the interpretative trustworthiness of their work by cross-checking identified themes with the observation notes as well as the field memos.³⁰

Trustworthiness and Ethical Considerations

The qualities considered essential to trustworthiness were addressed by methods such as member checking, peer debriefing, prolonged participant engagement, and detailed documentation of the research process.³¹ Turfloop Research Ethics Committee gave the researchers permission to carry out the research. Each participant consented, was given assurance about confidentiality and anonymity, and was told about the right to withdraw at any time he or she wished. To protect the identities of participants, pseudonyms were used for all of them, and the data were stored in password-protected files.

Methodological Justification

Qualitative methodology was suitable in that it allowed not only access to the personal experiences but also the implicit attitudes of adult learners and educators.³² Probing could be done as part of the flexibility afforded by semi-structured interviews, and on the other hand, the case study approach contributed to the contextual richness. This method is consistent with the purpose of the study, which is to assess the two modes of learning in relation to the highly complex socio-economic and infrastructural issues of rural South Africa and is thus able to produce rich, credible and contextually grounded findings.³³

PRESENTATION OF FINDINGS AND DISCUSSION

Access and Infrastructure

The pivotal role of infrastructure in learning experiences was a common theme that ran through the participants' interviews. Numerous rural learners shared their experiences of how weak internet signals and irregular power cuts made it almost impossible for them to use online learning platforms. One of the participants said,

"There are days when I can't even access the learning portal as the internet keeps dropping. I get a feeling of being left out compared to those living in town."

Another one said,

"Even if I have data, the price of it is so high that I cannot complete my homework on time."

These statements are a clear reflection of the digital divide that still exists and how it practically affects the learners' results.³⁴ Learning through the traditional method has somehow eased these access problems. The participants were very much in favour of regular attendance and fixed timetables; one of the learners said,

"At least only with the classroom, I don't need the internet or data, and the teacher is always available to answer my questions. "

Teachers also believed having the students physically in class helped to keep track of both attendance and learners' participation more effectively.

Flexibility and Learner Autonomy

³⁰ Matthew B Miles, A Michael Huberman, and Johnny Saldaña, "Qualitative Data Analysis: A Methods Sourcebook, 3/E.," 2013.

³¹ Yvonna S. Lincoln and Egon G. Guba, *Naturalistic Inquiry* (Beverly Hills, CA: Sage, 1985).

³² John W Creswell and Cheryl N Poth, *Qualitative Inquiry and Research Design: Choosing among Five Approaches* (Sage publications, 2016).

³³ Palinkas et al., "Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research."

³⁴ Van Dijk, *The Deepening Divide: Inequality in the Information Society*; Duma, Maphalala, and Nkosi, "Digital Literacy and Online Learning in Rural South African Adult Education."

Online learning was considered almost unanimously as a mode that offers flexibility, which facilitates adult learners in meeting the demands of their work and family life. A learner commented,

"I can access the learning material after I have come from work, which is not feasible in the case of classroom sessions. My learning can be done independently. "

Teachers admitted that such independence in the learners could increase self-directed learning; however, they warned that some learners find it very hard to study without direct supervision or a structured timetable.

"Online learning management not only requires self-discipline, but also many students lack this ability, and they will definitely need regular check-ins. "

This is in accordance with the Andragogy theory, which lays stress on self-directed learning.³⁵

Social Interaction and Engagement

Social Constructivist theories were apparent in the participants' references to engagement. According to them, peer interaction and joint work on the problems were more common in the classroom setting. A learner said,

"The greatest impact comes from our debates. In the classroom, the atmosphere where you can ask questions is more comfortable, and you receive instant feedback. "

On the other hand, the online learners conceded that they sometimes felt secluded and did not get the interaction that they wanted, so:

"Working online feels like self-studying. Occasionally I get my questions answered after days have elapsed. "

Teachers have confirmed such difficulties, and therefore they have suggested that there should be well-organised online discussion sessions and collection of opinions at once through online platforms to keep up the learner's engagement.³⁶

Digital Literacy and Technical Competence

Digital knowledge or skills were reported as the main component of successful online learning by many participants. A learner confessed,

"I am not good at getting around the platform to upload my work. I get very frustrated, and eventually I quit too often. "

Teachers have recognized that learners' different degrees of digital understanding call for extra instructional training and technical help. Such results emphasize the symbiotic relationship between preparedness in technology and the effectiveness of learning, thus strengthening the insight of the Digital Divide Theory.³⁷

Policy Alignment and Institutional Support

Several of the respondents were keen to point to the influence of policy and institutional backing in shaping features connected to learning outcomes. One of the teachers remarked,

"Our curriculum follows DHET standards; however, without learners' devices and data, policy alone cannot be a guarantee of success. "

Learners believed that the provision of data at a subsidized rate, community learning centers, and a mix of instructional approaches could be redirected towards attainment. Theory-driven

³⁵ Knowles, *The Modern Practice of Adult Education: From Pedagogy to Andragogy*; Bawa, "Retention in Online Courses: Exploring Issues and Solutions—A Literature Review."

³⁶ Ni, "Comparing the Effectiveness of Classroom and Online Learning: Teaching Research Methods"; Czerniewicz et al., "A Wake-up Call: Equity, Inequality and Covid-19 Emergency Remote Teaching and Learning."

³⁷ Selwyn, *Education and Technology: Key Issues and Debates*; Duma, Maphalala, and Nkosi, "Digital Literacy and Online Learning in Rural South African Adult Education."

policies and infrastructure development have been advocated in the literature, which resonates with these findings.³⁸

Blended Learning as an Optimal Solution

One of the features that kept coming back was people's views on blended learning, i.e., combining and benefiting from the best of two worlds. The learners pointed out that online learning's flexibility plus the face-to-face interaction could improve their learning outcomes:

"I think the best of both worlds is when you do online assignments and still meet your teacher and classmates. "

The teachers also concurred that the use of hybrid methods allows them to present varied instruction, hence meet the different needs of individual learners and also give the learners a chance to participate actively; thus, blended learning may nicely suit the rural adult education contexts.³⁹

DISCUSSION

The data highlighted that learning success depends on an array of interconnected factors such as infrastructure, learner autonomy, social involvement, level of digital literacy, and institutional backing. Online learning makes flexible options easily available that adult learners can take advantage of; however, its boundaries and challenges rest mostly on technical, social, and economic grounds, while classroom learning promotes learner engagement and peer support but is not that easily accessible to working adults. The participants pointed out that each mode has its limitations, and neither of them can sufficiently handle the multifaceted educational situations of adults in the rural areas. Therefore, their findings confirm the essential role of the blended learning approach that combines technology, pedagogy, and social factors. These findings support the earlier literature on adult education in the Global South by underscoring the relevance of sensitive interventions to the context and focused on equity.⁴⁰

RECOMMENDATIONS

A series of recommendations can be drawn from the study to help raise the level of adult education in the rural parts of South Africa. The first thing that needs to be done is for policymakers and the education fraternity to put digital infrastructure development and expansion at the top of their priorities; hence, factors such as reliable broadband connectivity, electricity, and affordable/accessible devices should be considered. This was necessary as, after all, this would bridge the digital divide and, at the same time, learners can engage meaningfully with online platforms. Apart from this, digital literacy programmes and technical support should be available and accessible to both educators and learners so that they get to know and master how to use online tools effectively.

Continuing with the above thought, it would be great to integrate blended learning formally into curricula to bring together online learning flexibility, on the one hand, and the social and pedagogical merits of face-to-face interaction, on the other hand, and thus address both access and engagement issues. Besides that, the local community can create a learning environment and come up with mutual support systems whereby one of the baseline features of learning would be the exchange of knowledge with peers, which in turn would help to lessen the feeling of isolation that is normally associated with online modes. Finally, continuous evaluation, monitoring, and compliance with the policy frameworks of DHET, AET, and TVET should be conducted to remove barriers, ensuring the relevance

³⁸ DHET, *Policy on Adult Education and Training in South Africa*; Maphalala and Ajani, "Online Learning Readiness among Adult Learners in Rural South Africa."

³⁹ Czerniewicz et al., "A Wake-up Call: Equity, Inequality and Covid-19 Emergency Remote Teaching and Learning"; Mulenga and Marbán, "Impact of Online Learning on Adult Education in the Global South"; C. Janse van Rensburg and B. Oguttu, "Challenges of Online Learning in Sub-Saharan Africa: A South African Case Study," *African Journal of Information and Communication* 29 (2022): 1–21.

⁴⁰ Maphalala and Ajani, "Online Learning Readiness among Adult Learners in Rural South Africa"; Moonasamy and Naidoo, "Assessing the Effectiveness of E-Learning in Adult Education in South African Rural Contexts"; Janse van Rensburg and Oguttu, "Challenges of Online Learning in Sub-Saharan Africa: A South African Case Study."

of the content, and, most importantly, providing meaningful adult education experiences to the diverse rural learners. The above-mentioned five aspects of carrying out a successful intervention agree that the infrastructural, pedagogical, technological, and socio-economic dimensions should co-exist and be dealt with properly to have adult learning optimized in rural South Africa.

CONCLUSION

This study set out to examine the effectiveness of online learning in adult education through a comparative analysis of online and traditional classroom-based learning within rural South African contexts. The paper sought to understand how adult learners and educators experience these different modes of learning amid persistent social, economic, and technological inequalities that continue to shape rural education. Guided by Digital Divide Theory, Social Constructivism, and Adult Learning Theory, the study demonstrated that although online learning has emerged as an important educational alternative capable of expanding access, flexibility, and continuity of learning, especially during the COVID-19 pandemic, its implementation in rural South Africa remains severely constrained by poor digital infrastructure, high data costs, unstable connectivity, limited access to technological devices, and low levels of digital literacy among adult learners. At the same time, the findings revealed that traditional classroom-based learning continues to provide valuable opportunities for collaborative engagement, immediate feedback, social interaction, and structured pedagogical support, despite challenges associated with transport, geographical isolation, inflexible schedules, and broader socioeconomic hardships.

The study therefore concludes that neither online learning nor classroom-based learning alone can adequately respond to the diverse and complex educational realities of rural adult learners. Rather, the effectiveness of adult education depends largely on contextual conditions, learner readiness, institutional support, and equitable access to educational resources. Consequently, the paper argues that blended learning offers the most practical, inclusive, and contextually appropriate pathway for strengthening adult education in rural communities because it combines the accessibility and flexibility of online learning with the interpersonal and pedagogical strengths of face-to-face teaching. Ultimately, the study's final position is that meaningful transformation in rural adult education requires sustained investment in digital infrastructure, affordable internet access, educator training, digital literacy development, and context-responsive educational policies that address the lived realities of rural populations. Without deliberate and targeted interventions aimed at reducing structural inequalities, the promise of technology-enhanced adult education in rural South Africa will remain limited and unevenly distributed.

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