

The role of early childhood development and education (ECDE) in supporting learning and well-being in rural early childhood and primary schools in South Africa

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ABSTRACT

This paper examines how early childhood and primary schools can be constructed as enabling spaces to improve the learning and well-being of children aged six to nine who live in multidimensionally poor, low-resourced rural communities in South Africa. Quality early childhood development and education (ECDE) can be the catalyst to break the cycle of poverty for many young children in rural areas. A systematic review was conducted based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses flowchart. A comprehensive search strategy using electronic databases and hand searches systematically whittled down an initial database of 30,080 articles to 16 articles for this study. A thematic analysis identified enablers and constraints for supporting children's learning and well-being across three themes: (1) infrastructure, educational resources and child agency (2) initial teacher education (ITE) and (3) socioeconomic status. The findings and discussion highlight child agency as an enabler to learning and well-being and the structural and pedagogical challenges of implementing ITE curricula specific to rural educational contexts.

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Introduction

The sustainable development goals (SDGs) have raised the importance of tackling educational inequality as exemplified through SDG 4 Quality Education (United Nations [UN] 2015). Education, and early years education in particular, is a catalyst for addressing important developmental challenges for the most marginalised in society and can directly impact socioeconomic development and the eradication of multidimensional aspects of poverty (UNDP 2020). Longitudinal studies have shown that evidenced-informed education, health, and nutrition interventions during early childhood have a

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potential associative effect on later adult productivity and well-being (Britto 2015; Gertler et al. 2014; 2020).

Globally, tackling educational inequality and multidimensional poverty is a key agenda for many governments in concentrating their efforts on supporting the needs of the most disadvantaged and marginalised communities. In low-resourced settings where the poverty rate is established at \$1.90 per day (UNDP 2020), an estimated 43% of children under five years live in such extreme poverty that their physical growth and consequent holistic development are stunted (UNICEF 2018). According to the Multiple Poverty Index (MPI), 84.2% of multidimensionally poor people live in rural areas, with sub-Saharan Africa having the highest population who are multidimensionally poor in rural areas (UNDP 2020). In South Africa, nearly a third (29.4%) of rural areas are likely to be imperilled by poverty, with access to limited or underdeveloped infrastructure and essential services such as health and education (UNDP 2020). Thus, rurality adds to the complexity of multidimensional deprivations, vulnerabilities, and inequalities. This paper positions the importance of ECDE in this wider research and socioeconomic context. In low- and middle-income countries, we argue that implementing effective ECDE programmes to enhance children's overall educational and well-being outcomes is all the more pertinent.

Positioning the study in the overarching research project

This paper is derived from a larger study which aims to support the learning and well-being of young children living in poor rural communities in South Africa. The project is jointly led by the Centre for the Study of Resilience (University of Pretoria, South Africa), the Centre for Leadership in Learning (University College London, United Kingdom) at IOE, UCL's Faculty of Education and Society, and supported by UCL Institute for Global Health and London South Bank University, and funded by the UK Economic and Social Research Council (ESRC).

The overall study is interdisciplinary and transcends traditional disciplinary boundaries by integrating education, social and health sciences knowledge systems to understand children in their context. The collective strengths of this project are that it not only draws on various fields of specialisation (namely education, health, psychology, sociology, and health economics) but also directly addresses the SDGs. The study team aims to investigate how early childhood and primary schools can be organised as enabling spaces to improve learning and the well-being of South African children in rural areas. The study focuses on children aged five to ten who were in Grade R, Grade 1, Grade 2 and Grade 3, including mixed-aged children in one grade and multi-graded classes. In South Africa, this phase of education is referred to as the foundation phase (DBE 2017).

The study involved a systematic review in collating the relevant literature to better understand the evidence base of the nature of support for the learning and well-being of children in marginalised societies in South Africa. The review findings are important for answering the overarching research question: *To what extent can ECDE and primary schools in rural areas in South Africa serve as enabling spaces to improve learning and well-being for young learners despite the challenges of rurality and poverty?*

Methodology

A systematic review was conducted based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flowchart. The study protocol was preregistered on the International Prospective Register of Systematic Reviews (PROSPERO) to permit access to interested scholars on how items such as peer-reviewed empirical and review articles were sampled (Basson et al. 2020) to ensure transparency. The systematic review adhered to a standardised protocol using a comprehensive search strategy using electronic and hand searches based on inclusion and exclusion selection criteria to minimise bias and ensure the reported findings are based on reliable and relevant studies (Cooper et al. 2018). The PRISMA extension also included an initial scoping review to pre-determine the scale of the defined topic.

Inclusion and exclusion criteria

A set of inclusion and exclusion criteria was developed to minimise ambiguity, determine the limits for the evidence synthesis, and lessen the likelihood of poor reproducibility.

Electronic database searches

The following nine databases were searched for published empirical research and intervention studies: EBSCO (ERIC), EBSCO (MEDLINE), EBSCO (Teacher Reference Center), EBSCO (APA Psychinfo), EBSCO (APA PsychArticles), ProQuest (Education Collection), Scielo Citation Index, Scopus and Web of Science (Core Collection). The first set of search terms is presented in Table 1.

A second set of search terms was applied to ensure a comprehensive search. In the second set, the words ‘indigenous knowledge’ OR partnership* OR ecological* OR community OR justice OR capabilit* replaced the search terms in the first line of Table 1. Line 1 (printed in bold) of both sets of search terms was applied to the title, abstract, and topic of the items in the databases. The rest of the lines were searched for in the ‘all’ domain.

After removing duplicates, the initial database searches resulted in 30,080 published empirical primary research, intervention studies, and reviews. The database searches were followed by a manual screening of titles, abstracts, and full texts,

Table 1. Search terms of set 1.

| |
|---|
| sustain* or ‘sustainable development’ or ‘human development’ or resilien* |
| AND |
| ‘primary school’ OR ‘foundation stage’ OR ‘foundation phase’ OR ‘elementary school’ OR ‘early education’ OR ‘early childhood*’ |
| AND |
| Health* OR ‘quality of life’ OR ‘well-being’ OR ‘child development’ OR ‘socio-emotion*’ OR ‘psychosocial’ OR academic* OR learn* OR ‘psycho-education’ OR educat* |
| AND |
| Intervention* OR empirical* OR training OR program* OR workshop* OR policy OR classroom OR ‘school-based’ OR rural* |
| AND |
| Qualitative OR ethnography OR phenomenology OR narrative OR grounded OR ‘case study’ OR creative OR art OR participatory |

according to the inclusion and exclusion criteria. The review process was subjected to quality assurance audits that included checking for inter-rater agreement. The systematic review process required regular meetings with a cross-disciplinary team of experts to ensure consistency, conformity to inclusion and exclusion criteria, and resolution of discrepancies. Thirty published empirical primary research and intervention studies remained after the screening according to the inclusion and exclusion criteria.

Hand searchers and reference lists included in the database searches

In addition to the 30 research and intervention studies found in the specified databases, 1,016 published review articles were also identified during the manual screening. A hand search was undertaken using the inclusion and exclusion criteria (Table 2 above) which entailed scoping the reference list or bibliography of each of the 1,016 published review articles and 30 identified sources to ensure that key relevant studies were included. From the hand searches, 147 new articles were identified for screening. The titles, abstracts and, subsequently, full texts of the new articles were then screened using the same screening procedure and method to resolve any discrepancies. This exercise resulted in the retrieval of 12 more items.

Table 2. Inclusion and exclusion criteria.

| Categories | Inclusion criteria | Exclusion criteria |
|--|---|--|
| Region | Developing, low, and middle-income countries, based on the Development Assistance Committee (DAC) List of Official Development Assistance (ODA) Recipients for 2018–2020 | Countries outside the DAC list. |
| Areas of Focus | Rurality, poverty, socioeconomic disadvantage; at-risk/vulnerability | Urban, city, metropolitan, residential, suburban, peri-urban |
| Settings | School- or school-community-based and socioeconomic deprivation or rural community-based | Studies that are not school- or school-community based |
| Design | Qualitative designs to improve educational practice, school and learning outcomes, and/or health outcomes, which relate to schools, school communities, teachers, school leaders, and learners. Only mixed method studies with a predominantly qualitative focus. | Studies with no qualitative outcome measures. |
| Type of Study | Published empirical primary research and intervention studies in peer-reviewed journals; any reviews. | Non-empirical studies and unpublished grey literature |
| Research and Intervention Focus | Improving learning and well-being including mental health outcomes | Studies focusing on other outcomes, such as specific diseases, medically related matters, learning disabilities and special needs schools. |
| Education Phase | Early years of formal schooling in primary schools, namely Grade R, Grade 1, Grade 2 and Grade 3. | Any school phase outside the early years of formal schooling. |
| Learner Population | Early years and primary school learners aged 5–10 years | School learners younger than 5 and older than 10 years |
| School and School-community Population | Teachers, school leaders, families/carers, learners, principals, staff | Other community stakeholders and student teachers |
| Publication Range Language | 2000 – July 2020 English publications | Studies before 2000 and after July 2020 Publications in languages other than English |

Synthesising categories to select studies

In total, 42 items adhered to the inclusion criteria – 30 from the database searches and 12 from the hand searches. Hereafter, all 42 published research articles were reviewed against the inclusion and exclusion criteria, of which 16 items were identified. The key characteristics of all 16 selected articles are presented in **Appendix A**.

Data extraction, coding, and management

A Mixed Methods Assessment Tool (MMAT) was applied to determine the quality of the selected records. All records were accepted based on the results of the MMAT. A codebook was designed and uploaded to Qualtrics to extract data from the records (Cooper et al. 2018; Fleeman and Dundar 2017). The Template for Intervention Description and Replication (TIDieR) checklist and guide (Hoffmann et al. 2014) was applied to the intervention studies specifically to ascertain that the reporting of the intervention studies was of high quality. A framework synthesis was adopted to assist in extracting and coding the records by using an a priori framework (Barnett-Page and Thomas 2009; Brunton et al. 2006). The initial framework was developed by the same cross-disciplinary team of experts based on the project's logic model (Figure 1). The team extracted and coded data deductively based on the a priori framework, further developed inductively as new sub-themes emerged during coding. This team consisted of eight researchers who worked on the extraction and coding, checking for interrater agreement. To enhance validity, an independent coder verified the codes to ensure a high intercoder agreement.

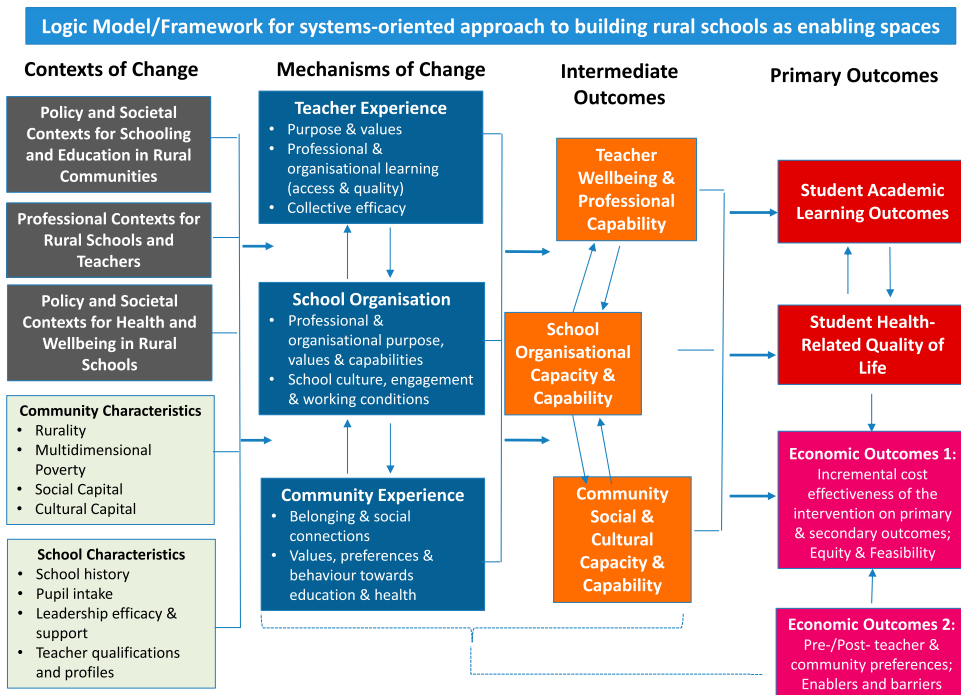


Figure 1. Logic model as meaning-making framework.

Ensuring validity and reliability

The PRISMA flow chart provided guidance in maintaining validity and reliability. Only including peer-reviewed articles raised validity by ensuring selected articles have already passed the scrutiny of academic peers in terms of quality. Searching nine databases using the selection criteria together with MMAT and the TIDieR checklist and guide minimised selection bias whilst strengthening rigour and relevancy. Furthermore, quality assurance audits, checking for inter-rater agreement, consulting a team of experts and augmenting the electronic search with hand searches contributed to the validity of the review and analysis. A codebook was applied to enhance the quality of data extraction and coding.

Ethical considerations

All the articles reviewed adhered to basic research ethics where only peer-reviewed, open-access articles were retrieved. The review team also ensured that the ethical principles of research rigour and respecting the intellectual integrity of the published papers and rights of the authors are upheld.

Results

The following three themes were identified based on the thematic analysis of the final 16 published articles. Each theme foregrounds the constraints and enablers that are contributing to the learning and well-being of South African children in rural schools:

Theme 1: infrastructure, educational resources and child agency

Constraints

Infrastructure and educational resources are often depleted or inadequate in rural areas, such as limited access to classrooms, over-crowdedness with 1:50 child–teacher ratios, insufficient classroom furniture, dilapidated buildings, low quality-built environments, inconsistent clean running water and electricity, lack of sanitation and access to food schemes, and reliable and safe transport (Inui 2020; Mgqwashu and Makhathini 2017; Mohangi et al. 2016; Wessels and Wood 2019). Some research raised concerns regarding literacy resources, with a lack of developmentally appropriate learning materials and reading facilities (Blease and Condy 2015; Inui 2020; Mohangi et al. 2016; Nel et al. 2016; Wessels and Wood 2019). Concurrently, those rural schools with reasonably adequate infrastructure are susceptible to vandalism and looting, which exacerbates the detrimental impact on the availability of resources for teaching, learning and learner well-being (Mohangi et al. 2016). Alam (2015) reported that rural families are often beset with limited monetary resources to support their children’s learning and well-being in the family and community (Alam 2015; Mgqwashu and Makhathini 2017; Nel et al. 2016).

Enablers

School policies can facilitate social interactions to develop thinking communities to share knowledge and skills to expand children’s learning environments (e.g. home, school,

community) for development (e.g. emotional, social, cognitive). Bresee et al. (2016) found that children's eagerness to share school experiences at home (e.g. hygiene routines, healthy habits) and strong partnerships between the school, homes, and communities not only enable the reciprocal exchange of knowledge, skills and values but also develop children as mediators of their learning environments (Bresee et al. 2016). Acknowledging the salience of more knowledgeable children in the classrooms can strengthen children's collective educational experience, particularly in multilingual classrooms. Children supporting their peers who are less knowledgeable in language learning, for instance, through the translation and explanation of concepts, help to create a shared peer learning experience for all (Rahim and Chun 2017). Acknowledging children's role as active learners to support and help develop each other's learning and sense of well-being emphasises the value and potential of child agency, with children as active contributors across learning environments.

Theme 2: initial teacher education (ITE) and work integrated learning (WIL)

Constraints

Multiple constraints were reported concerning the adequacy of teacher training and in-service teachers at rural schools in the foundation phase. Mohangi et al. (2016) reported inapt knowledge and skills and a trivialised attitude amongst some in-service teachers when utilising valuable learning and teaching support material (LTSM) in the learning environments (e.g. visual media displayed above eye level, locked-away literacy resources, educational toys, and creative material). In-service teachers had limited knowledge of interpreting and applying the national curriculum to support learning (Blease and Condy 2015; Cekiso, Meyiwa, and Mashige 2019; Mohangi et al. 2016; Nel et al. 2016; Ramrathan and Mzimela 2016). Mohangi et al. (2016) reported that some in-service teachers used unsuitable pedagogical approaches for teaching language education, such as reciting stories and limited child-teacher interactions, leading to disengaged and passive learners. The learning environment design rarely catered for language and wellness education that draws on child-centred pedagogies (Mohangi et al. 2016). School grades in rural areas often consist of multi-age, multilingual and multicultural children, requiring teachers to draw on various suitable child-centred pedagogies and LTSM (Inui 2020; Mohangi et al. 2016). Thus, socialising learners into multilingual repertoires and implementing multilingual practices in different contexts require specialist skills. However, the review showed that the rural environment rarely caters to incidental reading and viewing where learners are exposed to print through everyday incidental activities, such as advertisements and food labels, which expose children to text in their day-to-day natural environments, thus missing vital learning opportunities. Researchers also recognise the need for in-service professional teacher development to cater for the needs of learners in multi-grade classrooms in rural areas (Bresee et al. 2016; Mohangi et al. 2016; Ramrathan and Mzimela 2016; Riley 2013). Although learning support is included in ITE, it remains the responsibility of teachers to develop themselves professionally. Ramrathan and Mzimela (2016) reported that teachers from rural schools voiced their concern about not receiving proper practice-oriented workshops offered by the education department. The limited access to professional development

resources compels teachers to rely on more experienced teachers rather than qualified trainers (Mohangi et al. 2016).

Enablers

Most South African institutions offering ITE use English as the language of learning and teaching to accommodate pre-service teachers who cannot be trained in their home language (Cekiso, Meyiwa, and Mashige 2019). In South Africa, higher education institutions offering ITE in early childhood must equip pre-service teachers with the subject- and pedagogical knowledge to educate language in their home language (Department of Higher Education [DHET] 2015). Another enabler raised by Cekiso, Meyiwa, and Mashige (2019) is that in-service teachers support pre-service teachers during work-integrated learning (WIL) in teaching the official languages of South Africa. The Department of Basic Education (DBE) (2022) have invested much time, resources, and funds to develop contextually appropriate LTSM for teachers in all eleven official languages. Thus, providing the South African education sector with multilingual, contextually accurate and culturally inclusive LTSM enables educators to make the curriculum accessible for all children (Cekiso, Meyiwa, and Mashige 2019; Nel et al. 2016). Nel et al. (2016) discussed the spontaneous development of an amalgamated language, consisting of code-switching and mixing of any of the official languages to enable learners to use their social resources to promote literacy understanding. The curriculum is based on the principles of an integrated curriculum (DBE 2015), meaning content areas (languages, mathematics and life skills) are integrated during learning opportunities using real-life and relatable topics (DBE 2015). Rural areas offer teachers opportunities to incorporate real-life situations into their teaching, which have been shown to strengthen children's sense of belonging, learning and well-being (Blease and Condy 2015; Vashishtha and Panda 2019; Webster 2009). The value of collaborations, lesson planning, LTSM, and professional advice can help establish communities of practice where teachers benefit from collective knowledge, skills, and values (Rahim and Chun 2017). Rahim and Chun (2017) and Wessels and Wood (2019) report on the opportunity WIL offers in enriching pre-service student training.

Theme 3: socioeconomic status

Constraints

South Africa's socioeconomic status (SES) in rural areas differs significantly from metropolitan or urban areas. Families in rural areas have limited economic access to resources and their social positioning and can be described as multidimensionally poor (UNDP 2020). The constraints of multidimensional poverty (e.g. isolated geographic settlement, high unemployment rate, parental illiteracy, malnutrition, limited access to technological advances) negatively affect education and the well-being of the community and child (Naidoo and Muthukrishna 2016). Children in rural settlements are most likely to show inconsistent or poor school attendance, which leads to academic constraints, due to reasons such as doing chores, caring for siblings and the distances travelling to school (De Lange et al. 2012). The consequential exposure to disabling factors decreases the likelihood of children completing school, reducing families' capacity to overcome the cycle of multidimensional poverty across generations. Children in high-risk

environments are often deprived of acquiring the foundational skills to succeed academically, namely reading, writing and arithmetic (Bresee et al. 2016; Ndamba, van Wyk, and Sithole 2017).

Enablers

A key enabler for supporting learning and well-being in rural school communities are close-knit family units within the wider community that invest time to sustain and prolong the sense of belonging (e.g. through routines, travelling together, playing, sharing resources, and respect for community leadership) (Alam 2015; De Lange et al. 2012). De Lange et al. (2012) reveal that children growing up in rural areas described their lived experiences as feeling safe and supported. It seems that closely-knit rural communities value education and educators for investing in their knowledge systems that affect their sense of well-being (Alam 2015; Bresee et al. 2016). Community cohesiveness is also highlighted (Mohangi et al. 2016) when volunteers from the community contribute to learning and well-being, such as assisting with reading, writing, arithmetic or computer skills. Community leaders also play a key role in how education is perceived by its members (Alam 2015). These enablers might account for many pre-service students returning to their communities during WIL (Nel et al. 2016).

Discussion

The study showed important issues are raised around the complex challenge of educational inequality (SDG 4), particularly for families and schools in sub-Saharan rural communities with multidimensional poverty. At a macro-level, socioeconomic interventions such as government grants for ECDE are seldom enough to eradicate the effect of multidimensional poverty and educational inequality. In South Africa, material resources and infrastructure could, to some extent, alleviate the structural inequality in rural education (Mohangi et al. 2016). The Department of Basic Education (DBE) has partnered with the Development Bank of Southern Africa (DBSA) to implement the Accelerated Schools Infrastructure Delivery Initiative (ASIDI) to replace inappropriate school structures and provide basic services such as water, sanitation and electricity (DBSA 2023). However, many more classrooms are also needed, as nationally almost 3.2 million children under the age of 5 years still do not have access to any ECDE programme, with poorer attendance being more prevalent in rural areas (Berry, Biersteker, and Rantsi 2021). Alleviating the structural inequality in rural education requires policy and political focus. Politically, the responsibility of ECDE was moved from the Department of Social Development to the DBE (DBE 2021b). This important shift to education may have contributed to an increasing emphasis on the quality of ECDE, especially in rural areas, as the DBE leads in early learning curriculum development, monitoring and teacher training. The full implementation of the newly published National Framework for Rural Education (Rural Education Directorate 2022) also contributes to the importance of access, equity and quality of rural ECDE. The national framework also delineates roles and responsibilities at national, provincial, district and school levels (Rural Education Directorate 2022) regarding addressing infrastructure, teacher recruitment and retention to improve rural ECDE in South Africa. The framework will require time, human resource capacity and funding to effect long-lasting change.

Despite the ongoing progress, an overarching challenge facing rural education is the quality of ITE. Quality ECDE is crucial to facilitate young children's learning and future attainment. Our study found that some teachers perceived their own training as inadequate, stating that their training did not prepare them for dealing with multilingualism, multi-grade classrooms and a lack of LTSM in appropriate languages – a perception confirmed by their heads of department (Cekiso, Meyiwa, and Mashige 2019; Mohangi et al. 2016). Indeed, tertiary institutions should enable student-teachers in ECDE to contextualise the learning content through flexible, modified and adaptive pedagogical approaches, one of which shows children as active learners and how child agency in the early years can shape the lives of children and their communities (Bresee et al. 2016). Bresee et al. (2016) documented child agency in classrooms where child-appropriate pedagogies empowered some children to become more knowledgeable others. In other words, some children can regulate their own learning, co-regulate learning with peers/siblings/others, and translate knowledge, skills and values to peers and other community members (Bresee et al. 2016; Cekiso, Meyiwa, and Mashige 2019; Mohangi et al. 2016; Ramrathan and Mzimela 2016). Child agency as an enabler of quality ECDE in rural areas would benefit from future research, especially to establish the essence of appropriate child agency to prevent child abuse.

Despite the emerging research around adaptive pedagogical approaches, challenges remain in training teachers to deliver effective pedagogies. It seems that at least two aspects of teacher training require reconsideration: the quality of students enrolling and teacher training curricula. Firstly, ECDE practitioners have several entry levels of training. Currently, in South Africa, teachers for learners in Grade R, Grade 1, Grade 2 and Grade 3 (aged 5–10) require an undergraduate university degree. However, the entry requirements for teachers at South African universities are amongst the lowest of all national degrees, raising the question of whether the students enrolled in the degree programmes are suitably qualified for ECDE. Regardless of student quality, Mohangi et al. (2016) reported that some teachers had no additional training after their final school examination in Grade 12. The contrast between the training of many South African teachers and teachers from countries such as in the Global North, which rank amongst the highest reading achievements (Howie et al. 2017; NCEE 2021), suggests that more stringent selection criteria may be required, even for prospective students in ECDE. However, this can be politically contentious and raises an important dilemma. In South Africa, with inequality still rife after nearly three decades of democracy, more stringent selection criteria may perpetuate inequality by barring prospective teachers from disadvantaged areas. The National Rural Education Framework (Rural Education Directorate 2022) has recommended the appointment of education assistants (EAs) to support teachers and learners in numeracy, literacy, reading, arts, sports, culture and administrative tasks. The framework also envisions training the EAs to enter the teaching profession. The envisioned employment of EAs is similar to the Presidential Youth Employment Initiative (PYEI), implemented as the Basic Education Employment Initiative (BEEI), which selects unemployed youth between the ages of 18 and 34 years with a matric certificate as teacher assistants (DBE 2021a), to mitigate the impact of the COVID-19 pandemic on South Africa's economy. Training for various skills is also supplied. Research has shown that with careful selection, training and support, teacher assistants significantly improved foundational literacy and

numeracy in schools where they worked, in comparison to control schools (Ardington 2023), thus paving the way for the career development of EAs.

Secondly, the content of the ITE curricula at the university level could be better contextualised for diverse learning contexts in South Africa and better aligned with the needs of all learning contexts. Rural ECDE teachers mentioned training needs for teaching multilingual, multi-grade classes with limited resources, where the language of learning and teaching may or may not be English. It is equally important for the curricula for teacher training to address these needs through ongoing professional development.

Once teachers are qualified, the recruitment of qualified ECDE teachers for rural schools becomes another challenge. Mgqwashu and Makhathini (2017) reported that rural teachers are often lured to urban areas for convenience, safety, proximity to services, and other opportunities, leaving rural ECDE mainly in the hands of untrained but well-intended and committed individuals. The National Framework for Rural Education (Rural Education Directorate 2022) envisions packages of teacher incentives that include finances, development, career progression, transport, accommodation, recreation and other services. The framework also proposes the establishment of teacher villages, also called *edu-villages* where educators are to be provided with safe accommodation and other amenities and from where they can be employed in several schools (Rural Education Directorate 2022). In rural areas, some villages may effectively utilise the teachers from an *edu-village* as a scarce resource. However, at the same time, the lack of basic services, such as clean water, electricity and reliable transport, will make establishing such villages extremely challenging, requiring not only funding but also intersectoral collaboration. Recruiting and employing ECDE teachers according to a match between the degree they had studied, the prevalent languages in the proposed rural areas, the professional competence of the teachers' own language(s) and rural areas with specific teacher needs, will continue to be difficult to manage. Although the framework makes provision for a carefully constructed financial plan, no specific budget for implementation has been made available yet. This raises questions on the political commitment and will to change the current situation.

A further challenge is that qualified teachers who are employed to deliver ECDE in rural communities require support and ongoing professional development. Research by Wessels and Wood (2019) contended that amidst the demands of multi-grades, multiple languages, multiple cultures, with limited resources in rural ECDE, and the recently added challenge of COVID-19, teacher well-being is likely to decline, thus compromising teaching quality, learning and well-being (Wessels and Wood 2019). Their study implemented cost-free psychology techniques and consequently increased the self-reported well-being of teachers in rural areas. Expanding research on teacher well-being and teaching quality in rural contexts is, therefore, much needed.

The findings from this review have prompted important critical reflections on the delivery of ECDE in rural communities in South Africa. Structural inequalities and socio-economic deprivation remain complex challenges and costly to address. However, the migration of ECDE to the Department of Basic Education and the National Framework for Rural Education is an impetus in bringing about change to improve access, equity and quality in rural education. A vital concern remains the funding for such an encompassing project, as recognised by the National Framework for Rural Education (Rural Education

Directorate 2022). The effects of events such as the COVID-19 pandemic, unprecedented drought, and global financial crisis contributed to limited funds for addressing educational inequality. Yet, the potential of ECDE to address critical developmental challenges for the most marginalised in society and eradicate multidimensional poverty (UNDP 2020) should not be underestimated.

Limitations

Despite the comprehensive systematic review, there were inevitable methodological challenges. The study was essentially a systematic review based on a qualitative design and analysis, with a scarcity of evaluation studies to draw upon (Fox, Grimm, and Caldeira 2016). This was evident in the dearth of intervention studies which could have provided an added dimension to the study's findings (Fox, Grimm, and Caldeira 2016). Secondly, only published peer-reviewed articles were reviewed, and no other genres, such as policies and policy reports, which could have contributed to a broader knowledge of the enablers and constraints of ECDE in rural areas. Thirdly, articles related to special educational needs were excluded from the peer-reviewed articles' selection criteria. As South Africa follows an inclusive education policy (DoE 2001), many learners with special educational needs are in mainstream schools, requiring ECDE teachers to be skilled in screening, identifying, and supporting special educational needs (DBE 2014). Expanding the review to include research in this area may highlight other enablers and constraints, but this remains outside the scope of the study.

Conclusion

This paper presents the findings of a systematic review of how rural, early childhood and primary school settings in South Africa can serve as enabling spaces for children in the foundational years to improve their learning and well-being. The sampled literature was analysed thematically for specific constraints and enablers in delivering quality ECDE and interpreted using the logic model (Figure 1). The study showed that the diversity of South African contexts is influenced by various enablers and constraints associated with specific structural, social and cultural factors operating in the early childhood sector. The diversity and complexity of educational contexts warrant further research on providing quality education in the early years to minimise socioeconomic challenges and multidimensional poverty and promote the attainment of the SDGs. The importance of teacher education and training, addressing the complexities of rurality and multidimensional poverty (e.g. multi-grade classes and multilingual classes), and the role of children as active participants in their own learning, have emerged as unique opportunities for ECDE to support children's learning and well-being, particularly for South African rural communities.

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Appendix A: Key characteristics of included studies.

| Author(s) | Design | Sample Size | Setting | Methods | Outcomes |
|--|-------------|--|---|---|---|
| Alam 2015 | Qualitative | 1 Rural school; 1 Rural town school | Bangladesh, South Asia Income < US\$2 per day | Semi-structured interviews | No relationship, support, cooperation, or involvement from the community with the school to achieve quality education and well-being. |
| Blease and Condy 2015 | Qualitative | 2 Schools 2 Teachers | Rural multi-grade primary school, Western Cape, South Africa | Class observations Interviews with the teachers | Learners in rural multi- grade classes can receive quality education, depending on the teachers. Lack of school resources (e.g. stationary) and learner resources (e.g. clothes and food) compromised learning and teaching. |
| Bresee et al. 2016 | Qualitative | 5 primary schools 40 boys 40 girls 39 female guardians | Lundazi District, Eastern Province, Zambia | Focus group discussions | Children may serve as effective change agents in their households. Female caregivers were mostly receptive to the children's messages. |
| Cekiso, Meyiwa, and Mashige 2019 | Qualitative | 9 Foundation phase teachers 3 Rural schools | Eastern Cape, South Africa | Individual semi- structured interviews | Teacher training institutions should offer appropriate and adequate professional training to foundation phase teachers to educate in the mother tongue. |
| De Lange et al. 2012 | Qualitative | 16 Foundation Phase learners 1 Farm school | Western Cape, South Africa | The teddy diary protocol | Optimistic experiences of learning and living in rural contexts Interventions should improve the lives of children and their families through enhanced schooling |
| Inui 2020 | Qualitative | 3 rural schools | Pak Ou District, Luang Prabang province, Laos. | Interviews Observations | Preschool helps minority children in particular to progress. |
| Mohangi et al. 2016 | Qualitative | 3 Schools 9 Teachers: 3 Department Heads | Rural South Africa | Semi-structured interviews with teachers and the HOD in each school Questionnaire Classroom observations | Findings included challenges regarding infrastructure and support, class pedagogics, and management and support. Poverty, parent unemployment, transport challenges, language issues, and limited training of Grade R teachers posed challenges. |

(Continued)

Continued.

| Author(s) | Design | Sample Size | Setting | Methods | Outcomes |
|-----------------------------------|-------------|--|--|---|---|
| Mgqwashu and Makhathini 2017 | Qualitative | 1 Teacher | Rural KwaZulu-Natal, South Africa | Semi-structured interviews | Explicit teaching of reading increased learner achievement, and improved the confidence of both teachers and learners, despite challenging school and living contexts. |
| Ndamba, van Wyk, and Sithole 2017 | Qualitative | 15 teachers 3 principals 2 school inspectors | Rural Masvingo district, Zimbabwe | Individual interviews for school heads and inspectors Focus group discussions with primary school teachers. | Although the benefits of mother tongue education were mentioned, English was the preferred language based on perceived economic advantages. |
| Nel et al. 2016 | Qualitative | 8 teachers | Rural schools in Mpumalanga and Gauteng, South Africa. | Questionnaire with open-ended questions Individual interviews Departmental Heads Classroom observations. | Teachers have limited knowledge of teaching literacy to Grade R learners. Teachers face several barriers to literacy learning, such as outdated textbooks and teaching literacy to learners who are not proficient in the language of teaching. |
| Rahim and Chun 2017 | Qualitative | 4 English teachers | Rural Malaysia | Audiotaped interview sessions with the teachers Video-taped class observations | Optionist teachers were confident in their teaching. Non-optionist teachers required more support. Six components of an affective literacy framework: learner diversity, engaging pedagogy, meta-cognitive assessment, emotional management, pedagogical resources and positive interaction |
| Ramrathan and Mzimela 2016 | Qualitative | 2 primary schools with multi-grade teaching for Grade R and Grade 1 | Ndwedwe Circuit, KwaZulu-Natal, South Africa | Observations of teaching a home language reading period in a multi-grade classroom Semi-structured interviews | Teachers must adapt their teaching in multi-grade classrooms based on the intersection of their formal, situational, and experiential knowledge. |
| Riley 2013 | Qualitative | 14 Teachers 204 Learners 2 Administrators 1 Government official | Rural Shaanxi Province, China | Written reflections Notes Transcribed videotaped statements | Participants were favourable towards active, child-centred lessons according to the school reform suggestions, which |

(Continued)

Continued.

| Author(s) | Design | Sample Size | Setting | Methods | Outcomes |
|---------------------------|-------------|--------------------------|---|--|--|
| Vashishtha and Panda 2019 | Qualitative | 1 Classroom | Multigraded classroom (learners 7–9 years) in a Digantar school in Rajasthan, India | Classroom observations | included, e.g. constructivism, diversity of activity, innovation, communication, and collaboration. Learning was supported by multi-modal communication, the teacher as a non-expert and exploratory questions. This model created intersubjective spaces which facilitated concept development in children. |
| Webster 2009 | Qualitative | 30 Learners 1 Teacher | Rural Vere, Clarendon, Jamaica | Portraiture which consisted of field notes, interviews, and analyses of learners' artefacts. | When a teacher reads informational text aloud, it improves motivation to read and write, content learning, vocabulary, and comprehension. |
| Wessels and Wood 2019 | Qualitative | 1 School 6 Teachers | Rural primary school in North West Province, South Africa | Field notes, collages, discussions, reflections, presentations | Even in challenging circumstances, teachers can improve their well-being by learning inexpensive positive psychology activities, which enable them to provide quality education. |