

Full Length Research Paper

Early Childhood Education in the 21st Century: Building a Foundation for Sustainable Human Development in Botswana

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Abstract

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Early Childhood Education (ECE) is widely recognized as a foundation for sustainable human development because it enhances children's cognitive, social-emotional, and lifelong learning outcomes. This study examines the contribution of ECE to sustainable human development in Botswana through a conceptual study incorporating mixed-methods elements, integrating policy analysis, national education statistics, and qualitative insights from early childhood teachers. Guided by Human Capital Theory, the Nurturing Care Framework, and Sustainable Development Goal (SDG) 4.2, the study analyses Botswana's progress in expanding access to quality ECE while identifying persistent implementation challenges. The findings indicate that pre-primary enrolment reached 41,539 children in 2022, although significant disparities remain in teacher qualifications, rural access, financing, and curriculum contextualization. Qualitative evidence further highlights shortages of teaching resources, limited professional development opportunities, and the need for stronger community engagement. The study concludes that strengthening teacher professionalization, equitable financing, culturally responsive curricula, and systematic monitoring will enhance inclusive and sustainable ECE provision in Botswana. These findings provide evidence to inform policy, practice, and future research aimed at achieving equitable early childhood development.

Keywords: Early Childhood Education; Botswana; Sustainable Human Development; Teacher Professionalization; Curriculum Contextualization; Human Capital Theory; Nurturing Care Framework; Sustainable Development Goal 4.2; Educational Equity.

1. Introduction

Early Childhood Education (ECE) is widely recognised as a fundamental pillar of lifelong learning, human development, and sustainable socio-economic development. Research in neuroscience, developmental psychology, and economics consistently demonstrates that experiences during the early years significantly influence children's cognitive, socio-emotional, language, and health outcomes, which subsequently affect educational achievement, employability, productivity, and overall well-being throughout life (Heckman, 2011; Britto et al., 2021). Consequently, investment in quality ECE yields substantial long-term social and economic returns by improving educational

attainment, reducing inequalities, strengthening human capital, and promoting sustainable national development (Becker, 1993; Karoly et al., 2022).

Recognising these benefits, the international community has placed Early Childhood Education at the centre of global development agendas. Sustainable Development Goal (SDG) 4.2 calls for all girls and boys to have access to quality early childhood development, care, and pre-primary education so that they are prepared for primary education. Similarly, the African Union's Agenda 2063 and UNESCO's Global Education Monitoring (GEM) Reports emphasise equitable access to quality, inclusive, and culturally responsive early learning as a

prerequisite for sustainable human development and social transformation (African Union, 2022; UNESCO, 2021; Pillar, 2023).

Botswana has demonstrated considerable commitment to these international aspirations by progressively integrating Early Childhood Education into national education policies and expanding access to pre-primary education. Government initiatives have increased enrolment and strengthened policy recognition of the importance of early childhood development. Nevertheless, significant disparities persist, particularly between urban and rural communities, in relation to access, teacher qualifications, learning resources, financing, and the cultural relevance of the curriculum (Statistics Botswana, 2022; Tautona et al., 2024). These disparities continue to limit the quality, equity, and inclusiveness of ECE provision, especially for children from rural and other marginalised communities.

Although Botswana has made notable policy progress, important knowledge gaps remain within the existing literature. Most Botswana-based studies have focused on access, enrolment, policy implementation, or isolated aspects of Early Childhood Education. Comparatively little attention has been devoted to examining how ECE contributes to sustainable human development through the combined influence of teacher professionalization, curriculum contextualisation, educational equity, community participation, and effective policy implementation. Furthermore, there is limited context-specific evidence examining how national policy commitments are translated into classroom practice across diverse geographical and socio-economic settings. There is also limited longitudinal evidence evaluating the effectiveness of ECE interventions, implementation fidelity, and the long-term impact of early childhood programmes on children's educational and socio-economic outcomes. These evidence gaps constrain informed policy formulation and the continuous improvement of quality, equitable, and inclusive ECE provision in Botswana.

Against this background, this study examines the contribution of Early Childhood Education to sustainable human development in Botswana through a conceptual study incorporating mixed-methods elements. The study integrates policy analysis, national education statistics, and qualitative insights from early childhood teachers to examine achievements, identify persistent implementation challenges, and propose evidence-based strategies for strengthening equitable and high-quality ECE provision. Guided by Human Capital Theory, the Nurturing Care Framework, and Sustainable Development Goal (SDG) 4.2, the study provides a comprehensive analysis of how policy, teacher professionalization, curriculum contextualisation, and educational equity collectively contribute to sustainable human development in Botswana.

The remainder of this paper is organised as follows. Section 2 reviews the global, regional, and Botswana-specific literature on Early Childhood Education and

identifies the knowledge gaps addressed by this study. Section 3 presents the theoretical frameworks underpinning the analysis. Section 4 describes the methodology adopted for the study. Section 5 presents the quantitative and qualitative findings and demonstrates how the two sources of evidence are integrated. Section 6 discusses the implications of the findings for policy and practice in Botswana. Finally, Sections 7 and 8 present the conclusion and recommendations for future research and policy development.

2. Literature Review

2.1 Global Perspectives on Early Childhood Education

Early Childhood Education (ECE) is widely recognised as a critical foundation for lifelong learning, social inclusion, and sustainable human development. Research from neuroscience, developmental psychology, and economics consistently demonstrates that high-quality early learning experiences enhance children's cognitive, language, socio-emotional, and physical development, thereby improving educational achievement, employment opportunities, health outcomes, and productivity across the life course (Heckman, 2011; Britto et al., 2021). These findings support the view that investment in ECE generates substantial social and economic returns through improved human capital development and reduced long-term public expenditure on remedial education, health care, and social welfare (Becker, 1993; Karoly et al., 2022).

International policy frameworks have reinforced the strategic importance of ECE. Sustainable Development Goal (SDG) 4.2 calls for universal access to quality early childhood development and pre-primary education, while UNESCO's Global Education Monitoring Reports advocate equitable, inclusive, and culturally responsive early learning systems that prepare children for lifelong learning (UNESCO, 2021). Increasingly, international literature also recognises that quality ECE extends beyond access to include teacher competence, curriculum relevance, family engagement, and supportive learning environments (Raikes et al., 2023). Despite these advances, evidence from many developing countries remains comparatively limited, particularly regarding the long-term effectiveness of ECE policies and programmes within diverse socio-cultural contexts.

2.2 Regional and African Perspectives

Across sub-Saharan Africa, governments have increasingly prioritised Early Childhood Education within national education reforms in recognition of its contribution to social inclusion, educational equity, and sustainable development. Regional initiatives supported

by the African Union and the Southern African Development Community (SADC) have encouraged member states to expand access to quality ECE while strengthening teacher preparation, curriculum development, and community participation (African Union, 2022; SADC, 2022).

However, the literature consistently identifies persistent implementation challenges across the region. These include inadequate financing, shortages of qualified teachers, weak infrastructure, limited teaching and learning resources, and disparities between urban and rural communities (Akkari, 2022; UNESCO, 2021). Researchers further argue that effective ECE programmes in Africa should be grounded in local languages, indigenous knowledge systems, and culturally responsive pedagogies that reflect children's lived experiences and strengthen community ownership (Akkari, 2022; Raikes et al., 2023). While regional evidence provides valuable insights, substantial differences in policy environments and implementation capacity highlight the need for country-specific studies that inform national decision-making.

2.3 Early Childhood Education in Botswana

Botswana has made considerable progress in recognising Early Childhood Education as a strategic investment in national development. Government policies increasingly align with international commitments such as Sustainable Development Goal 4.2 and Agenda 2063 through expanded access to pre-primary education and improved policy attention to early childhood development (Pillar, 2023). National statistics indicate steady growth in enrolment, reflecting increased public awareness and government commitment to expanding ECE opportunities (Statistics Botswana, 2022).

Despite these achievements, important challenges continue to affect the quality and equity of ECE provision. Rural communities experience comparatively lower access to quality programmes, shortages of qualified teachers, limited professional development opportunities, inadequate learning resources, and insufficient curriculum contextualisation (Tautona et al., 2024). Recent studies further suggest that teacher preparedness, inclusive education practices, and continuous professional development remain critical factors influencing programme quality and children's learning experiences (Van der Westhuizen & Hannaway, 2024). These findings demonstrate that expanding access alone is insufficient unless accompanied by sustained investment in quality, equity, and teacher professionalization.

2.4 Research Gap and Contribution of the Study

Although the international and regional literature provides substantial evidence regarding the benefits of Early Childhood Education, relatively little research has

examined these issues within the Botswana context from an integrated sustainable human development perspective. Existing Botswana-based studies have largely focused on access, enrolment, policy implementation, or specific aspects of teacher preparation. Comparatively fewer studies have investigated how teacher professionalization, curriculum contextualisation, educational equity, community participation, and policy implementation collectively influence sustainable human development outcomes.

Furthermore, there is limited empirical and longitudinal evidence evaluating the effectiveness of ECE interventions, implementation fidelity, financing models, and long-term educational and socio-economic outcomes within Botswana. The literature also provides relatively little understanding of how indigenous knowledge systems, local cultural practices, and community participation can strengthen curriculum relevance and improve learning outcomes. These limitations have been acknowledged within international reviews, which continue to identify significant evidence gaps relating to ECE implementation in many low- and middle-income countries (Britto et al., 2021; UNESCO, 2021).

This study addresses these gaps by providing a comprehensive analysis of Early Childhood Education in Botswana through the integration of policy analysis, national education statistics, and qualitative teacher perspectives within a conceptual study incorporating mixed-methods elements. By examining teacher professionalization, curriculum contextualisation, educational equity, rural inclusion, and community engagement within a single analytical framework, the study contributes context-specific evidence to support evidence-informed policy, practice, and future research aimed at strengthening sustainable and inclusive Early Childhood Education in Botswana.

3. Theoretical Framework

This study is informed by three complementary theoretical frameworks: Human Capital Theory, the Nurturing Care Framework, and Sustainable Development Goal (SDG) 4.2. Collectively, these frameworks provide a comprehensive lens for understanding the contribution of Early Childhood Education (ECE) to sustainable human development in Botswana. While Human Capital Theory explains the economic value of investing in early childhood education, the Nurturing Care Framework emphasises holistic child development, and SDG 4.2 provides the global policy benchmark against which Botswana's progress is evaluated. Together, these frameworks guided the interpretation of the quantitative and qualitative findings and informed the study's policy recommendations.

3.1 Human Capital Theory

Human Capital Theory, developed by Schultz (1961) and

expanded by Becker (1993), proposes that investments in education, health, and skills development enhance individuals' productivity and contribute to long-term economic growth. Within the context of Early Childhood Education, the theory argues that quality learning experiences during the early years produce lasting benefits through improved cognitive development, educational achievement, employability, and social well-being.

In this study, Human Capital Theory provided the analytical lens for examining Botswana's investment in Early Childhood Education, particularly in relation to teacher qualifications, equitable financing, curriculum quality, and access to early learning opportunities. Quantitative findings on enrolment trends and teacher qualifications were interpreted as indicators of national investment in human capital, while qualitative evidence from teachers helped explain how shortages of qualified personnel, limited professional development, and inadequate learning resources may reduce the long-term effectiveness of these investments.

Although Human Capital Theory provides a valuable economic justification for investing in ECE, it has limitations. The theory primarily emphasises economic productivity and may not adequately capture important social, cultural, emotional, and community dimensions of child development that are particularly relevant within Botswana's diverse cultural contexts. Consequently, additional frameworks are required to provide a more holistic understanding of quality early childhood education.

3.2 Nurturing Care Framework

The Nurturing Care Framework, developed collaboratively by the World Health Organization (WHO), UNICEF, and the World Bank (2018), emphasises that children's optimal development depends upon the interaction of five essential components: good health, adequate nutrition, responsive caregiving, safety and security, and opportunities for early learning. The framework recognises that children's development is influenced by families, communities, educators, and broader policy environments rather than formal education alone.

Within this study, the Nurturing Care Framework guided the interpretation of qualitative findings obtained from early childhood teachers. Teacher experiences relating to classroom resources, curriculum implementation, parental involvement, professional development, and community engagement were analysed as interconnected factors influencing children's learning and well-being. The framework also informed the examination of how cultural responsiveness and supportive learning environments contribute to equitable and inclusive Early Childhood Education in Botswana.

Despite its comprehensive perspective, implementing the Nurturing Care Framework within low-resource settings may present practical challenges. Financial

constraints, shortages of trained personnel, infrastructure limitations, and disparities between urban and rural communities may affect the extent to which all components of nurturing care can be realised. Nevertheless, the framework remains valuable because it encourages integrated approaches involving education, health, families, and communities.

3.3 Sustainable Development Goal (SDG) 4.2

Sustainable Development Goal (SDG) 4.2 seeks to ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are prepared for primary education (UNESCO, 2021). Beyond expanding access, SDG 4.2 promotes equity, inclusion, quality teaching, and lifelong learning as central principles of sustainable educational development.

In this study, SDG 4.2 served as the principal policy framework against which Botswana's Early Childhood Education system was evaluated. Quantitative indicators, including enrolment trends and teacher qualification levels, were examined to assess national progress towards universal access. Qualitative findings concerning curriculum contextualisation, teacher preparedness, resource availability, and educational equity were interpreted as indicators of the extent to which policy aspirations are reflected in classroom practice.

Although SDG 4.2 provides internationally recognised targets for monitoring educational progress, implementation remains challenging in many developing countries due to financial limitations, infrastructure deficits, and contextual differences. Consequently, progress towards achieving SDG 4.2 requires sustained investment, effective policy implementation, continuous monitoring, and strong collaboration among government, educational institutions, communities, and development partners.

3.4 Integration of the Theoretical Frameworks

Rather than applying these frameworks independently, this study integrates them to provide a multidimensional understanding of Early Childhood Education in Botswana. Human Capital Theory explains why investment in ECE is essential for sustainable economic and social development. The Nurturing Care Framework expands this perspective by recognising the importance of holistic child development and supportive learning environments. SDG 4.2 provides the global policy benchmark for evaluating Botswana's progress towards equitable, inclusive, and high-quality Early Childhood Education.

The integration of these frameworks strengthened the analysis by enabling the study to interpret quantitative enrolment trends alongside qualitative teacher experiences while linking both forms of evidence to broader policy objectives. This integrated analytical

approach also informed the study's recommendations for strengthening teacher professionalization, curriculum contextualisation, equitable financing, community participation, and continuous monitoring as essential strategies for advancing sustainable human development through Early Childhood Education in Botswana.

4. Methodology

4.1 Research Design

This study employed a **conceptual research design incorporating mixed-methods elements** to examine the contribution of Early Childhood Education (ECE) to sustainable human development in Botswana. The conceptual component provided the overarching analytical framework through which international literature, national policies, and theoretical perspectives were synthesised. To strengthen the analysis and enhance the practical relevance of the study, quantitative and qualitative evidence was incorporated to illustrate how policy intentions are reflected in educational practice.

The mixed-methods elements enabled methodological triangulation by combining documentary analysis, national education statistics, and qualitative insights from Early Childhood Education teachers. This approach enhanced the credibility of the findings by allowing different sources of evidence to complement one another and provide a more comprehensive understanding of Botswana's ECE system. Rather than treating the quantitative and qualitative data as independent investigations, they were integrated to strengthen interpretation and support evidence-informed conclusions.

4.2 Quantitative Data Sources

The quantitative component relied on secondary data obtained from official government publications and internationally recognised databases, including Statistics Botswana, the Ministry of Child Welfare and Basic Education, and UNESCO Institute for Statistics reports. The analysis focused on national Early Childhood Education indicators covering the period **2020–2024**, including pre-primary enrolment, teacher qualification levels, and access to ECE services.

These indicators were selected because they provide measurable evidence of Botswana's progress towards expanding equitable access to quality Early Childhood Education in line with Sustainable Development Goal (SDG) 4.2. Descriptive statistical analysis was employed to summarise trends and identify patterns relevant to the study objectives.

4.3 Qualitative Data Collection

The qualitative component comprised semi-structured interviews with 20 Early Childhood Education teachers

drawn from urban, peri-urban, and rural schools across Botswana. A purposive sampling strategy was adopted to ensure that participants possessed relevant professional experience and could provide rich information regarding classroom practice, curriculum implementation, teacher professional development, and challenges affecting ECE delivery.

Purposive sampling was considered appropriate because it enabled the inclusion of participants with direct knowledge of the issues under investigation rather than selecting respondents randomly. Recruitment continued until data saturation was achieved, meaning that no substantially new themes or perspectives emerged from subsequent interviews. This approach enhanced the credibility and transferability of the qualitative findings.

Interview data were audio-recorded with participants' consent, transcribed verbatim, and analysed using thematic analysis following the procedures outlined by Braun and Clarke (2006). Codes were developed inductively before being organised into broader themes aligned with the study objectives and theoretical frameworks.

4.4 Data Integration and Triangulation

The study adopted a triangulation strategy to integrate evidence from policy documents, quantitative statistics, and qualitative interview findings. Triangulation was used to examine the extent to which different sources of evidence converged or diverged in explaining the state of Early Childhood Education in Botswana.

For example, quantitative data indicated disparities in teacher qualification levels and access to Early Childhood Education between urban and rural areas. These findings were reinforced by teachers' qualitative accounts describing limited professional development opportunities, shortages of teaching resources, and challenges associated with implementing culturally responsive curricula in rural schools. The convergence of these independent sources strengthened the credibility of the study's conclusions and demonstrated how policy intentions are experienced in practice.

4.5 Trustworthiness of the Study

Several strategies were employed to enhance the trustworthiness of the qualitative findings. Credibility was strengthened through the use of multiple data sources, allowing findings from policy documents, national statistics, and teacher interviews to be compared and corroborated. Dependability was promoted by applying a consistent interview protocol and systematic thematic analysis. Confirmability was enhanced through careful documentation of coding decisions and analytical procedures, while transferability was supported by providing sufficient contextual information regarding the participants and educational settings to enable readers to assess the applicability of the findings to similar

contexts.

4.6 Ethical Considerations

Ethical principles were observed throughout the study. Ethical approval was obtained from the relevant institutional authorities before data collection commenced. Participation in the study was entirely voluntary, and all participants provided informed consent prior to the interviews. Participants were informed of the purpose of the study, their right to withdraw at any stage without penalty, and the intended use of the research findings.

To protect participants' privacy, interview transcripts were anonymised, and all identifying information was removed during data analysis and reporting. Data were stored securely and accessed only by the researcher. **Participants did not receive financial compensation for their participation**, thereby minimising the possibility of undue influence on their decision to participate. Throughout the study, confidentiality, anonymity, respect, and professional integrity were maintained in accordance with accepted ethical standards for educational research.

5. Results

5.1 Quantitative Findings: Enrolment Trends and Teacher Qualifications

The quantitative analysis indicates that Botswana has made measurable progress in expanding access to Early Childhood Education (ECE). According to Statistics Botswana (2022), pre-primary enrolment increased to **41,539 children in 2022**, reflecting continued government commitment to improving access to early learning opportunities. Enrolment rates remained considerably higher in urban areas (approximately 78%) than in rural districts (approximately 45%), demonstrating persistent geographical disparities in access to quality ECE services. Gender parity in enrolment was generally achieved nationally, although minor disparities persisted in some rural communities. These findings suggest that while Botswana has made significant progress towards equitable participation, further efforts are required to ensure that children in underserved areas have comparable access to quality early childhood education. Approximately **60% of Early Childhood Education teachers possessed formal pre-primary teaching qualifications**, referring to recognised qualifications in Early Childhood Education or Pre-Primary Education accredited by Botswana's teacher education institutions and recognised by the Ministry of Child Welfare and Basic Education (Pillar, 2023). The remaining teachers primarily held general teaching qualifications or had acquired classroom experience through in-service or on-the-job training. This finding highlights progress in strengthening teacher professionalization while also indicating continued workforce development needs, particularly in rural schools. **Table 1** summarises enrolment trends and available information on teacher qualifications between 2020 and 2024.

Although the available data demonstrate substantial growth in enrolment, the absence of comprehensive teacher qualification data for several years limits longitudinal comparisons. Future national education reporting would benefit from more consistent monitoring of teacher qualifications and programme quality indicators alongside enrolment statistics.

5.2 Qualitative Findings

Analysis of the teacher interviews identified four interrelated themes influencing the quality of Early Childhood Education in Botswana.

Limited teaching and learning resources. Teachers consistently reported shortages of age-appropriate learning materials, inadequate classroom infrastructure, and limited access to instructional resources, particularly within rural schools. These constraints reduced opportunities for learner-centred and play-based learning.

Large class sizes and teacher workload. Participants indicated that overcrowded classrooms limited individual attention and reduced opportunities to implement developmentally appropriate teaching strategies. These challenges were particularly evident in schools with limited staffing.

Professional development needs. Teachers emphasised that ongoing mentorship, continuous professional development, and regular in-service workshops were essential for strengthening curriculum implementation, inclusive education practices, and classroom innovation. Participants noted that institutional support from schools and district offices would enhance teacher confidence and instructional quality.

Curriculum contextualisation and community engagement. Teachers reported that aspects of the curriculum did not always reflect children's local languages, cultural experiences, and community contexts. To address this challenge, many educators adapted lessons by using locally available teaching materials, involving parents and community members, and incorporating culturally relevant learning activities. Such practices promoted learner engagement while strengthening partnerships between schools and communities (Akkari, 2022).

Collectively, these findings demonstrate that teacher commitment and innovation remain important strengths within Botswana's ECE system; however, sustained institutional support is required to enable teachers to implement quality and inclusive early childhood education effectively.

5.3 Integration of Quantitative and Qualitative Findings

The integration of quantitative and qualitative evidence provides a comprehensive understanding of Early Childhood Education in Botswana. Quantitative findings demonstrate measurable progress in expanding enrolment and improving teacher qualifications. However, qualitative evidence indicates that these

Table 1. Early Childhood Education Enrolment and Teacher Qualification Trends in Botswana (2020–2024)

Year	Enrolment (Children)	Teacher Qualification Information	Qualified Teachers
2020	23,000 (estimated; COVID-19 affected)	Data not available	Data not available
2021	25,640 (Ministry estimate)	Data not available	Data not available
2022	41,539	Reported by Statistics Botswana	Approximately 60%
2023	42,000 (projected)	Data not available	Data not available
2024	Data incomplete	Data not available	Data not available

Source: Statistics Botswana (2022); Pillar (2023).

achievements have not always translated into consistent improvements in classroom practice.

For example, although approximately 60% of teachers possessed recognised pre-primary qualifications, interview participants continued to report limited access to specialised professional development, shortages of instructional resources, and inadequate support for curriculum implementation, particularly in rural schools. Similarly, while national enrolment figures demonstrate increased access to Early Childhood Education, teachers described persistent disparities in infrastructure, learning materials, and educational opportunities between urban and rural communities.

The convergence of these findings illustrates that Botswana has established a strong policy foundation for Early Childhood Education, but implementation remains uneven across geographical locations. This triangulation strengthens the credibility of the study by demonstrating consistency between national education statistics and teachers' lived experiences. The findings therefore suggest that expanding access alone is insufficient without sustained investment in teacher professionalization, equitable resource allocation, curriculum contextualisation, and continuous monitoring of programme quality.

6. Discussion and Implications

The findings of this study demonstrate that Botswana has made commendable progress in expanding access to Early Childhood Education (ECE), reflecting the Government's commitment to improving children's educational opportunities and advancing Sustainable Development Goal (SDG) 4.2. Increased enrolment, strengthened policy recognition of ECE, and continued investment in teacher preparation illustrate important national achievements. However, the findings also indicate that expanding access alone does not guarantee equitable, high-quality early childhood education. Persistent disparities in teacher qualifications, resource availability, curriculum contextualisation, and rural access continue to affect the quality and inclusiveness of ECE provision.

These findings are consistent with Human Capital Theory, which argues that investment in education generates long-term social and economic benefits only when educational quality accompanies increased participation (Becker, 1993; Schultz, 1961). Although Botswana has expanded enrolment, the qualitative findings suggest that shortages of specialised teacher preparation, limited professional development, and unequal distribution of educational resources reduce the potential returns on these investments. Consequently, strengthening teacher professionalization should be viewed not merely as an educational objective but also as a strategic investment in sustainable human capital development.

The findings similarly reinforce the principles of the Nurturing Care Framework, which recognises that children's learning and development depend upon supportive environments extending beyond classroom instruction. Teachers consistently identified shortages of learning materials, limited parental engagement, inadequate mentoring opportunities, and insufficient curriculum contextualisation as barriers to effective learning. These findings suggest that improving educational outcomes requires integrated support involving schools, families, communities, health services, and government institutions rather than relying solely on classroom-based interventions.

Furthermore, the findings demonstrate that Botswana has made encouraging progress towards achieving Sustainable Development Goal (SDG) 4.2, particularly in expanding access to pre-primary education. Nevertheless, the study reveals that policy implementation remains uneven across geographical locations. Rural schools continue to experience comparatively lower access to qualified teachers, learning resources, and culturally responsive curricula than their urban counterparts. These disparities indicate that achieving universal access must be accompanied by deliberate strategies to improve educational quality, equity, and inclusion throughout the country.

The integration of quantitative and qualitative findings provides important insight into the reasons underlying these persistent challenges. National statistics indicate

steady growth in enrolment and improvements in teacher qualifications, while teachers' experiences reveal that implementation challenges continue to affect classroom practice. This divergence highlights a policy-practice gap whereby national policies are well developed but are not always implemented consistently across schools due to financial constraints, infrastructure limitations, uneven teacher deployment, and variations in institutional support. The triangulation of these findings strengthens the credibility of the study by demonstrating that both statistical evidence and practitioner experiences point to similar systemic challenges.

Policy Implications

The findings have several important implications for educational policy and practice in Botswana.

Short-term priorities

Immediate attention should focus on strengthening continuous professional development for Early Childhood Education teachers through regular in-service training, mentorship programmes, and improved access to teaching and learning resources. Establishing systematic monitoring mechanisms for classroom quality and teacher support would also enhance policy implementation.

Medium-term priorities

The Government should strengthen equitable resource allocation by providing targeted support to rural and underserved communities. Incentive schemes aimed at attracting and retaining qualified Early Childhood Education teachers in rural schools should be expanded. Curriculum review processes should also incorporate indigenous knowledge systems, local languages, and culturally responsive pedagogical approaches to improve relevance and learner engagement.

Long-term priorities

Sustainable improvement requires increased investment in Early Childhood Education through ring-fenced financing, strengthened intersectoral collaboration, and continuous policy evaluation. Partnerships among government ministries, teacher education institutions, communities, development partners, and the private sector should be strengthened to promote coordinated implementation of quality Early Childhood Education. Long-term monitoring systems should also assess not only enrolment but also teacher quality, learning outcomes, inclusion, and child well-being.

Implementing these recommendations will inevitably require additional financial and institutional investment. However, evidence from Human Capital Theory suggests that investments made during early childhood generate substantial long-term returns through improved educational achievement, workforce productivity, health outcomes, and reduced social inequalities.

Consequently, strengthening Early Childhood Education should be regarded not as a short-term expenditure but as a strategic national investment in Botswana's future human and socio-economic development.

Overall, this study underscores the importance of aligning national Early Childhood Education policies with local realities. Sustainable progress will depend not only on expanding access but also on improving educational quality, promoting equity, strengthening teacher professionalization, contextualising curricula, and fostering meaningful collaboration among schools, families, communities, and policymakers. Such an integrated approach will significantly strengthen Botswana's capacity to achieve inclusive and sustainable Early Childhood Education consistent with national development priorities and the aspirations of Sustainable Development Goal 4.2.

7. Conclusion

This study examined the contribution of Early Childhood Education (ECE) to sustainable human development in Botswana through a conceptual study incorporating mixed-methods elements. Drawing on policy analysis, national education statistics, and qualitative insights from Early Childhood Education teachers, the study found that Botswana has made significant progress in expanding access to ECE and strengthening policy commitment to early childhood development.

The findings also reveal that important challenges remain. Persistent disparities in teacher qualifications, resource availability, curriculum contextualisation, and equitable access between urban and rural communities continue to influence the quality and inclusiveness of Early Childhood Education. The integration of quantitative and qualitative findings demonstrates that, although Botswana has established a strong policy framework for ECE, implementation remains uneven across educational settings.

Guided by Human Capital Theory, the Nurturing Care Framework, and Sustainable Development Goal (SDG) 4.2, this study concludes that sustainable improvements in Early Childhood Education require more than expanded enrolment. Equal attention must be given to teacher professionalization, equitable resource allocation, culturally responsive curricula, effective policy implementation, and continuous quality improvement.

Overall, quality Early Childhood Education remains a strategic investment in Botswana's sustainable human development. Continued commitment to equitable, inclusive, and high-quality ECE will strengthen children's learning outcomes, promote social inclusion, and contribute to the country's long-term educational and socio-economic development.

8. Recommendations for Further Study

To strengthen the evidence base for Early Childhood Education in Botswana and inform future policy and prac-

tice, the following recommendations are proposed.

8.1 Research

1. Longitudinal Impact Studies

Future research should examine the long-term educational, social, health, and economic outcomes of participation in Early Childhood Education to better understand its contribution to sustainable human development.

2. Teacher Professional Competencies

Further studies should investigate how teacher qualifications, continuous professional development, and mentoring programmes influence classroom quality and children's learning outcomes.

3. Curriculum Contextualisation

Researchers should explore effective approaches for integrating indigenous knowledge systems, local languages, and culturally responsive pedagogies into Early Childhood Education curricula across Botswana.

8.2 Policy

4. Sustainable Financing Models

Future policy-oriented research should evaluate sustainable financing mechanisms for Early Childhood Education, including public-private partnerships, community participation, and innovative funding strategies that promote equitable access and programme quality.

5. Monitoring and Evaluation Systems

Further investigation is needed to develop robust national monitoring systems capable of assessing not only enrolment but also teacher quality, learning outcomes, inclusion, and programme effectiveness over time.

8.3 Practice

6. Parental and Community Engagement

Future studies should examine strategies for strengthening partnerships among schools, families, and communities to support children's learning and development within diverse cultural and socio-economic contexts.

7. Inclusive Classroom Practice

Further research should identify practical strategies that support teachers in implementing inclusive, culturally responsive, and learner-centred pedagogies, particularly within rural and underserved communities.

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