




# Assessing the role of Play-Based Sport pedagogies in enhancing cognitive and social skills for Early Childhood Development in Rural Vhembe schools

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## ABSTRACT

This study investigated the role of play-based sport pedagogies in enhancing cognitive and social skills among Early Childhood Development (ECD) learners in resource-scarce rural Vhembe District schools, South Africa, where infrastructure deficits and poverty impede holistic growth. Employing a qualitative multiple case study design, the research targeted 8 experienced ECD practitioners across 8 rural centers, using triangulated data collection over 3 months: semi-structured interviews (n=8, 45 minutes each), document analysis of 24 lesson plans, and nonparticipant observations (24 sessions, 24 hours total) with structured protocols and checklists. Reflexive thematic analysis via ATLAS.ti (version 22.0.7) of 120 transcribed pages and field notes revealed three core themes, showing practitioners' resourceful adaptations of indigenous games like morabaraba with natural materials (e.g., stones), which drove high engagement (mean 4.2/5 Likert score) in 92% of instances; cognitive skills such as sequencing and problem-solving progressed three times faster in 85% of play sessions, while social skills like cooperation and empathy surged in 85% of interactions compared to non-play activities. These findings validate low-cost, culturally relevant pedagogies as effective for rural ECD skill-building, challenging deficit narratives and underscoring their potential for scalability. Recommendations include targeted practitioner training, policy integration into national curricula, and minimal funding for natural-material kits to improve enrollment and equity. By evidencing zero-cost, decolonial interventions in African contexts, this work advances ECD and sports pedagogy scholarship, providing a replicable framework that links indigenous knowledge to developmental outcomes and informs global education models.

**Keywords:** Play-based pedagogies, indigenous games, ECD, rural Vhembe, cognitive skills, social development.

## INTRODUCTION

Early Childhood Development (ECD) is internationally recognised as a cornerstone for cognitive, social, and emotional development, with long-term implications for educational success and social equity. In South Africa, ECD is positioned as a strategic priority for addressing inequality and poverty.<sup>1</sup> Despite

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<sup>1</sup> National Planning Commission, “National Development Plan 2030: Our Future – Make It Work,” The Presidency, 2012, <https://www.gov.za/documents/national-development-plan-2030-our-future-make-it-work>; Department of Basic Education., *Curriculum and Assessment Policy Statement (CAPS)* (Pretoria: Government Printers, 2015).

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this policy emphasis, significant disparities persist between urban and rural ECD provision. Rural districts such as Vhembe in Limpopo Province continue to experience infrastructural shortages, limited learning materials, and inadequate practitioner support, which collectively constrain the implementation of developmentally appropriate pedagogies.<sup>2</sup> These conditions disproportionately affect young children's opportunities to develop foundational cognitive and social skills essential for school readiness.

A key policy and practice challenge lies in the disconnect between national ECD frameworks and the lived realities of rural centres. While South African ECD policies advocate play-based learning, they provide limited operational guidance on how play can be enacted meaningfully in resource-scarce, culturally diverse settings.<sup>3</sup> Consequently, rural ECD practitioners are often expected to meet developmental outcomes using pedagogical models and resources designed for urban contexts. This urban bias contributes to inconsistent implementation of play-based approaches and reinforces deficit narratives that portray rural ECD centres as lacking capacity rather than recognising local innovation and indigenous knowledge systems.<sup>4</sup>

Play-based sport pedagogies, particularly those incorporating indigenous games, offer a contextually relevant and low-cost response to these challenges. Drawing on sociocultural and constructivist perspectives, play is understood as an active, socially mediated process through which children construct knowledge, develop executive functions, and learn to navigate social relationships.<sup>5</sup> Sport-based play further embeds rules, turn-taking, cooperation, and problem-solving within physically engaging activities, thereby supporting the integrated development of cognitive and social competencies.<sup>6</sup> In rural Vhembe, indigenous games such as *morabaraba* are culturally embedded, require minimal resources, and align with communal values, making them particularly suitable for ECD contexts characterised by poverty and limited infrastructure.

Existing research demonstrates that play-based and movement-oriented pedagogies enhance cognitive skills such as attention, sequencing, working memory, and problem-solving, while also fostering social skills, including empathy, cooperation, and conflict resolution.<sup>7</sup> However, much of this evidence is derived from urban or well-resourced environments, limiting its relevance to rural African settings. There is a notable lack of qualitative, practitioner-focused studies that document how play-based sport pedagogies are adapted in rural ECD centres and how these practices simultaneously support cognitive and social development. This gap is especially concerning in the context of post-COVID-19 learning disruptions, where low-cost, resilient pedagogical strategies are urgently needed to support learner engagement and wellbeing in marginalised communities.<sup>8</sup>

Against this backdrop, the aim of this study is to examine the role of play-based sport pedagogies in enhancing cognitive and social skills among Early Childhood Development learners in rural Vhembe schools. To address this aim, the study is guided by the following research questions:

1. How do ECD practitioners in rural Vhembe adapt and implement play-based sport pedagogies using low-cost and indigenous resources?
2. In what ways do play-based sport pedagogies contribute to the development of cognitive skills among ECD learners in rural settings?
3. How does participation in sport-based play foster social skills such as cooperation, empathy, and conflict resolution among ECD learners?

<sup>2</sup> Tsumbedzo Jonas Mathoni, "Experiences of Teachers in the Implementation of a Special School Curriculum and Barriers Learners Face in Vhembe District, Limpopo Province, South Africa: Towards an Intervention Strategy" (University of Limpopo, 2024).

<sup>3</sup> Department of Basic Education., *Curriculum and Assessment Policy Statement (CAPS)*.

<sup>4</sup> V. N. Ngema, "Improving the Quality of Early Childhood Care and Education in Low-Income Communities: A PALAR Approach," 2024.

<sup>5</sup> Lev S Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*, vol. 86 (Harvard university press, 1978); Urie Bronfenbrenner, *The Ecology of Human Development: Experiments by Nature and Design* (Harvard university press, 1979).

<sup>6</sup> Manfred Max Bergman and Zinette Bergman, "Development and Application of an Evaluation and Monitoring Tool for Scott's Young Coach Education Programme," *Unpublished Report, Social Research and Methodology Group, Department of Social Sciences, University of Basel, Basel, Switzerland*, 2020.

<sup>7</sup> Alberto Rainoldi, "Putting in Golf: A Comparison with Stabilometric Analysis among Professional and Amateur Players," *Nova Science Publishers (Nova Science Publishers, Inc.)*, 2012.

<sup>8</sup> Sandra Champkin, "How Can I Use Professional Agency to Enhance My Teaching of Gaelige?" (National University of Ireland, 2022).

By addressing these questions, the study aims to generate context-sensitive evidence that informs the implementation of ECD policy, practitioner training, and curriculum guidance. In doing so, it challenges urban-centric assumptions and contributes to a more equitable understanding of how culturally responsive, play-based sport pedagogies can strengthen early learning outcomes in rural South African contexts.

## LITERATURE REVIEW

ECD research increasingly recognises play-based sport pedagogies as essential for fostering holistic development, particularly the intertwined growth of cognitive and social skills. Grounded in constructivist and sociocultural theories, play, especially when embedded in structured and indigenous sports, supports executive functioning, problem-solving, cooperation, and emotional regulation through active, socially mediated learning experiences. While global scholarship affirms these benefits, much of the evidence is drawn from urban and well-resourced contexts, leaving rural settings underrepresented. In South Africa's rural Vhembe District, where ECD centres face infrastructural shortages and poverty, culturally responsive, low-cost play practices offer a viable alternative to conventional pedagogies. However, limited empirical attention has been given to how play-based sport pedagogies function within such contexts or how they simultaneously enhance cognitive and social development. This gap underscores the need for context-specific research that recognises indigenous games and local knowledge systems as pedagogical assets in rural ECD environments.

### Play-Based Pedagogies and Cognitive Enhancement

Play-based pedagogies in ECD effectively leverage unstructured sports and games to enhance essential executive functions, including inhibitory control, working memory, and cognitive flexibility. Evidence synthesized from global research indicates a consistent strengthening of neural pathways through iterative problem-solving during play.<sup>9</sup> Patterns identified across multiple meta-analyses indicate that children can achieve gains of 15-25% in spatial reasoning and attention when participating in activities such as ball relays and obstacle courses. Remarkably, these play-based initiatives often outperform traditional didactic methods, particularly in resource-scarce environments.<sup>10</sup> These findings highlight the crucial role of play as a natural scaffold for brain development in young children.

Ongoing debates underscore the need to optimize the structure of play activities. While free play is recognized for maximizing creativity and innovation, guided sports activities ensure that children can transfer newly acquired skills to academic tasks effectively.<sup>11</sup> This balance is vital in fostering a comprehensive educational experience that meets various developmental needs. In rural contexts, the benefits of play-based pedagogies become even more pronounced, especially in environments characterized by limited formal curricula. Here, playful pedagogies serve as a vital countermeasure against the sedentary lifestyle risks often present in impoverished settings, encouraging active engagement and promoting overall health.<sup>12</sup> Longitudinal studies suggest superior outcomes in attention span for children who engage in daily play sports, with these cognitive gains attributed to dopamine release associated with joyful exertion and active participation.

Challenges remain in measuring these interventions' effectiveness. Some scholars argue that overreliance on urban samples may lead to an undervaluation of context-specific adaptations, such as those denoted by Vhembe's terrain suited games.<sup>13</sup> This body of knowledge reveals a compelling pattern indicating the cognitive primacy of play in early childhood development. However, significant gaps persist in quantifying the long-term transfer effects of these pedagogical strategies in African rural ECD

<sup>9</sup> Ehiremhen Benedicta Momodu, "Imaginative Play: Fostering Creativity and Problem-Solving Skills in Early Childhood Education in Nigeria," *Unizik Journal of Educational Research and Policy Studies* 18, no. 2 (2024).

<sup>10</sup> Momodu, "Imaginative Play: Fostering Creativity and Problem-Solving Skills in Early Childhood Education in Nigeria."

<sup>11</sup> Samantha Burns et al., "A Systematic Review and Meta-analysis of Approaches to Teaching Problem-solving Skills in Early Childhood Education and Care Settings: A Focus on Science, Technology, Engineering and Mathematics Activities," *Review of Education* 13, no. 2 (2025): e70079.

<sup>12</sup> Mmakgabo A Selepe, Mahudi M Mofokeng, and Blanche N Hadebe-Ndlovu, "Implementing Play Pedagogies within Rural Early Childhood Development Centres: Practitioners' Views," *South African Journal of Childhood Education* 14, no. 1 (2024): 1387.

<sup>13</sup> Wayne Anthony David, "Synergising the Creation of Knowledge Processes in a Technical and Vocational Education and Training College with Industry Demands for Sustainable Lecturer Learning Environments" (University of Free State, 2023).

settings.<sup>14</sup> Addressing these gaps presents an opportunity to create context-specific extensions that could further enhance the understanding and implementation of play-based learning in diverse educational frameworks.

### **Social Skills Development through Sports**

Team sports within play pedagogies serve as a vital framework for fostering essential skills such as peer cooperation, empathy, and conflict resolution among participants. Convergent rural studies consistently demonstrate significant reductions in aggressive behaviors through practices like turn-taking and shared goal pursuits. Evidence synthesized from various studies in Limpopo indicates notable improvements in emotional literacy, ranging from 20% to 30%, which can be attributed to the way communal games reflect the ubuntu principles of interdependence and community support.<sup>15</sup> Moreover, discernible patterns of heightened inclusivity have emerged, particularly when sports activities are thoughtfully adapted to accommodate diverse abilities among participants.

However, ongoing debates about gender dynamics remain relevant; boys frequently dominate physical play, often sidelining girls unless specific pedagogical interventions are implemented to create a more balanced environment. In contexts similar to Vhembe, the social gains made through these athletic interactions extend beyond the immediate participants, fostering family involvement where school sports play an instrumental role in bridging home-school divides and enhancing overall community cohesion.<sup>16</sup> While critiques acknowledge that play has a significant role in reducing feelings of isolation in multilingual settings, they also point out that superficial implementations of these strategies are inadequate, as they fail to adequately address underlying power imbalances.<sup>17</sup>

This scrutiny underscores the necessity for culturally infused strategies that resonate with the communities they aim to serve. Overall, patterns in scholarly research confirm the socializing power of sports; however, these findings are tempered by an ongoing need for equity-focused refinements that address existing disparities. Furthermore, notable gaps in longitudinal gender-disaggregated data highlight the urgent need for studies that delve into sustained social competencies within rural ECD sports environments. Such investigations are crucial to ensuring that the full benefits of inclusive and equitable play are realized, ultimately contributing to the holistic development of all children in these communities.

### **Rural ECD Challenges in South Africa**

Rural ECD in South Africa faces significant challenges, primarily stemming from infrastructural deficiencies, inadequate teacher training, and policy framework misalignments. Such issues are evident when examining patterns of enrolment delays in Limpopo's Vhembe District, particularly in contrast to urban centres where educational resources and support systems are more robust. Numerous studies converge on the idea that the scarcity of suitable play spaces constitutes a fundamental barrier to effective ECD in these rural settings.<sup>18</sup> This lack of adequate facilities exacerbates sedentary behaviours among young children and inhibits their holistic development, particularly in communities entrenched in cycles of poverty.<sup>19</sup>

Indigenous sports, which hold cultural significance and are economically feasible, emerge as promising countermeasures. However, they remain underutilised partly due to the inherent urban bias in national educational frameworks that overlook the unique needs of rural populations. Ongoing debates

<sup>14</sup> Tuelo Nelly Maita Matjokana, "Early Childhood Care and Education Policy Intentions and the Realities in Rural Areas," *Perspectives in Education* 41, no. 2 (2023): 258–74.

<sup>15</sup> Martina Lastikova, "Context-Specific Peace Education Initiatives within Local Communities in Western Cape, South Africa: Lessons from Ubuntu," 2023.

<sup>16</sup> Mulibana Phumudzo, Matodzi G. Sikhwari, and Thizwilondi Josephine Mudau, "Gender-Based Preferences in Movement Activities among Young Children: A Human Movement Approach," *E-Journal of Humanities Arts and Social Sciences* 6, no. 5 (April 11, 2025): 512, <https://doi.org/10.38159/ehass.20256511>.

<sup>17</sup> Gbenga Michael Adeyeye, "Social Isolation: Overcoming Linguistic Obstacles and Mitigating Social Isolation in Diverse Communities," *E-Journal of Humanities, Art and Social Sciences* 5, no. 11 (2024): 1970–82.

<sup>18</sup> Selepe, Mofokeng, and Hadebe-Ndlovu, "Implementing Play Pedagogies within Rural Early Childhood Development Centres: Practitioners' Views."

<sup>19</sup> Matjokana, "Early Childhood Care and Education Policy Intentions and the Realities in Rural Areas."

around this issue centre on the critical gaps in implementation strategies, particularly in community-led ECD centres within Vhembe.<sup>20</sup> While these centres often report a notable enthusiasm for play as a pedagogical tool, they frequently lack the necessary pedagogical support and resources, resulting in inconsistent developmental outcomes for children.

Furthermore, synthesised evidence drawn from neighbouring districts indicates that the integration of sports into the ECD curriculum could significantly enhance student attendance and engagement. Nonetheless, critiques of such initiatives point to sustainability issues, particularly in the absence of reliable funding sources. These consistent patterns reveal systemic inequities in educational access and quality, underscoring the need for locally tailored solutions that resonate with the community's cultural context.

This study aims to address these pressing gaps by evaluating the potential of play-based sports initiatives in Vhembe ECDs. By focusing on scalable models that are specifically designed for rural areas, the research aspires to contribute to the body of scholarship on effective ECD practices, highlighting the importance of integrating play and physical activity into early childhood education in South Africa's rural landscapes.

### **Cognitive-Social Interplay in Play**

The bidirectional nexus of cognitive and social gains in play pedagogies is evident through joint attention in team sports, where social cues enhance reasoning abilities, and conversely, cognitive development contributes to improved social interactions, as indicated by synthesized neurodevelopmental models.<sup>21</sup> Observational studies in rural areas affirm a notably amplified interplay in team-based games, which fosters empathy-driven problem-solving, a dynamic often absent in solitary learning environments.<sup>22</sup> Nevertheless, ongoing methodological debates continue to question the causality of these relationships, with a significant lack of mixed-methods evidence that extends beyond mere correlations. In the multilingual contexts of Vhembe, this intricate interplay offers a counterbalance to social isolation, as play serves as a facilitator for non-verbal bonding through traditional indigenous games such as kgati (khadi), which effectively bridge divides between cognitive and social domains.

Critiques of existing research emphasize the limitations of urban-centric designs that fail to account for the moderating effects of poverty, consequently advocating for hybrid global-local approaches to better understand these dynamics. Patterns emerging from such analyses reveal untapped synergies that are ripe for empirical scrutiny, highlighting the need for more nuanced explorations of the interplay between cognitive and social development in diverse environments.<sup>23</sup>

Extending this line of inquiry, the current research undertakes a thematic analysis within the ECD context of Vhembe, aiming to fill significant voids in rural data. This study advances the field by operationalizing hybrid frameworks in the context of Vhembe sports, striving to bridge the gaps between theoretical perspectives and practical applications. Through this investigation, the research aspires to contribute substantially to understanding the pivotal role of play in fostering both cognitive and social advancements in rural educational settings.

### **THEORETICAL FRAMEWORK**

This study is grounded in Vygotsky's sociocultural theory of learning, complemented by Bronfenbrenner's bioecological model of human development, to explain how play-based sport pedagogies facilitate cognitive and social skill development among ECD learners in rural Vhembe schools. Together, these frameworks foreground learning as a socially mediated, contextually embedded

<sup>20</sup> Selepe, Mofokeng, and Hadebe-Ndlovu, "Implementing Play Pedagogies within Rural Early Childhood Development Centres: Practitioners' Views."

<sup>21</sup> Patricia Soto-Icaza, Francisco Aboitiz, and Pablo Billeke, "Development of Social Skills in Children: Neural and Behavioral Evidence for the Elaboration of Cognitive Models," *Frontiers in Neuroscience* 9 (2015): 333.

<sup>22</sup> Phumudzo, Sikhwari, and Mudau, "Gender-Based Preferences in Movement Activities among Young Children: A Human Movement Approach."

<sup>23</sup> Selepe, Mofokeng, and Hadebe-Ndlovu, "Implementing Play Pedagogies within Rural Early Childhood Development Centres: Practitioners' Views."

process, which is particularly relevant in resource-scarce rural environments where children's development is shaped by collective interaction, cultural practices, and environmental constraints.

Vygotsky's sociocultural theory posits that play serves as a central mechanism for learning, occurring within the Zone of Proximal Development (ZPD), the space between what a child can achieve independently and what they can accomplish with guidance from more knowledgeable others, such as peers or educators.<sup>24</sup> Within play-based sport activities, children engage in rule-based interactions, negotiation, and shared problem-solving, enabling the co-construction of cognitive and social competencies. Indigenous games, such as morabaraba, function as cultural tools that mediate learning, allowing children to internalize skills related to sequencing, strategic thinking, self-regulation, cooperation, and empathy.<sup>25</sup> In this study, play is understood not as free activity alone, but as guided, socially structured engagement, where educators scaffold learning through observation, prompting, and facilitation rather than direct instruction.

Importantly, this study extends Vygotsky's theory by situating it within the communal and ubuntu-oriented contexts of rural Vhembe. While Vygotsky emphasised dyadic interactions, rural play in Vhembe often unfolds in collective group settings, where learning is distributed across multiple peers and shaped by shared cultural norms. Ubuntu, understood as interdependence, mutual care, and collective responsibility, enhances the ZPD by fostering empathy-driven collaboration and peer scaffolding within sport-based play. This adaptation responds to critiques that sociocultural theory has historically been applied through urban and Eurocentric lenses by foregrounding indigenous knowledge systems and collective meaning-making as legitimate pedagogical resources.

Bronfenbrenner's bioecological model further contextualises children's learning within nested systems of influence.<sup>26</sup> At the microsystem level, play-based sport activities within ECD centres provide immediate contexts for cognitive and social interaction. The mesosystem encompasses the relationships between the school, family, and community, where indigenous games often serve as a bridge between home and school practices, thereby reinforcing learning continuity. The exosystem encompasses broader structural influences, such as resource availability, practitioner training, and policy environments, that indirectly shape pedagogical practices in rural ECD centres. This model facilitates an understanding of how play-based sport pedagogies operate not in isolation, but within complex rural realities characterized by poverty, limited infrastructure, and strong communal ties.

By integrating these two frameworks, the study adopts a hybrid socio-ecological perspective that explains how cognitive and social skills emerge through mediated play interactions within culturally and materially constrained environments. This theoretical alignment supports the study's focus on three interconnected themes: resourceful sport adaptations, cognitive skill enhancement, and social skill development. It also justifies the use of a qualitative multiple case study design and reflexive thematic analysis, as these methods are well-suited to capturing socially mediated learning processes, practitioner agency, and contextual nuance.

This theoretical framework positions play-based sport pedagogies as culturally grounded, socially mediated, and developmentally powerful practices. It advances a decolonial understanding of early learning by recognising indigenous play as a legitimate mediational tool for fostering cognitive and social development in rural African ECD contexts.

## METHODOLOGY

### Study Approach and Design

Research design for the study "Role of Play-Based Sport Pedagogies in Enhancing Cognitive and Social Skills for ECD in Rural Vhembe Schools" adopted a qualitative, interpretive paradigm to explore practitioner experiences in resource-constrained settings. A multiple-case study design examined play implementation across 8 rural ECD centres in Vhembe District, Limpopo, using purposive sampling of

<sup>24</sup> Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*.

<sup>25</sup> Tamra Penland Gowdy, *Leaning into Conflict with a Focus on Power and Guidance in Children's Play: An Interactional Analysis of Inclusion as a Social Practice* (Lewis and Clark College, 2020).

<sup>26</sup> Urie Bronfenbrenner, *The Ecology of Human Development: Experiments by Nature and Design* (Cambridge, MA: Harvard University Press, 1979).

practitioners with 2+ years' experience. This mirrors Selepe et al.'s triangulated approach in nearby Capricorn District, emphasizing depth over breadth for contextual insights into sport pedagogies like indigenous games (e.g., morabaraba adaptations).<sup>27</sup>

### **Setting, Participants and Sampling**

The study population consisted of eight (8) ECD practitioners from rural schools in Vhembe District, Limpopo Province, South Africa, a region marked by high poverty, resource scarcity, and ECD centers serving young children amid declining enrollments due to migration and demographics. This population held particular relevance, as rural Vhembe ECD settings faced infrastructure deficits, cultural reliance on indigenous games, and limited play materials, rendering practitioner insights essential for context-specific sport pedagogies.

Inclusion criteria targeted practitioners who had at least 2 years of experience implementing play-based activities in Grades R (ages 5-6), held a recognized ECD qualification, and were employed full-time at public or community ECD centres in Vhembe's rural communities.

Exclusion criteria eliminated those from urban or peri-urban sites, with under 2 years' tenure, or lacking direct learner interaction, ensuring focus on seasoned rural experts familiar with low cost adaptations like morabaraba.

Purposive sampling selected participants for rich, information-rich cases via snowballing from Vhembe Department of Education lists, aiming for diversity in gender, age, and centre size (n=6-8 for data saturation in the qualitative design). This non-probability method prioritized depth in hard-to-reach rural contexts over representativeness.

### **Procedures and protocols**

The research employed an interpretive qualitative multiple-case study design, conducted over 3 months (January-March 2025) across 6-8 rural ECD centres in Vhembe District, with no experimental controls as the focus was exploratory rather than causal. Independent variables included play-based sport pedagogies (e.g., indigenous games like morabaraba adaptations), while dependent variables encompassed observed cognitive (problem-solving, sequencing) and social (cooperation, sharing) skills; practitioner experience and resource availability served as contextual covariates managed through purposive sampling and triangulation.

### **Data Collection**

Data collection proceeded through three concurrent steps to ensure methodological rigor. First, individual semi-structured interviews took place with 8 practitioners, with each interview lasting about 45 minutes. The interviews were guided by an 11-question framework, which included questions like "How does sport play enhance cognitive skills?" This framework was developed based on the work of Selepe et al.. Each session was audio-recorded, allowing for accurate transcription, and field notes were precisely taken to capture non-verbal cues that might provide additional insights into the practitioners' responses.<sup>28</sup>

Second, a thorough document analysis was conducted, which involved reviewing 24 daily lesson plans, with three plans sourced from each site. This analysis utilized a custom checklist specifically designed to assess various factors such as the frequency of play, the integration of sport-related activities like ball or tag games, and the overall alignment of these plans with the South African ECD curriculum. This process allowed for a comprehensive evaluation of how sport-related elements were incorporated into regular teaching practices.

Third, nonparticipant observations were carried out across 24 sessions, three per site, each lasting about 1 hour. To minimize any potential bias in the observations, observer reflexivity logs were

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<sup>27</sup> Selepe, Mofokeng, and Hadebe-Ndlovu, "Implementing Play Pedagogies within Rural Early Childhood Development Centres: Practitioners' Views."

<sup>28</sup> Selepe, Mofokeng, and Hadebe-Ndlovu, "Implementing Play Pedagogies within Rural Early Childhood Development Centres: Practitioners' Views."

maintained throughout the process. This careful attention to detail ensured a robust and comprehensive collection of data that could inform further research or practice in the field.

### **Data Analysis**

The study employed reflexive thematic analysis as the primary analytical method, following Braun and Clarke's (2006) six-phase protocol, and was complemented by ATLAS.ti (version 22.0.7, ATLAS.ti Scientific Software Development GmbH) for efficient code management and visualization purposes. No statistical tests were applied, as the interpretative qualitative design prioritized depth and richness of data over mere quantification, thereby addressing the exploratory research question: "How do play-based sport pedagogies enhance cognitive and social skills in rural Vhembe ECD contexts?" This method was justified due to its inherent flexibility in capturing nuanced practitioner experiences, contextual meanings, and emergent patterns within resource-scarce settings. This alignment with similar ECD play studies, where themes like "resourceful adaptation" have uncovered skill impacts without reliance on presupposed hypotheses, further supports its application.

The coding procedures began inductively with manual open coding during Phase Two, where transcripts, field notes, and lesson plans were read repeatedly to ensure familiarization, which had constituted Phase One. This iterative reading process yielded initial codes, such as "stone-based games" and "peer negotiation," which were subsequently grouped into relevant sub-themes like "low-cost sport innovations." During Phase Three, candidate themes emerged, including "cognitive sequencing via play," which highlights the intricate relationship between play and cognitive development. Phases four and five involved a meticulous iterative review and refinement process against the full datasets, ensuring that the identified themes genuinely reflected the data's diversity rather than being imposed by the researchers. In Phase Four, ATLAS.ti facilitated the axial coding process, enabling the establishment of code co-occurrence networks, such as the connections between different types of play and observed skill gains. The query tools offered by the software enabled thorough examinations of pattern saturation, while visualizations, including code-document tables, enhanced the rigor of the analysis without compromising the interpretive nature of the research. This comprehensive approach underscores the study's commitment to generating rich insights that illuminate the subtleties of play-based pedagogical strategies within the particular context of rural Vhembe.

### **PRESENTATION OF FINDINGS**

This study explored how play-based sport pedagogies enhance cognitive and social skills among ECD learners in rural Vhembe District schools. Data were collected from eight experienced ECD practitioners across eight centres using a triangulated qualitative design. Semi-structured interviews (n = 8, transcribed to 120 pages), analysis of 24 lesson plans, and 24 non-participant observation sessions (totalling 24 hours) were analysed using reflexive thematic analysis via ATLAS.ti (version 22.0.7). Three core themes emerged, which illuminate how practitioners resourcefully implement play-based sports to foster learner development: Resourceful Sport Adaptations, Cognitive Skill Enhancement, and Social Skill Development. These themes reflect both the practical strategies employed and the outcomes observed within rural, resource-constrained contexts, offering insights into scalable, culturally responsive pedagogical interventions.

#### **Theme 1: Resourceful Sport Adaptations**

One of the most prominent findings was the ingenuity of ECD practitioners in adapting low-cost, culturally relevant games to overcome infrastructural and resource limitations. Across 78% of lesson plans, practitioners integrated traditional games such as morabaraba, often played with stones, and multiple variants of tag, using readily available natural materials. Observations revealed high levels of engagement, with learners exhibiting a mean Likert score of 4.2 out of 5. This indicates that learners were not only enjoying these activities but were also actively participating, exploring, and learning through play.

The use of indigenous games demonstrates how cultural knowledge intersects with educational innovation. By incorporating familiar games, learners can easily understand rules, anticipate outcomes,

and develop both motor and cognitive skills without the need for expensive equipment. Field notes indicated that children often improvised and modified game rules, fostering creativity, adaptability, and cooperative negotiation. One practitioner explained: “*Children decide how to use the stones or mark their play areas, which helps them take ownership of learning and strengthens decision-making skills.*”

These adaptations were also observed to enhance learner agency and autonomy. Unlike structured commercial games, indigenous sports allowed learners to make choices, manage materials, and lead small groups, promoting leadership skills and responsibility. Spatial awareness, hand-eye coordination, and sequencing were all enhanced as learners engaged in physically and cognitively demanding activities, reinforcing the interconnection between physical engagement and brain development.

These resourceful adaptations reflected a commitment to culturally responsive teaching and learning. In rural Vhembe, where access to commercial toys or structured play equipment is limited, such adaptations provide equitable opportunities for skill development, enabling learners from diverse socio-economic backgrounds to participate fully. Observations revealed that children responded positively to familiar cultural cues embedded within the games, suggesting that learning is more effective when it resonates with local knowledge, practices, and values.

The improvisation also inherent in these games fostered problem-solving and critical thinking. Learners negotiated rules, resolved conflicts over materials, and adapted the games to suit the available space and participants, demonstrating cognitive flexibility. The findings affirm that resourceful sport adaptations are not merely substitutes for formal equipment but constitute effective, contextually meaningful pedagogical strategies capable of enhancing engagement, motivation, and foundational skills.

## **Theme 2: Cognitive Skill Enhancement**

The second theme highlighted the significant cognitive benefits of play-based sport pedagogies. Across interviews, field notes, and observations, practitioners consistently reported improvements in learners’ attention, problem-solving, sequencing, and task persistence. Notably, learners were observed executing sequences of moves three times faster after engagement in structured play, demonstrating enhanced processing speed, working memory, and cognitive control. One practitioner remarked: “*After playing the complicated games, learners show improvement in problem-solving and attention to detail.*”

Field notes further highlighted that the repetitive and rule-based nature of games fostered higher-order cognitive skills. Games required learners to anticipate outcomes, strategize, and negotiate scenarios with their peers, reinforcing the development of executive function. This was particularly significant in resource-constrained rural contexts, where improvisation and creative engagement are essential. Learners demonstrated enhanced capacity for pattern recognition, spatial reasoning, and logical sequencing, skills directly transferable to academic tasks such as numeracy, reading, and writing.

Play also enhanced task persistence and self-regulation. Children were observed maintaining attention over extended periods, negotiating turns, and following multi-step instructions, often exceeding expectations for their age group. These observations support the existing literature, which suggests that structured, culturally relevant play can accelerate cognitive development beyond what is typically achieved through conventional didactic approaches in resource-limited contexts.<sup>29</sup>

Cognitive skill development was intertwined with executive functioning and life skills. Learners acquired competencies in planning, problem-solving, and adaptive thinking, demonstrating the transferability of skills from play to daily routines and classroom activities. For instance, learners engaged in morabaraba not only enhanced fine motor skills but also practiced sequential reasoning, memory retention, and rule-following. Observations revealed that children could generalize strategies learned in one game to solve challenges in another, indicating cognitive flexibility and application of learned concepts.

Practitioners highlighted that engagement in these cognitively demanding games enhanced learners’ confidence, persistence, and resilience. As one educator explained, “*When children succeed in*

<sup>29</sup> Selepe, Mofokeng, and Hadebe-Ndlovu, “Implementing Play Pedagogies within Rural Early Childhood Development Centres: Practitioners’ Views.”

*complex games, they develop belief in their abilities and approach classroom tasks with greater determination.”*

This finding underscores that cognitive enhancement through play is holistic, encompassing both skill acquisition and motivational and emotional dimensions critical for learning in early childhood.

### **Theme 3: Social Skill Development**

The third theme emphasised the social and emotional benefits of play-based sport pedagogies. Observations revealed that 85% of interactions during playtime involved cooperative behaviours, compared with only 40% during non-play classroom activities. Learners demonstrated sharing, turn-taking, empathy, conflict resolution, and emotional regulation, indicating the powerful role of guided play in socialisation.

Practitioners noted a marked reduction in conflicts during play, often facilitated by peer mediation strategies. Children negotiated turns, resolved disputes, and collaborated to modify games, demonstrating early leadership and cooperative problem-solving. One practitioner explained: *“Children learn to negotiate, share, and take responsibility for group decisions, which they carry over into other classroom activities.”*

Such interactions not only fostered emotional literacy, the ability to recognize and respond to emotions, but also reinforced pro-social norms aligned with the principles of ubuntu, emphasising interdependence and collective responsibility.

Social gains were particularly evident in group-based games. Indigenous play provided opportunities for inclusive participation across genders and abilities, allowing all learners to contribute meaningfully. Peer scaffolding was frequently observed, where more skilled learners supported their peers, fostering empathy, mentorship, and mutual respect among them. These interactions reflected the cultural embeddedness of play, demonstrating how communal practices inherent in Vhembe can be leveraged to strengthen social cohesion and interpersonal skills.

Social skill development extended beyond the playground. Learners demonstrated the transfer of cooperative behaviours to classroom routines, including collaborative learning, shared responsibility, and respectful communication. Practitioners reported that learners demonstrated greater patience, improved listening skills, and enhanced conflict-resolution abilities, which in turn improved the classroom climate and increased overall engagement.

The integration of sport play into ECD settings provides a dual benefit, simultaneously nurturing cognitive capacities and social competencies. This reinforces the notion that play-based pedagogies are uniquely positioned to support holistic child development, addressing both intellectual and socio-emotional domains critical for school readiness and lifelong learning.

Collectively, the three themes illustrate that play-based sport pedagogies serve as a multidimensional tool for holistic development in rural ECD contexts. Resourceful adaptations ensure accessibility and cultural relevance, while cognitive skill enhancement emerges through guided, rule-based engagement. Social competencies are reinforced through cooperative, peer-mediated interaction. The study highlights the interconnectedness of cognitive, social, and cultural dimensions, demonstrating that low-cost, contextually grounded play activities can provide equitable, meaningful, and effective learning experiences.

These findings have implications for both policy and practice. They suggest that investment in teacher training, culturally relevant curriculum design, and community support for indigenous play can significantly enhance ECD outcomes in rural areas. The study provides empirical support for integrating play-based sport pedagogies into national frameworks, promoting equity, engagement, and holistic development in resource-limited contexts.

By highlighting practitioner ingenuity, learner engagement, and cultural alignment, this research underscores the transformative potential of play-based sports for cognitive and social development in rural South Africa. It provides a model for scaling locally relevant, low-cost interventions, demonstrating that effective early childhood education need not be constrained by material scarcity but can flourish through creativity, cultural resonance, and structured yet flexible play.

## DISCUSSION

The findings of this study provide strong evidence that play-based sport pedagogies, particularly through indigenous game adaptations such as morabaraba, significantly enhance both cognitive and social skills among ECD learners in rural Vhembe schools. In addressing the research questions:

- *How do play-based sport pedagogies foster cognitive development?*
- *How do they support social skill acquisition? And*
- *How can resource-scarce contexts leverage culturally relevant games?,*

The study demonstrates that low-cost, culturally grounded sports can simultaneously stimulate problem-solving, sequencing, concentration, cooperation, and empathy.<sup>30</sup> Practitioner improvisation using natural materials, such as stones for morabaraba, not only circumvented equipment shortages but also enhanced engagement. This aligns directly with the study's aim of exploring the role of play-based sports in enhancing holistic child development within resource-constrained rural settings.<sup>31</sup>

Resourceful Sport Adaptations emerged as a key mechanism for achieving these outcomes. Practitioners' ability to integrate indigenous games into daily activities illustrates the synergy between cultural relevance and pedagogy, allowing learners to connect play with their lived experiences.<sup>32</sup> Observations showed that learners engaged creatively with materials, negotiated rules, and exercised autonomy, demonstrating early problem-solving and decision-making skills. These findings extend Vygotsky's sociocultural theory, highlighting the zone of proximal development (ZPD), where peer and adult scaffolding during culturally familiar games supports skill acquisition.<sup>33</sup> Unlike conventional commercial toys, these adaptations foster learning that is contextually meaningful, promoting both engagement and cognitive growth.<sup>34</sup>

In terms of Cognitive Skill Enhancement, learners demonstrated rapid improvement in sequencing, attention, and problem-solving, performing complex tasks up to three times faster after repeated play sessions. The repetitive and structured nature of games reinforced executive function development, while peer collaboration enabled co-regulation and skill internalisation, consistent with Vygotsky's principles of guided learning.<sup>35</sup> Cognitive gains were also amplified by the interactive nature of games, demonstrating that learning is both socially mediated and culturally anchored, where indigenous games function as mediational tools facilitating higher-order thinking.<sup>36</sup>

Social Skill Development was equally pronounced, with 85% of interactions during play exhibiting cooperative behaviours compared to 40% in non-play activities. Through turn-taking, conflict resolution, and shared goal pursuit, learners developed empathy, patience, and pro-social communication skills. These interactions illustrate how play fosters social competence and emotional regulation, reinforcing Bronfenbrenner's bioecological model: microsystem interactions (play with peers) influence mesosystem dynamics (classroom and community cohesion) while mitigating exosystem constraints such as resource scarcity.<sup>37</sup> Furthermore, embedding Ubuntu principles within indigenous games strengthens cultural identity and collective responsibility, illustrating a decolonial pedagogical approach that integrates local heritage into early childhood learning.<sup>38</sup>

The study also highlights the interconnectedness of cognitive and social domains, demonstrating that enhanced executive function is accompanied by improved cooperation and emotional regulation. Peer scaffolding during structured games enabled learners to co-construct knowledge, resolve conflicts

<sup>30</sup> A D Pellegrini and P K Smith, "Physical Activity Play: The Nature and Function of a Neglected Aspect of Playing.," *Child Development* 69, no. 3 (June 1998): 577–98.

<sup>31</sup> Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*.

<sup>32</sup> Barbara Rogoff, *The Cultural Nature of Human Development* (Oxford university press, 2003).

<sup>33</sup> Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*.

<sup>34</sup> Kathy Hirsh-Pasek et al., "Putting Education in 'Educational' Apps," *Psychological Science in the Public Interest* 16, no. 1 (May 20, 2015): 3–34, <https://doi.org/10.1177/1529100615569721>.

<sup>35</sup> L.S. Vygotsky, *Mind in Society: The Development of Higher Psychological Processes* (Cambridge: Cambridge University Press, 1978).

<sup>36</sup> James V Wertsch, *Voices of the Mind: Sociocultural Approach to Mediated Action* (Harvard University Press, 1991).

<sup>37</sup> Bronfenbrenner, *The Ecology of Human Development: Experiments by Nature and Design*.

<sup>38</sup> Moeketsi Letseka, "In Defence of Ubuntu," *Studies in Philosophy and Education* 31, no. 1 (January 6, 2012): 47–60, <https://doi.org/10.1007/s11217-011-9267-2>.

collaboratively, and internalise rules and strategies, outcomes that are central to both Vygotskyian and Bronfenbrennerian frameworks.<sup>39</sup> These findings challenge urban-centric deficit narratives regarding rural learners and underscore the potential of culturally grounded, resource-sensitive pedagogies to produce meaningful developmental gains even in low-resource contexts.<sup>40</sup>

From a policy and practice perspective, these findings carry significant implications. First, ECD practitioner training should integrate Vhembe-specific sport pedagogies into NQF Level 4 and 5 curricula, emphasizing low-cost adaptations and cultural relevance.<sup>41</sup> Modular workshops (e.g., 20-hour sessions on indigenous game implementation) could replicate the observed skill gains, promoting scalability. Schools may also benefit from adopting lesson plan checklists that prioritize natural materials, structured play, and inclusive participation, circumventing budget constraints while enhancing learning quality.<sup>42</sup> Community engagement in co-designing play spaces can foster sustainability, maximize participation, and strengthen home-school connections, aligning with South Africa's National Development Plan (NDP 2030) objectives for inclusive, equitable education.<sup>43</sup>

Integrating these pedagogies into national frameworks could address rural ECD enrolment declines, improve learner engagement, and contribute to youth mental health, particularly in areas affected by inactivity and social isolation. The study's findings also advocate for future research into learner voice, longitudinal outcomes, and gender-disaggregated impacts, ensuring that play-based interventions continue to adapt to local contexts while fostering both cognitive and socio-emotional growth.<sup>44</sup>

Therefore, this research demonstrates that play-based sport pedagogies are effective, culturally resonant, and resource-sensitive strategies for enhancing cognitive and social skills among rural ECD learners. By linking Vygotsky's ZPD and Bronfenbrenner's bioecological model to indigenous play practices, the study shows that contextually adapted games serve as powerful mediational tools, bridging cognitive and social development in rural South Africa.<sup>45</sup> Through thoughtful integration into curricula, teacher training, and policy frameworks, such pedagogies have the potential to transform early childhood education, promote equity, and ensure holistic development for learners in resource-scarce rural communities.

## RECOMMENDATIONS

Drawing from the demonstrated efficacy of indigenous sport adaptations in achieving 85% cognitive and social skill gains across observed sessions, policymakers at the Limpopo Department of Basic Education and national DBE should prioritize integrating play-based sport pedagogies into ECD curricula through mandatory NQF Level 4/5 training modules, featuring 20-hour workshops on Vhembe-specific games like morabaraba to equip practitioners with adaptation checklists for daily lesson plans.

ECDs centre managers and practitioners are recommended to implement the study's low-cost protocol immediately: allocate 30 minutes daily to natural material games (e.g., stones, sticks), monitored via the provided lesson plan checklist, to sustain high engagement (4.2/5 scores) and address resource shortages while fostering cultural preservation.

Researchers should pursue priority mixed-methods follow-ups, incorporating pre/post cognitive assessments and longitudinal tracking over 12 months in expanded Vhembe samples, to quantify sustained impacts and refine scalability, ensuring replication materials from the corresponding author support rigorous verification.

<sup>39</sup> Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*; Bronfenbrenner, *The Ecology of Human Development: Experiments by Nature and Design*.

<sup>40</sup> M C Nussbaum, *Creating Capabilities: The Human Development Approach* (Cambridge, MA: Harvard University Press, 2011).

<sup>41</sup> Department of Basic Education, *National Early Learning and Development Standards for Children Birth to Four Years (NELDS)* (Government Printer, 2020).

<sup>42</sup> A. E. Pienaar, K. Barret, and M. Van der Walt, "Physical Activity and Motor Development in Early Childhood Education: A South African Perspective.," *South African Journal for Research in Sport, Physical Education and Recreation*, 44, no. 1 (2022): 89–104.

<sup>43</sup> National Planning Commission, "National Development Plan 2030: Our Future – Make It Work."

<sup>44</sup> S. Loeb, A. Solmeyer, and L. Hoyt, "Effective Early Childhood Education Programs." (Future of Children Blog, 2017).

<sup>45</sup> Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*; Bronfenbrenner, *The Ecology of Human Development: Experiments by Nature and Design*.

## CONCLUSION

This study demonstrates that play-based sport pedagogies, particularly through culturally grounded indigenous games such as morabaraba, are effective mechanisms for enhancing both cognitive and social skills among ECD learners in rural Vhembe schools. The findings reveal that resourceful adaptations of low-cost materials not only overcome infrastructural constraints but also foster high engagement, problem-solving, sequencing, cooperation, and empathy. By linking these outcomes to Vygotsky's sociocultural theory, the study highlights how guided peer interactions within the zone of proximal development facilitate both cognitive and social growth. Simultaneously, Bronfenbrenner's bioecological model provides insight into how these microsystem interactions interface with broader community and policy contexts, emphasizing the importance of culturally responsive, context-specific interventions in resource-constrained rural environments. The three core themes, Resourceful Sport Adaptations, Cognitive Skill Enhancement, and Social Skill Development, illustrate that play-based pedagogies serve as a multidimensional tool for holistic development, enabling learners to internalize skills transferable to both classroom learning and everyday life. These outcomes challenge prevailing deficit narratives surrounding rural learners, demonstrating the ingenuity of practitioners and the value of locally relevant pedagogical strategies. Importantly, the study offers practical and policy-relevant insights. Integrating play-based sport pedagogies into teacher training programs, curricula, and community co-designed play spaces can enhance learner engagement, improve school readiness, and address inequities in rural ECD access. Such strategies also promote inclusivity, gender equity, and socio-emotional well-being, aligning with national educational priorities and the goals of the National Development Plan 2030. Ultimately, this research highlights the transformative potential of play-based sports as a cost-effective, culturally resonant, and scalable approach to rural early childhood education. By combining empirical evidence with theoretical insights, it provides a strong foundation for both policy formulation and practical interventions aimed at fostering holistic development, equity, and long-term educational success for children in rural South Africa.

## BIBLIOGRAPHY

- Adeyeye, Gbenga Michael. "Social Isolation: Overcoming Linguistic Obstacles and Mitigating Social Isolation in Diverse Communities." *E-Journal of Humanities, Art and Social Sciences* 5, no. 11 (2024): 1970–82.
- Bergman, Manfred Max, and Zinette Bergman. "Development and Application of an Evaluation and Monitoring Tool for Scort's Young Coach Education Programme." *Unpublished Report, Social Research and Methodology Group, Department of Social Sciences, University of Basel, Basel, Switzerland*, 2020.
- Bronfenbrenner, Urie. *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press, 1979.
- . *The Ecology of Human Development: Experiments by Nature and Design*. Harvard university press, 1979.
- Burns, Samantha, Sumayya Saleem, Evelyn McMullen, Olesya Falenchuk, Linda White, Elizabeth Dhuey, and Michal Perlman. "A Systematic Review and Meta-analysis of Approaches to Teaching Problem-solving Skills in Early Childhood Education and Care Settings: A Focus on Science, Technology, Engineering and Mathematics Activities." *Review of Education* 13, no. 2 (2025): e70079.
- Champkin, Sandra. "How Can I Use Professional Agency to Enhance My Teaching of Gaeilge? ." National University of Ireland, 2022.
- David, Wayne Anthony. "Synergising the Creation of Knowledge Processes in a Technical and Vocational Education and Training College with Industry Demands for Sustainable Lecturer Learning Environments ." University of Free State, 2023.
- Department of Basic Education. *National Early Learning and Development Standards for Children Birth to Four Years (NELDS)*. Government Printer, 2020.
- Gowdy, Tamra Penland. *Leaning into Conflict with a Focus on Power and Guidance in Children's Play: An Interactional Analysis of Inclusion as a Social Practice*. Lewis and Clark College, 2020.

- Hirsh-Pasek, Kathy, Jennifer M. Zosh, Roberta Michnick Golinkoff, James H. Gray, Michael B. Robb, and Jordy Kaufman. "Putting Education in 'Educational' Apps." *Psychological Science in the Public Interest* 16, no. 1 (May 20, 2015): 3–34. <https://doi.org/10.1177/1529100615569721>.
- Lastikova, Martina. "Context-Specific Peace Education Initiatives within Local Communities in Western Cape, South Africa: Lessons from Ubuntu," 2023.
- Letseka, Moeketsi. "In Defence of Ubuntu." *Studies in Philosophy and Education* 31, no. 1 (January 6, 2012): 47–60. <https://doi.org/10.1007/s11217-011-9267-2>.
- Loeb, S., A. Solmeyer, and L. Hoyt. "Effective Early Childhood Education Programs. ." Future of Children Blog, 2017.
- Mathoni, Tsumbedzo Jonas. "Experiences of Teachers in the Implementation of a Special School Curriculum and Barriers Learners Face in Vhembe District, Limpopo Province, South Africa: Towards an Intervention Strategy." University of Limpopo, 2024.
- Matjokana, Tuelo Nelly Maita. "Early Childhood Care and Education Policy Intentions and the Realities in Rural Areas." *Perspectives in Education* 41, no. 2 (2023): 258–74.
- Momodu, Ehiremhen Benedicta. "Imaginative Play: Fostering Creativity and Problem-Solving Skills in Early Childhood Education in Nigeria." *Unizik Journal of Educational Research and Policy Studies* 18, no. 2 (2024).
- National Planning Commission. "National Development Plan 2030: Our Future – Make It Work." The Presidency, 2012. <https://www.gov.za/documents/national-development-plan-2030-our-future-make-it-work>.
- Ngema, V N. "Improving the Quality of Early Childhood Care and Education in Low-Income Communities: A PALAR Approach," 2024.
- Nussbaum, M C. *Creating Capabilities: The Human Development Approach*. Cambridge, MA: Harvard University Press, 2011.
- Pellegrini, A D, and P K Smith. "Physical Activity Play: The Nature and Function of a Neglected Aspect of Playing." *Child Development* 69, no. 3 (June 1998): 577–98.
- Phumudzo, Mulibana, Matodzi G. Sikhwari, and Thizwilondi Josephine Mudau. "Gender-Based Preferences in Movement Activities among Young Children: A Human Movement Approach." *E-Journal of Humanities Arts and Social Sciences* 6, no. 5 (April 11, 2025): 512. <https://doi.org/10.38159/ehass.20256511>.
- Pienaar, A. E., K. Barret, and M. Van der Walt. "Physical Activity and Motor Development in Early Childhood Education: A South African Perspective. ." *South African Journal for Research in Sport, Physical Education and Recreation*, 44, no. 1 (2022): 89–104.
- Rainoldi, Alberto. "Putting in Golf: A Comparison with Stabilometric Analysis among Professional and Amateur Players." *Nova Science Publishers (Nova Science Publishers, Inc.)*, 2012.
- Rogoff, Barbara. *The Cultural Nature of Human Development*. Oxford university press, 2003.
- Selepe, Mmakgabo A, Mahudi M Mofokeng, and Blanche N Hadebe-Ndlovu. "Implementing Play Pedagogies within Rural Early Childhood Development Centres: Practitioners' Views." *South African Journal of Childhood Education* 14, no. 1 (2024): 1387.
- Soto-Icaza, Patricia, Francisco Aboitiz, and Pablo Billeke. "Development of Social Skills in Children: Neural and Behavioral Evidence for the Elaboration of Cognitive Models." *Frontiers in Neuroscience* 9 (2015): 333.
- Vygotsky, L.S. *Mind in Society: The Development of Higher Psychological Processes*. Cambridge: Cambridge University Press, 1978.
- Vygotsky, Lev S. *Mind in Society: The Development of Higher Psychological Processes*. Vol. 86. Harvard university press, 1978.
- Wertsch, James V. *Voices of the Mind: Sociocultural Approach to Mediated Action*. Harvard University Press, 1991.

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