

The Evolution of Pedagogy for The Effectiveness of Competency-Based Curriculum (CBC) Implementation in Kenya

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Abstract-Transitioning from the 8-4-4 system to the Competency-Based Curriculum (CBC) in Kenya represents a fundamental shift toward learner-centered approaches and 21st-century skills development. However, challenges in adapting pedagogical practices hinder effective implementation. This systematic literature review examined the role of pedagogical evolution in CBC implementation effectiveness, focusing on learner-centered approaches, continuous assessment strategies, and technology integration. Findings revealed that learner-centered approaches positively influence CBC effectiveness by promoting student engagement and flexible curricula. Continuous assessment strategies enhance implementation through frequent formative assessments focused on learning outcomes. Technology integration significantly improves curriculum delivery and student engagement. The study concludes that pedagogical evolution plays a critical role in CBC success and recommends policy revisions to promote learner-centered practices, resource allocation for teacher training, and enhanced technology integration initiatives by the Kenya Institute of Curriculum Development.

Key Words: *Pedagogy Evolution, Competency-Based Curriculum, Learner-Centered Approaches, Continuous Assessment*

I. INTRODUCTION

Education serves as a fundamental catalyst for both national development and individual growth, driving economic progress, social advancement, and innovation (Corsi, 2021). At the national level, investment in education cultivates skilled workforces, fosters technological advancement, and promotes social cohesion (Gulled, 2023). However, traditional educational systems worldwide face significant challenges. Brinkmann (2019) observed that conventional teaching methods often fail to accommodate diverse learning styles, relying on rigid curricula that prioritize memorization over critical thinking. Persistent disparities in accessing quality

education based on socioeconomic factors continue perpetuating inequality (Gleeson, 2022).

The Competency-Based Curriculum emphasizes mastery of specific skills, knowledge, and abilities over traditional content coverage. Nyaboke, Kereri and Nyabwari (2021) indicate that CBC addresses inherent limitations of traditional education by focusing on personalized learning experiences tailored to individual student needs. This approach promotes practical skill development, critical thinking, and problem-solving abilities, preparing students for success in diverse contexts (Gulled, 2023). Despite its benefits, CBC faces numerous implementation challenges including teacher training, assessment methods, and monitoring mechanisms. In Tanzania, Nombi (2022) identified inadequate government support and insufficient ICT skills among teachers as primary barriers. Muchira and Wawire (2023) observed common challenges across the United States, South Korea, and Kenya including limited teacher training opportunities and inconsistent pedagogical approaches.

Kenya's pedagogical evolution reflects socio-political changes through various phases (Ongowo, 2022). The introduction of the 8-4-4 system aimed at practical education but maintained teacher-centered approaches. Currently, CBC adoption signifies a shift toward learner-centered education, emphasizing critical thinking and holistic development (Manduku & Sang, 2021). Pedagogical transformations in Kenya have progressively shifted from rote learning to competency development. Education has transitioned from teacher-centered to learner-centered approaches under CBC, promoting active student engagement. The shift from examination-oriented systems to continuous assessment aims to reduce stress while providing comprehensive evaluations (Opondo & Afwande, 2023).

Despite ongoing efforts to shift toward learner-centered approaches, challenges remain in effectively adapting pedagogical practices to support CBC implementation (Ongowo, 2022). Ngeno (2023) found that significant numbers of teachers reported feeling unprepared for CBC implementation due to limited training. Another challenge involves overdependence on print media despite efforts toward technology-enhanced learning (Asava, 2021). Previous studies focused on specific counties, limiting generalizability. This study explores pedagogical evolution and its implications for successful CBC implementation, addressing key questions regarding teaching practice alignment with CBC principles, educator readiness to adopt learner-centered approaches, and pedagogical shifts' impact on student learning outcomes.

The study objective was to examine the role of pedagogical evolution (learner-centered approaches, continuous assessment strategies, and technology integration) on the effectiveness of Competency-Based Curriculum (CBC) implementation in Kenya.

II. LITERATURE REVIEW

Learner-centered approaches have demonstrated positive effects on CBC implementation across various contexts. Kimario and Otieno (2022) showed that learner-centered approaches positively affected student achievement in Tanzania through personalized instruction tailored to individual needs. The study employed a convergent mixed methods design with 142 respondents including teachers, students, and education officials. Similarly, Asava (2021) examined learner-centered approaches' influence on CBC implementation in Kenyan public primary schools. While teachers underwent training, insufficient digital devices and implementation challenges persisted, particularly in visual communication competencies.

Continuous assessment strategies constitute critical components of effective CBC implementation. Otieno and Machani (2022) found that most Kenyan teachers lacked sufficient preparation for assessment activities aligned with CBC, hindering students' competency acquisition. The study revealed that teachers' deficiency in formative assessment understanding and application impeded curriculum goals achievement. Ngulube (2024) examined educators' perceptions of continuous assessment

implementation in Zimbabwe, revealing that many teachers' practices deviated significantly from policy guidelines. Teachers lacked necessary competencies for continuous assessment implementation and primarily focused on cognitive attainment while neglecting affective and psychomotor behaviors.

Technology integration presents both opportunities and challenges for CBC implementation. Murithi and Yoo (2021) examined teachers' ICT use in implementing CBC in Kenyan public primary schools through an online questionnaire completed by 351 teachers. The study revealed perceived inadequacies in ICT facilities impeding technology integration, with teachers receiving only rudimentary computer literacy training. Despite acknowledging computers' essential role, teachers faced challenges effectively incorporating technology into lessons. Orina and Macharia (2023) examined technology integration in science learning areas within CBC in Nairobi County, highlighting necessities for skilled teachers, reliable electricity, consistent internet connectivity, and sufficient ICT devices for effective classroom technology integration.

III. RESEARCH METHODOLOGY

This study adopted a systematic literature review methodology. Systematic reviews constitute rigorous methods for gathering, assessing, and synthesizing existing research (Ritterbusch & Teichmann, 2023). The process involves formulating clear research questions, developing systematic search strategies, screening studies based on predefined criteria, extracting data systematically, and synthesizing findings (Booth & Papaioannou, 2021). This methodology provides comprehensive approaches to synthesizing existing research, policies, and educational reforms related to pedagogical practices, enabling identification of key trends, challenges, and best practices in pedagogy. Systematic reviews enhance credibility and reliability by minimizing bias and ensuring transparency in the review process.

IV. RESULTS AND DISCUSSION

4.1 Learner-Centered Approaches and CBC Implementation

The shift from teacher-centered to learner-centered approaches represents significant educational evolution. In traditional models, educators serve as knowledge transmitters with students occupying

passive roles (Owuondo, 2023). CBC introduction marked shifts toward learner-centered paradigms where students are placed at learning centers, with teachers assuming facilitator roles. Teachers transition from "sage on the stage" to guides, empowering students to take charge of learning. Through facilitating inquiry-based activities and collaborative projects, teachers create dynamic environments fostering curiosity and creativity (Nteziyaremye & Murenzi, 2024).

Learner-centered approaches promote heightened student engagement critical for CBC effectiveness. Educators prioritize active participation and hands-on experiences resonating with students' interests (Mugambi & Chepkonga, 2022). Through meaningful activities, students develop deeper understanding and genuine learning passion. Flexible student-centered curricula allow personalized experiences tailored to diverse needs, empowering students to explore interests and develop essential competencies (Nteziyaremye & Murenzi, 2024). This personalized approach promotes inclusivity, equity, and academic excellence, contributing to overall CBC implementation effectiveness.

Challenges include paradigm shifts needed in teaching methodologies and classroom dynamics (Sifuna & Obonyo, 2019). Transitioning requires educators to adopt facilitative roles, demanding significant professional development (Manduku & Sang, 2021). Resistance to change among stakeholders accustomed to traditional practices presents additional obstacles.

4.2 Continuous Assessment and CBC Implementation

The traditional 8-4-4 system was characterized by heavy examination reliance, placing immense student pressure and resulting in high stress (Kubai, 2023). Students memorized vast information amounts, leaving little room for deeper understanding (Opondo, Afwande & Kamau, 2023). CBC represents departure toward holistic continuous assessment approaches. Continuous assessment's frequent nature ensures students' progress is regularly monitored, providing timely feedback informing instructional decisions. By assessing understanding at regular intervals, educators identify strength areas and needed improvements, enabling teaching strategy adjustments (Kubai, 2023).

Formative assessment emphasis fosters deeper learning experiences. Unlike summative assessments measuring achievement at learning period ends, formative assessments support student learning as it unfolds (Momanyi & Rop, 2020). By providing immediate feedback, formative assessments help students identify misconceptions and set improvement goals, promoting metacognitive awareness and growth mindsets (Kubai, 2023). Focusing on learning outcomes encourages demonstrating understanding through practical application and problem-solving, aligning with CBC goals.

Challenges include necessary mindset shifts among educators, students, and parents. Previous system focus on high-stakes exams promotes rote memorization (Nyaboke, Kereri & Nyabwari, 2021). Embracing continuous assessment demands substantial professional development for educators. Resource availability and infrastructure support present additional hurdles for effective implementation.

4.3 Technology Integration and CBC Implementation

Technology integration represents significant instructional practice evolution (Adannur, 2024). CBC embraces this trend, advocating digital technology integration to augment traditional methods (Keengwe & Onchwari, 2019). Through digital tools, educators create dynamic environments catering to diverse learning needs (Murithi & Yoo, 2021). Technology integration through platforms like Animation, Educloud Content, and Edu channel by KICD has significantly influenced CBC effectiveness. Animation offers engaging content capturing student attention and fostering deeper understanding (Adannur, 2024). Animated videos make complex topics more accessible, providing multisensory approaches catering to different learning styles.

Educational content availability on platforms has democratized resource access, particularly in underserved areas (Otieno, 2020). Students and educators access wide curriculum-aligned material ranges including videos, quizzes, and e-books. These platforms offer learning flexibility, allowing self-paced learning and promoting autonomy (Murithi & Yoo, 2021). By providing access to quality educational content, these platforms contribute to CBC implementation effectiveness by supporting

personalized learning, enhancing student engagement, and facilitating 21st-century skills acquisition.

Challenges include limited digital infrastructure access in many areas, particularly rural regions (Adannur, 2024). Inadequate internet connectivity and device access hinder students' abilities to leverage digital platforms (Tokareva, Smirnova & Orchakova, 2019). Disparities in digital literacy skills pose challenges to effectively navigating technology-enhanced resources. Content quality variations on platforms may impact effectiveness in supporting CBC implementation.

CONCLUSION

Learner-centered approaches significantly affect CBC implementation effectiveness in Kenya. Adopting practical experiences, student engagement, and flexible curricula leads to improved CBC effectiveness. However, adoption faces hurdles including paradigm shift needs, stakeholder resistance, and effectiveness concerns.

Continuous assessment strategies positively affect CBC implementation effectiveness. Adopting strategies encompassing assessment frequency, formative assessments, and learning outcome focus leads to improved effectiveness. However, shifting faces challenges including stakeholder mindset shifts, adequate resource provision, and overcoming resistance.

Technology integration positively affects CBC implementation effectiveness. Integration and use of animation, Educloud content, and Edu channel leads to improved effectiveness. However, integration faces challenges including limited infrastructure access, digital literacy discrepancies, and content quality variations.

RECOMMENDATIONS

1. The study recommends policy revisions to explicitly promote practical experiences, student engagement, and flexible curricula aligned with CBC principles. Allocating resources for teacher training programs is crucial to support educators in adopting learner-centered pedagogies. Policymakers should develop guidelines outlining best practices. The Ministry of

Education should facilitate dialogue and offer professional development opportunities focused on pedagogical innovation.

2. Stakeholders should prioritize initiatives facilitating mindset shifts among educators, students, parents, and policymakers. This involves raising awareness about continuous assessment benefits, providing training programs, and fostering supportive environments. Efforts should actively engage stakeholders in collaborative decision-making to ensure buy-in and ownership.
3. Kenya Institute of Curriculum Development should prioritize technology integration initiatives. This includes investing in digital infrastructure to ensure widespread access to technology-enabled learning environments. KICD should collaborate with stakeholders to address digital literacy skill discrepancies through targeted training programs. KICD should establish quality assurance mechanisms to ensure digital educational content relevance and consistency.

REFERENCES

- [1] Adannur, H. I. (2024). Integrating Digital Literacy in Competency-Based Curriculum among Junior Secondary Schools in Kenya. *African Journal of Emerging Issues*, 6(6), 85-97.
- [2] Asava, J. K. (2021). Influence of Teacher Pedagogies on Implementation of Competency-based Curriculum in Public Primary Schools in Westlands Sub-County, Nairobi City County, Kenya.
- [3] Booth, A., & Papaioannou, D. (2021). *Systematic approaches to a successful literature review*. Sage Publications.
- [4] Brinkmann, S. (2019). Teachers' beliefs and educational reform in India: from 'learner-centred' to 'learning-centred' education. *Comparative Education*, 55(1), 9-29.
- [5] Corsi, G. (2021). 'Education has no end': Reconciling past and future through reforms in the education system. In *Education in Flux* (pp. 95-104). Routledge.
- [6] Gleeson, J. (2022). Evolution of Irish curriculum culture: Understandings, policy, reform and change. *Irish Educational Studies*, 41(4), 713-733.

- [7] Gulled, Y. M. (2023). Paradigms for Contextualizing Competency Based Curriculum in Africa: Inferences from the OECD Countries. *Education Quarterly Reviews*, 6(1), 90-112.
- [8] Keengwe, J., & Onchwari, G. (2019). *Handbook of research on literacy and digital technology integration in teacher education*. IGI Global.
- [9] Kimario, T. T., & Otieno, K. O. (2022). Effects of Competency-Based Curriculum on Students' Education Achievement: A Study of Secondary Schools in Arusha City Council, Tanzania. *Journal of Research Innovation and Implications in Education*, 6(1), 201-210.
- [10] Kubai, E. (2023). A Critical Review of the Challenges Facing the Competency-Based Assessments in the Competency-Based Curriculum in Nairobi County, Kenya. *Journal of Education and Practices*, 3(3), 1-13.
- [11] Manduku, J., & Sang, H. (2021). Innovative pedagogies in competency based learning: A critical analysis between the traditional and the CBC curriculum. *International Journal of Research in Education and Psychology*, 7(2), 1-18.
- [12] Momanyi, J. M., & Rop, P. K. (2020). Teacher preparedness for the implementation of competency based curriculum in Kenya. *The Cradle of Knowledge*, 7(1), 10-15.
- [13] Muchira, J. M., Morris, R. J., & Wawire, B. A. (2023). Implementing Competency Based Curriculum in Kenya: Challenges and Lessons from South Korea and USA. *Journal of Education and Learning Archives*, 12(3), 20-39.
- [14] Mugambi, M., & Chepkonga, Y. (2022). Application of Pragmatism to Competency Based Curriculum in Kenya. *International Journal of Current Science Research and Review*, 5(10), 3984-3992.
- [15] Murithi, J., & Yoo, J. E. (2021). Teachers' use of ICT in implementing the competency-based curriculum in Kenyan public primary schools. *Innovation and Education*, 3(1), 1-11.
- [16] Ngeno, B. (2023). The Relationship between Teacher Training and Implementation of a Competency-Based Curriculum in Public Primary Schools. *East African Journal of Education Studies*, 6(1), 280-290.
- [17] Ngulube, L. N. (2024). Perceptions of Educators on the Implementation of Continuous Assessment at Secondary School Level. *International Journal of Social Sciences*, 21(1), 65-84.
- [18] Nomboi, U. (2022). Competency-Based Curriculum in the Teachers Colleges: The Challenges. *European Journal of Alternative Education Studies*, 7(1), 56-78.
- [19] Nteziyaremye, A., & Murenzi, J. D. D. (2024). Implementation of Competence-Based Curriculum for Kinyarwanda Subject in Rwanda. *African Journal of Empirical Research*, 5(2), 438-452.
- [20] Nyaboke, R., Kereri, D., & Nyabwari, L. (2021). Competence-based curriculum in Kenya and the challenge of vision 2030. *International Journal of Education, Technology and Science*, 1(4), 155-169.
- [21] Ongowo, R. O. (2022). Towards a Competency Based Curriculum: A Pedagogic Perspective. *Journal of Technology & Socio-Economic Development*, 10(1), 105-117.
- [22] Opondo, R. O., & Afwande, J. (2023). Challenges Facing Implementation of Competency-Based Assessment in Kenyan Primary Schools. *International Journal of Education and Research*, 11(1), 21-32.
- [23] Opondo, R. O., Afwande, J., & Kamau, L. N. (2023). Challenges Facing Implementation of Competency-Based Assessment. *International Journal of Education and Research*, 11(1), 21-32.
- [24] Orina, W. A., & Macharia, S. (2023). Technology Integration in Science Learning Areas in the Kenyan Competency-Based Curriculum. *The International Journal of Humanities & Social Studies*, 11(5), 170-187.
- [25] Otieno, D. (2020). *Integrating digital literacy in competency-based curriculum*. IGI Global.
- [26] Otieno, M., & Machani, A. (2022). Teachers' Competencies in Assessment of Competency-Based Curriculum among Grades 1, 2 and 3. *International Journal of Humanities Social Sciences and Education*, 9(12), 37-45.
- [27] Owuondo, J. (2023). Disrupting Kenya's Education System: Advancing towards a Learner-Centered Paradigm. *International Journal of Research and Scientific Innovation*, 10, 23-34.
- [28] Ritterbusch, G. D., & Teichmann, M. R. (2023). Defining the metaverse: A systematic literature review. *IEEE Access*, 11, 12368-12377.

- [29] Sifuna, D. N., & Obonyo, M. M. (2019). Competency based curriculum in primary schools in Kenya. *Journal of Popular Education in Africa*, 3(7), 39-50.
- [30] Tokareva, E. A., Smirnova, Y. V., & Orchakova, L. G. (2019). Innovation and communication technologies in higher education. *Education and Information Technologies*, 24(5), 3219-3234.