

Early Career Selection in Kenya's CBC: A Critique of Pathways and Implications

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Abstract

Kenya's Competency-Based Curriculum (CBC) requires learners aged 14-15 to select a career pathway (STEM, Social Sciences, or Arts and Sports Science) at entry into Senior Secondary School. This early specialisation mechanism risks being developmentally premature, inequitable, and operationally rigid, yet its implications for long-term career development have not been systematically critiqued. Employing a three-step critical policy analysis, this paper traces global and local forces shaping CBC, analyses pathway selection through Super's vocational development theory, and examines political and economic factors including resource allocation and infrastructure disparities. The analysis reveals a "flexibility paradox": CBC promises structural flexibility but current implementation produces practical rigidity. Resource constraints, lack of standardised psychometric tools, a shortage of trained career counsellors, and tightly bundled subject packages make pathway switching difficult. Requiring pathway commitment at age 14-15 contradicts Super's exploration stage, which emphasises tentative preferences and progressive self-crystallisation through experience. The paper concludes that CBC's early pathway selection mechanism is developmentally premature, exacerbates educational inequalities, and creates psychological distress for learners who later wish to change direction. Without systemic changes, CBC risks replacing one rigid system (8-4-4) with another wearing the language of flexibility. To reconcile CBC's theoretical promise with developmental realities, the paper proposes modular credit systems, structured switching windows (end of Grade 10, mid-Grade 11), culturally validated psychometric assessments, continuous termly career guidance, school clusters for shared resources, delayed specialisation until Grades 11-12, and decoupling university admission from rigid pathway requirements.

Keywords: Competency-Based Curriculum, Career Pathway Selection, Vocational Maturity, Early Specialisation, Critical Policy Analysis

Introduction

This section establishes the background and rationale for the study. It outlines the problem of early career pathway selection under Kenya's CBC, presents the research questions, and describes the theoretical framework underpinning the critique.

Background and Context

The challenge of preparing young people for career trajectories through secondary education is a global policy concern (Eichhorst et al., 2015; UNESCO, 2021). Education systems worldwide balance early specialisation benefits against risks of premature foreclosure (Brunello & Checchi, 2007; Hanushek & Wößmann, 2006). Most OECD countries have near-universal enrolment for ages 6–14 (OECD, 2025), but some introduce tracking as early as age 10 or 11, differentiating by programme orientation. While this can respond to diverse student needs, it may restrict flexibility and reinforce socio-economic disparities (OECD, 2025; Woessmann, 2016).

International evidence on early specialisation is mixed. Germany's dual vocational training system shows positive outcomes when supported by career guidance, employer partnerships, and multiple pathways (Eichhorst et al., 2015). However, a Korean study found early specialisation lowered early-career wages and adaptive skills (Lee & Park, 2025). Students specialising at age 16 have stronger vocational outcomes, higher STEM university enrolment, and better employment rates than those specialising earlier (Malamud, 2010). Thus, aligning vocational opportunities with natural transition points is advantageous.

Super's vocational development theory explains why timing matters. Career development is a lifelong, multi-stage process (Super, 1990). The exploration stage (ages 14-24) is characterised by tentative preferences, progressive self-concept crystallisation, and legitimate floundering. Individuals should use classes, work experiences, and hobbies to identify interests before committing (Lane & Adair, 2022). Super et al. (1996) advocated that occupational choice should be an ongoing process, not a one-time decision. This raises fundamental questions about requiring 14- to 15-year-olds to make irreversible career commitments.

The challenge is particularly acute in sub-Saharan Africa. Africa has the world's fastest-growing youth population, i.e., 426 million (22.6% of global youth) (Nwafor, 2025). Youth unemployment stands at nearly 14%, with many trapped in informal jobs. Africa must create 20 million jobs annually (The New Times, 2025). Skills mismatches compound the problem: vertical mismatches increase unemployment odds by 24%, horizontal by 16% (Gohi, 2026). The ILO estimates 70.9 million youth in sub-Saharan Africa are NEET (23.2%) (Nwafor, 2025). Many countries have placed skill development at the centre of policy, integrating vocational subjects into secondary education (ADEA, 2015).

Kenya's transition from 8-4-4 to the Competency-Based Curriculum (CBC), initiated in 2017, attempts to address these challenges through a learner-centred, competency-driven approach (KICD, 2017; MoE, 2019). Central to CBC is early career pathway selection at Senior Secondary (Grades 10-12), where learners choose among STEM, Social Sciences, or Arts and Sports Science (KICD, 2020). This departs from 8-4-4's uniform curriculum, which delayed specialisation until later secondary years. Proponents argue early specialisation enhances motivation, reduces overload, and aligns with labour market needs (MoE, 2019).

However, implementation has significant concerns. Former KNUT Secretary General Wilson Sossion warned that many schools lack trained teachers, facilities, and infrastructure to support pathway choices; choosing Arts or Sports could leave students without viable career prospects due to lack of professional leagues and training facilities (Sossion, 2026). A report from Vihiga Boys High School found about a quarter of Grade 10 students undecided, with parental influence and peer pressure affecting choices (Oteng'o, 2026). KUCCPS has pushed for early career assessments in junior schools (KUCCPS, 2025). Moreover, Ministry guidelines indicate that pathway selection ends at junior school (Grade nine), raising questions about flexibility for learners who wish to change direction later (MoE, 2024).

Despite its theoretical promise, CBC's early selection mechanism raises fundamental questions about developmental appropriateness, equity, and long-term career adaptability, questions this paper systematically addresses.

Statement of the Problem

Despite CBC's intention to provide flexible career pathways, several critical gaps have emerged. First, requiring learners aged 14 -15 to select pathways is developmentally premature (Super, 1990; Lavrijsen & Nicaise, 2017; OECD, 2018), yet CBC mandates selection at Grade 9 -10 with limited revision mechanisms. Second, policy documents emphasise flexibility, but subject bundling, lack of switching windows, and university requirements create path dependency, i.e., "theoretical flexibility with operational rigidity", without critical analysis of long-term career adaptability. Third, objective, culturally validated assessment tools are not systematically deployed. Most placement relies on subjective teacher recommendations; fewer than 30% of public secondary schools employ qualified counsellors (Odhiambo & Ooko, 2021), and KNEC's interest questionnaires (KNEC, 2024) remain unvalidated. Fourth, many schools, especially in rural areas, lack laboratories, studios, and trained teachers for all three pathways (Mwangi & Ndung'u, 2023). Learner "choice" often reflects school availability, reinforcing inequalities. Fifth, although CBC aims to replace the exam-centred 8-4-4 system, implementation evidence shows examinations and teacher subjectivity still dominate placement, a policy-practice gap not systematically addressed.

In response, this paper: (1) provides a systematic critique of CBC's early pathway selection, integrating developmental psychology, implementation science, and comparative tracking literature; (2) identifies precise sources of operational rigidity within the CBC framework, including structural, resource-based, and institutional constraints; and (3) proposes evidence-based, contextually appropriate reforms to reconcile CBC's flexibility promise with developmental realities, enabling learners to revise pathway choices without penalty, access objective career guidance, and build genuine career adaptability. This roadmap aims to transform CBC from "early selection as an event" into "continuous, flexible career development as a journey."

Research Questions

This paper addresses the following questions:

- How does CBC's early career pathway selection mechanism align with established vocational development theories, particularly Super's framework?
- What implementation gaps exist between CBC policy intentions and practical realities in Kenyan schools?
- How do current constraints affect learners' future career adaptability and developmental trajectories?
- What evidence-based reforms could reconcile CBC's flexibility promise with operational realities?

Theoretical Framework

This study is anchored in two complementary theoretical perspectives: Donald Super's life-span, life-space theory of career development (subsequently reconceptualised as career construction theory) and the Social Cognitive Career Theory (SCCT). Super's framework provides a developmental lens for understanding why the timing of career pathway selection matters, while SCCT supplies a socio-cognitive explanation of how learners' self-beliefs, outcome expectations, and contextual factors shape their ability to make and sustain appropriate career choices. Integrating these two frameworks allows a more comprehensive critique of Kenya's early pathway selection mechanism than either theory could offer alone.

Super's Life-Span, Life-Space Theory: Core Tenets

Super shifted the focus from a single occupational choice to a lifelong, multi-stage process of self-concept implementation (Super, 1990). Career development unfolds across five major life stages: growth (birth to age 14), exploration (ages 15-24), establishment (25-44), maintenance (45-64), and disengagement (65+). The exploration stage is most pertinent to this study. It is characterised by tentative examination of career options, crystallisation of vocational preferences, and initiation of preliminary occupational choices through education, work, and hobbies (Super, 1990). During ages 14-24, learners should use classes, work experiences, and hobbies to identify their interests and capabilities before aligning them with occupations (Lane & Adair, 2022). Super's emphasis on flexibility during this stage contradicts requiring adolescents at ages 14-15 to make irreversible career pathway commitments. The exploration stage implies that learners should try different options, revise preferences, and delay final decisions until self-concept is sufficiently crystallised.

The life-space component recognises that individuals occupy multiple roles as student, worker, parent and/or citizen) across different life contexts (Super, 1990). Super's concept of career (vocational) maturity assesses an individual's readiness to make career decisions, influenced by intelligence and performance (Osipow, 1982). Super and Overstreet's (1960) career pattern study identified five dimensions of vocational maturity: orientation to vocational choice, information and planning, consistency of vocational choice, wisdom of vocational choice, and overall vocational maturity.

How Super's Theory Relates to the Present Study

First, the exploration stage (15-24) makes pathway selection at age 14 -15 developmentally premature. Super and Jordan (1982) found that between ages 18 and 25, many individuals changed occupations up to six times, challenging the appropriateness of firm commitments at 14.

Second, information and planning examine whether learners possess realistic knowledge about their preferred careers (Super & Overstreet, 1960). In Kenya, inadequate career guidance infrastructure means learners often lack accurate information about vocations (Odhiambo & Ooko, 2021), undermining wise choices.

Third, consistency of vocational choice expects stability that is developmentally unrealistic for adolescents (Osipow, 1983). CBC's assumption that a single pathway remains appropriate for years overlooks the fluidity of adolescent preferences.

Fourth, wisdom of vocational choice assesses alignment of aspirations with abilities, opportunities, and constraints (Super & Overstreet, 1960). Without quality career guidance and psychometric assessments, learners risk pursuing unattainable goals (Lent & Brown, 2013).

Weaknesses of Super's Theory

Super's theory has several relevant criticisms. It lacks attention to individual difference variables explaining why some learners navigate career transitions more successfully than others (Lokan & Boss, 1977). It was developed primarily on male samples and may not apply to women or non-Western populations (Doherty & Manfredi, 2010); studies among African American students suggest limited adequacy (Stead & Watson, 1995). The theory's individualist cultural orientation may not align with collectivist Kenyan contexts where family expectations heavily influence career decisions. Super's expansion of "career" has been called overly inclusive and vague (Salomone, 1996). The theory's stage-based structure assumes a stable occupational environment, failing to handle non-linear careers and gig work (Coetzee, 2006). Finally, Super has been criticised for not providing testable hypotheses (Geyer, 2010; Osipow & Fitzgerald, 1996).

Evolution Toward Career Construction Theory

Savickas (1997, 2005) revised Super's theory into career construction theory (CCT) using social constructionism. CCT sees careers as personal stories that individuals construct through continuous exchanges and adjustments (Savickas, 2005). It refined the concept of *career adaptability*, "a psycho-social construct that denotes an individual's readiness and resources for coping with current and anticipated tasks of career development, including coping with unpredictable changes" (Savickas, 2005, p. 49). Career adaptability encompasses four dimensions: concern, control, curiosity, and confidence. The shift from vocational maturity to career adaptability recognises that contemporary careers require ongoing adjustment, information seeking, and self-regulation.

Social Cognitive Career Theory (SCCT) as a Complementary Framework

Given Super's weaknesses, this study incorporates SCCT (Lent, Brown, & Hackett, 1994). SCCT emphasises cognitive-personal variables (self-efficacy, outcome expectations, personal goals) and

contextual variables that enhance or constrain agency. It has been widely applied in educational and career guidance research, showing how self-efficacy mediates the relationship between social support and career adaptability. SCCT is particularly valuable in volatile, uncertain, complex, and ambiguous (VUCA) environments. A study across 80 educational systems found that SCCT's inclusion of self-efficacy, outcome expectations, and contextual affordances makes it more comprehensive than traditional theories (Unsettled horizon, 2025).

SCCT complements Super in four ways: (1) It explicitly incorporates contextual variables (barriers and supports) that shape career choices, allowing analysis of school resources, parental involvement, and community factors. (2) It is suited for VUCA labour markets, whereas Super assumes stability. (3) It has strong empirical grounding with well-operationalised constructs. (4) Its career self-management model aligns with career adaptability, supporting flexible, reversible pathway selection.

Integration of the Two Theories

Super's framework provides the developmental lens: exploration requires flexibility, time to crystallise self-concept, and progressive vocational maturity. SCCT provides the explanatory mechanism: self-efficacy, outcome expectations, and contextual factors (school resources, parental support, career guidance) influence whether learners navigate the exploration stage successfully. Together, they critique CBC's early pathway selection as both developmentally premature (Super) and failing to provide the self-efficacy-building experiences, outcome information, and contextual supports needed for informed choices (SCCT). The integration also addresses Super's weaknesses through SCCT's stronger empirical grounding, attention to contextual variables, and applicability to diverse cultural settings. Finally, the evolution into career construction theory and career adaptability provides contemporary grounding for the argument that CBC should replace early specialisation with flexible, reversible, continuously supported pathway selection.

Literature Review

Competency-Based Curriculum: Global and Sub-Saharan African Perspectives

The shift to Competency-Based Curricula (CBC) is a global movement, not unique to Kenya. Over three decades, many Sub-Saharan African countries have adopted CBC to equip learners with practical skills for 21st-century labour markets, moving away from exam-driven models. However, evidence shows limited translation of policy intentions into sustained classroom practice (Ochieng & Akinyi, 2022). Implementation remains uneven due to constrained education systems, limited teacher capacity, and lack of resources. A cross-country study on science CBC implementation found that the science curriculum is still taught in traditional ways and fails to address socio-economic needs (Oduor & Mwangi, 2020). Teacher preparedness significantly impacts success (Mugambi & Kimathi, 2021), and integrating African Indigenous Knowledge Systems into teacher training has been emphasised for holistic development (Kipchumba & Chepchumba, 2026).

In response to the "learning crisis" identified by UNESCO and the World Bank, Rwanda, Tanzania, Uganda, and Kenya have all adopted CBC. A qualitative synthesis noted that assessment of learner achievement remains a major challenge, particularly in resource-constrained settings (Kiboro & Ogetange,

2022). Challenges include limited teacher preparation, overcrowded classrooms, shortages of learning materials, and inadequate infrastructure (Gikandi et al., 2025). A Brookings Institution report found that while teachers understand CBC intentions, comprehensive implementation is inhibited by gaps in teacher preparation, limited resources, inadequate infrastructure, and varying parental engagement, compounded by weak cohesion across the system (Gikandi et al., 2025).

Kenya's CBC is organised into three levels: Early Years (Pre-Primary to Grade 3), Middle School (Grades 4-9), and Senior School (Grades 10-12). Career pathway selection occurs at the transition from Junior Secondary (Grades 7-9) to Senior Secondary, guided by continuous assessment scores, teacher recommendations, learner interests, parental input, and psychometric assessments where available (MoE, 2019). The policy's rationale includes talent identification, competency development, labour market alignment, and cognitive load reduction (KICD, 2020; MoE, 2019). Learners choose among STEM, Social Sciences, or Arts and Sports Science, each with specific subject combinations. A digital platform has been developed to support transition, described as a "water-tight system" (Kihaki, 2025).

Super's Theory of Vocational Development and the Shift to Career Adaptability

Donald Super revolutionised career development by introducing vocational maturity and challenging the idea that career choice is a single, irreversible event (Super, 1957). Vocational maturity is the degree to which an individual's career-related behaviours align with developmental norms for their age (Osipow, 1982). Super and Overstreet's (1960) career pattern study identified five dimensions: orientation to vocational choice, information and planning, consistency of vocational choice, wisdom of vocational choice, and overall vocational maturity.

Orientation to vocational choice involves concern for vocational problems and effective use of resources (Osipow, 1983). Information and planning assesses whether learners have realistic knowledge about educational requirements, daily tasks, and challenges of preferred careers (Super & Overstreet, 1960). Research shows many adolescents hold idealised perceptions (Lent & Brown, 2013). In Kenya, inadequate career guidance means learners often lack accurate information (Odhiambo & Ooko, 2021), undermining wise choices. Consistency examines stability of preferences over time. Although reasonable choices sustained from an early age indicate positive adjustment, instability is common among adolescents (Osipow, 1983). Super and Jordan (1982) found that between ages 18 and 25, many changed occupations up to six times, challenging the appropriateness of firm commitments at age 14 (Savickas, 2005). Wisdom assesses realism and feasibility of aspirations given abilities, opportunities, and constraints (Super & Overstreet, 1960). Without quality guidance, learners risk pursuing unattainable goals (Lent & Brown, 2013). Overall vocational maturity integrates these dimensions (Ikeme, 1990; Savickas, 2005).

As work became more fluid, researchers expanded Super's framework into *career adaptability*. Savickas (2005, p. 49) defines it as "a psycho-social construct that denotes an individual's readiness and resources for coping with current and anticipated tasks of career development, including coping with unpredictable changes." Career adaptability encompasses concern, control, curiosity, and confidence, replacing career maturity as the central construct. Super himself criticised his term "career maturity" and recommended "career adaptability" (Le Corff & Gingras, 2011, cited in Nils, 2018). This shift is highly relevant to

Kenya's CBC, as it foregrounds the need for flexible, non-linear pathways, directly conflicting with the rigid early specialisation mechanism currently being implemented.

International Evidence on Early Specialisation and Educational Tracking

Comparative evidence shows mixed outcomes from early specialisation, with growing consensus that tracking timing significantly affects equity and long-term outcomes. Early tracking can have “catastrophic consequences” for poor performers, as they are unable to recover due to network effects that punish false starts (Lavrijsen & Nicaise, 2017, p. 34). Several OECD countries postponed tracking until age 15-16 to improve equity (OECD, 2018). Where tracking occurs early, students' choices strongly correlate with socio-economic background, reproducing inequalities rather than mitigating them (OECD, 2018).

Cross-country evidence suggests early tracking yields no average gains: it marginally increases outcomes for high achievers but substantially decreases performance for low achievers, increasing inequality (OECD, 2018). German research shows that track attendance creates path dependencies leading to different occupational positions (Brzinsky-Fay & Solga, 2016). However, adding non-selective schools and hybrid vocational tracks lowers the perceived costs of educational upgrading for late-bloomers (Matthewes & Borgna, 2025). European systems like Germany's dual vocational training produce positive outcomes when accompanied by robust support, broad clusters, and flexibility for later redirection (Eichhorst et al., 2015). Conversely, rigid early tracking without support amplifies inequalities, reduces mobility, and increases unemployment risk for lower-track learners (Hanushek & Wößmann, 2006; Brunello & Checchi, 2007).

Career Guidance Infrastructure in Sub-Saharan Africa

Career guidance quality and availability across Sub-Saharan Africa remain significant challenges. Kenya's Ministry of Education recognises career guidance as integral to CBC, mandating comprehensive services including psychometric assessments, counselling, and parental involvement (MoE, 2019). However, empirical investigations reveal implementation deficits. In Rwanda, career counselling sessions were available but insufficient to meaningfully improve performance, explaining only 7.9% of variation (Mugisha & Nzabwirwa, 2020). In South Africa, learners valued guidance but lacked access to vocational resources, leading them to conduct their own research (Maree, 2025a; Maree, 2025b; Maree & Molepo, 2020). In Uganda, poor career transition between school and work hampers students' career self-concepts (Ssekamwa & Ndawula, 2018).

In Kenya, fewer than 30% of public secondary schools employ qualified career counsellors, and psychometric assessments are used in only 12% of schools (Odiambo & Ooko, 2021). Guidance is typically one-off rather than continuous. To address this, the Kenya National Examination Council (KNEC) introduced interest-based questionnaires for Grade 9 learners in 2024 to identify strengths and aspirations (KNEC, 2024). The Kenya Universities and Colleges Central Placement Service (KUCCPS) has also launched a structured career guidance programme, emphasising self-awareness and competencies over examinations (KUCCPS, 2026). However, these initiatives are recent and their long-term impact remains unevaluated.

Implementation of Competency-Based Curricula: Empirical Evidence from Sub-Saharan Africa

Empirical research consistently identifies teacher preparedness, resource availability, and assessment as key determinants of CBC success. A study of Kenyan primary teachers found only 60% had received CBC training, with trained teachers reporting significantly higher readiness (Koskei & Chepchumba, 2020). A more recent study found that while 95% of teachers had been trained, 65% held negative perceptions toward the new curriculum (Mwangi, Karuku, & Obura, 2026). The Brookings Institution confirmed that teachers understand CBC intentions, but consistent competency development is constrained by gaps in teacher preparation, limited resources and digital tools (especially in arid regions), inadequate infrastructure, and varying parental engagement (Gikandi et al., 2025).

A narrative review of system-level constraints across Sub-Saharan Africa identified limited instructional leadership, weak professional development, large class sizes, resource shortages, accountability pressures, and policy-practice misalignment (Okoth & Otieno, 2021). Without addressing these, efforts to sustain CBC are unlikely to succeed. In Tanzania, after seventeen years of implementation, Biology teachers still face insufficient knowledge, irregular training, lack of resources, and inadequate laboratory space (Mkimbili & Kira, 2022). The integration of African Indigenous Knowledge Systems into teacher training has been highlighted as critical for successful CBC (Kipchumba & Chepchumba, 2026).

Innovative approaches are emerging. The Kenya National Qualifications Authority (KNQA) champions modularisation as a transformative approach, allowing learners to progressively acquire industry-relevant skills through flexible, learner-centred pathways (KNQA, 2023). A UNESCO study across seven African countries identified good practices for competency-based assessment in TVET systems, while also documenting difficulties in sustaining the approach (UNESCO, 2020). Successful CBC implementation requires not only sound policy design but also adequate teacher preparation, resource provision, assessment alignment, and sustained institutional support.

Methodology

Research Approach

This paper employs a critical policy analysis methodology, examining CBC's career pathway selection mechanism through the lens of vocational development theory and implementation science. Critical policy analysis involves systematic examination of policy documents, identification of gaps between stated intentions and practical realities, and evaluation of policy impacts on diverse stakeholder groups (Bacchi, 2009). The analysis proceeds through three distinct steps:

Step 1: Causal Links Between Global and Local Forces. This step traces how international educational discourses—such as competency-based reforms, early specialization, and human capital theory—have influenced Kenya's CBC policy formulation. It also examines how global trends interact with local political, economic, and cultural contexts to produce specific policy outcomes (Bacchi, 2009).

Step 2: Analysis of the Educational Policy Within a Theoretical Conceptual Context. This step situates CBC's career pathway selection mechanism within established vocational development theories, particularly Super's framework of vocational maturity (Super, 1990; Super & Overstreet, 1960). It evaluates

the policy's assumptions about adolescent career decision-making against developmental psychology principles and identifies conceptual tensions between policy design and theoretical expectations.

Step 3: Examining The Educational Policy Within Political and Economic Forces and Politics. This step investigates how political interests, resource allocation decisions, and institutional power dynamics shape CBC implementation. It considers how economic constraints, including school funding disparities and infrastructure limitations, create differential access to pathways across socioeconomic strata and geographic regions (Mwangi & Ndung'u, 2023).

Data Sources

Data sources included: (a) official policy documents from the Kenya Institute of Curriculum Development and Ministry of Education (2017-2023); (b) peer-reviewed empirical studies on CBC implementation published between 2020 and 2024; (c) gray literature including evaluation reports from educational stakeholders; (d) comparative international studies on early tracking systems; and (e) theoretical literature on vocational development, particularly Super's framework.

Analytical Framework

Analysis employed a framework integrating three dimensions: (1) policy-practice alignment, examining congruence between stated policy intentions and implementation realities; (2) developmental appropriateness, evaluating whether mechanisms align with established developmental psychology principles; and (3) equity implications, i.e., assessing differential impacts across school types, geographic locations, and socioeconomic strata.

Findings and Analysis

Policy Intentions Versus Implementation Realities

The analysis reveals substantial misalignment between CBC's stated intentions and operational realities. Table 1 summarises key discrepancies.

Table 1: Policy-Practice Gaps in CBC Career Pathway Selection

Policy Intention	Implementation Reality	Gap Severity
Holistic placement combining interests, aptitudes, and performance	Heavy reliance on examination scores due to lack of alternative assessment infrastructure	High
Continuous career guidance throughout Senior Secondary	One-time guidance events; shortage of trained counsellors	High
All schools offering all three pathways	Many schools offering only 1-2 pathways; resource constraints	Severe
Flexible pathway switching	No structured switching mechanisms; administrative barriers	High
Psychometric assessment integration	Rarely deployed; no nationally standardised tools	Severe

Source: Author's analysis based on MoE (2022), Otieno and Wanjiru (2022), Mwangi and Ndung'u (2023)

The Age Problem

Super's framework raises fundamental concerns about requiring 14- to 15-year-olds to select career pathways. The exploration stage (ages 14-24) is characterised by tentative preferences, progressive self-concept crystallisation, and legitimate floundering as learners test options against reality (Super, 1990). Expecting consistency of vocational choice at age 14 contradicts developmental norms (Super & Overstreet, 1960).

Kenyan policy documents state that pathways are “broad and directional rather than final” (KICD, 2020, p. 34). However, several factors render this flexibility operationally meaningless. First, subject combinations are tightly bundled, making switching difficult without repeating content. Second, university admission requirements increasingly expect specific pathway completions, creating external pressure to maintain original choices. Third, social and institutional pressures, i.e., parental expectations and school streaming, discourage switching even where technically permitted.

Even if objective psychological tests were widely used, at age 14 -15 interests and personality are still developing; test results may change, and over-reliance could prematurely label learners. The challenge is not only lack of tools, but the developmental stage itself. While CBC attempts a holistic approach, early specialisation risks locking learners into paths too soon.

Resource Constraints and Equity Implications

Severe resource disparities undermine CBC's equity aspirations. Urban, well-resourced schools offer all three pathways with adequate facilities namely, STEM labs, arts studios and sports infrastructure. However, rural schools and those serving low-income populations often lack resources to offer multiple pathways (Mwangi & Ndung'u, 2023). Consequently, learner “choice” frequently reflects school availability rather than genuine interest or aptitude.

The shortage of trained career counsellors (Odhiambo & Ooko, 2021) means most learners receive minimal guidance. Where guidance exists, it tends to emphasise examination performance and “prestigious” careers (medicine, engineering) rather than exploring diverse options aligned with individual strengths. This pattern reinforces existing socioeconomic hierarchies instead of creating new opportunities for talent development.

The Psychometric Assessment Gap

Psychological testing namely, aptitude, interests and personality, could enhance objectivity in pathway placement, but such tools are not systematically deployed in Kenya's CBC. Even where available, tests are typically imported from Western contexts without cultural validation (Ochieng & Akinyi, 2022). A scoping review found that research on career interest measures for African adolescents is severely lacking, with only 10 articles published between 2012 and 2022, most using South African instruments (Scholtz, 2024). Context-sensitive measures are urgently needed.

The absence of standardised psychometric infrastructure creates significant problems (Kiragu, 2025). First, placement relies heavily on teacher recommendations, which are subjective and prone to unconscious biases namely, gender stereotypes and socioeconomic assumptions. An evaluation of CBC's assessment framework found moderate reliability (41%) and validity (57%), weak moderation (28%), and poor

construct validation (Kiragu, 2025). Second, learners with non-academic talents such as, arts and sports, may be overlooked because their strengths are not systematically assessed (KICD, 2020; Odhiambo & Ooko, 2021), contradicting CBC's commitment to diverse talents (MoE, 2019). Third, lack of objective data undermines evidence-based career guidance, forcing counsellors to rely on intuition (Savickas, 2005; Super, 1990). Without reliable psychometric data, guidance becomes less replicable, accountable, and more error-prone (Lent & Brown, 2013).

In response, KNEC introduced interest-based questionnaires for Grade 9 learners in 2024 to identify strengths and aspirations (KNEC, 2024). KUCCPS has also launched a structured career guidance programme emphasising self-awareness and competencies (KUCCPS, 2026). However, these initiatives are recent; their psychometric properties such as, reliability, validity and cultural appropriateness, have not been independently evaluated (Kiragu, 2025). The persistent shortage of trained counsellors so far, fewer than 30% of public secondary schools employ qualified counsellors, compounds the challenge, with guidance delivered as one-off events rather than continuous support (Odhiambo & Ooko, 2021).

Emerging efforts elsewhere offer models. A validated competence-focused Career Maturity Inventory for Ghanaian senior high students demonstrated strong psychometric properties, including content validity, reliability, and scalar invariance across gender and school type (Antwi, 2026). Adapting such an approach for Kenya could strengthen objectivity and fairness while respecting developmental fluidity (Super, 1990; Savickas, 2005).

Comparing 8-4-4 and CBC: The Flexibility Paradox

International research documents how early tracking produces path dependencies that constrain later mobility (Brzinsky-Fay & Solga, 2016; Protsch & Solga, 2016). This section identifies a critical paradox: while CBC promises greater structural flexibility, current implementation offers less practical flexibility than the system it replaced.

International Evidence. In most OECD countries, tracking begins at age 15-16, though some (Germany, Austria) start at age 10 (Brunello & Checchi, 2007; Lavrijzen & Nicaise, 2017). Early tracking can have “catastrophic consequences” for poor performers, who cannot recover because social networks punish false starts (Lavrijzen & Nicaise, 2017, p. 34). The OECD (2018) cautions that early tracking reproduces socio-economic inequalities, yields no average gains, and increases inequality. However, adding non-selective schools and hybrid vocational tracks can lower the costs of upgrading for late-bloomers (Matthewes & Borgna, 2025).

Flexibility in 8-4-4. Under 8-4-4, learners studied identical subjects up to Form 2 (age 16), with specialisation later. The curriculum was rigid and exam-driven, but late specialisation allowed natural exploration. Learners could change subjects relatively easily in early secondary years (Aengwo & Thamarasseri, 2024). Delayed decision-making provided developmental flexibility, aligning with Super's exploration stage (Super, 1990).

Flexibility in CBC: Theory Vs. Practice. CBC was designed to be flexible, learner-centred, and inclusive, with three pathways intended to offer personalised routes (Kenya News Agency, 2024). However, implementation has fallen short. While 78% favoured CBC's holistic approach, concerns about

inconsistency and resource limitations persist (Aengwo & Thamarasseri, 2024). A Brookings report confirmed persistent gaps in teacher capacity and infrastructure (Brookings Institution, 2025). Critics note that “an elegant design without matching implementation is a recipe for failure” (Osabwa, 2025), and the difference between 8-4-4 and CBC remains largely cosmetic, with teachers still drilling learners for tests.

The Flexibility Paradox. CBC promises more structural flexibility but provides less practical flexibility. Under 8-4-4, late specialisation allowed natural exploration. Under CBC, early specialisation (Grade 10) creates path dependency: tightly bundled subjects, university requirements, and resource constraints make switching difficult. Switching may require changing schools—impossible for many disadvantaged learners. Infrastructure deficits in rural areas (no labs, limited digital tools, unreliable electricity) exacerbate inequities (Sultan, 2026). Many teachers are ill-equipped for competency-based instruction, and schools lack capacity to offer all three pathways effectively (Sossion, 2026). Thus, CBC is conceptually progressive but operationally constrained, the flexibility paradox.

Table 2 provides a direct comparison of flexibility dimensions across the two systems.

Table 2: Comparison of Flexibility: 8-4-4 versus CBC

Aspect	8-4-4	CBC (Theory)	CBC (Reality)
Timing of specialization	Late ¹ (Form 2-3)	Early (Grade 9-10)	Early
Curriculum structure	Rigid	Flexible	Semi-flexible
Ability to switch	Moderate (early secondary)	High (intended)	Limited
Dependence on school resources	Low	High	Very high
Personalization	Low	High	Uneven

Source: Author's analysis

While CBC has more structural flexibility than 8-4-4, current Kenyan schools do not yet provide enough practical flexibility for learners to easily switch pathways. The system is conceptually progressive but operationally constrained. The flexibility paradox reflects a broader tension in educational reform: policy documents can promise learner-centred adaptability, but without adequate infrastructure, teacher training, and institutional mechanisms, such promises remain unfulfilled. As Osabwa (2025) concluded, “the tragedy of Kenya’s education reforms is not in ambition but in execution” (para. 43).

Discussion

This section interprets the key findings presented above. It draws out the theoretical, practical, and policy implications of CBC’s early career pathway selection mechanism. The paper concludes with actionable recommendations and directions for future research.

Theoretical Implications

The findings raise important questions about the applicability of Western career theories in African contexts. Africa has been an “absent presence” in career studies, with its unique cultural and institutional

¹ Late here refers to the point in a student’s educational journey when they are required to choose a specialization or specific subject cluster

dynamics largely ignored (Ituma et al., 2025; Mordi et al., 2025; Ochieng & Akinyi, 2022). Super's framework, developed from American samples, assumes individualistic career progression and formal sector employment that may not align with Kenyan realities (Super, 1990). A Nigerian study found Super's self-concept theory inapplicable there (Adeyemi & Ogundele, 2013), and South African scholars have called for indigenising career psychology (Stead & Watson, 2025).

Nevertheless, the core insight that vocational maturity develops progressively and requires flexibility during adolescence has cross-cultural relevance (Savickas, 2005). In Ghana's collectivist culture, career decisions are heavily influenced by family expectations, contrasting with Super's individualist assumptions. The tension between CBC's early selection and Super's developmental principles suggests either policy modification or contextual adaptation of Western theories is needed (Otieno & Wanjiru, 2022). Recent scholarship advocates shifting from psychological frameworks towards institutionalist approaches that consider labour market structures and socio-cultural norms (Ituma et al., 2025; Mordi et al., 2025).

Super's orientation to vocational choice dimension requires effective use of resources like career conversations, work observations, and apprenticeships (Peterson & Nisenholz, 1992). However, in Kenya, effectiveness is hampered by absent standardised, culturally appropriate assessment tools and a shortage of trained counsellors (Kiragu, 2025; Odhiambo & Ooko, 2021). KNEC's new interest questionnaires are steps forward, but their psychometric robustness remains unevaluated.

Practical Consequences for Learners

The current implementation produces adverse consequences (Otieno & Wanjiru, 2022). First, premature foreclosure may cause "career regret" when learners discover incompatible interests later (Savickas, 2005). Second, the high-stakes, perceived irreversibility creates psychological distress, especially for uncertain learners (Lent & Brown, 2013). Third, mismatched placement reduces motivation and performance (Super, 1990). Conversely, learners in well-resourced schools may benefit from early specialisation, deepening expertise. Thus, the system risks widening educational inequalities (Brunello & Checchi, 2007; Mwangi & Ndung'u, 2023).

Early Choices Should Not Be Final: Eight Implications

The statement that early career choices should not be final has critical implications. First, pathway choice must be reversible. At 14 -15, self-concept is still developing (Super, 1990); choices should be starting directions, not lifelong commitments. Limited flexibility locks learners into ill-fitting paths (Savickas, 2005). Second, continuous career guidance is essential, not one-time events (Peterson & Nisenholz, 1992; Odhiambo & Ooko, 2021). Third, genuine flexibility supports confidence and experimentation, but parental and school pressures often make the decision feel final (Lent & Brown, 2013; Mwangi & Ndung'u, 2023). Fourth, learners need exposure beyond their pathway; core competencies must cut across all pathways (MoE, 2019). Fifth, not all schools offer all pathways; "choice" often reflects school resources, reinforcing inequality (Brunello & Checchi, 2007). Sixth, interests change; transitioning may require bridging courses or repeating content (Super & Jordan, 1982). Seventh, early choice places heavy responsibility on young learners; poor guidance has long-term consequences (Osipow, 1983). Eighth, CBC must allow easy switching, recognise multiple career routes (TVET, university, bridging), and avoid over-reliance on early exam performance (Otieno & Wanjiru, 2022).

Recommendations for Reform

To actualise CBC's flexibility promise, the paper proposes nine reforms.

- **Modular Credit System.** Break subjects into credit-based modules, allowing transferable credits across pathways, enabling direction shifts without restarting (Eichhorst et al., 2015).
- **Structured Switching Windows.** Establish official transition points (end of Grade 10, mid-Grade 11) with bridging programs and academic support, recognising that vocational identity remains fluid (Savickas, 2005; Super, 1990).
- **Strengthen Psychometric Assessment Infrastructure.** Develop nationally standardised, culturally validated aptitude and interest assessments to reduce bias (Ochieng & Akinyi, 2022).
- **Mandate Continuous Career Guidance.** Require career guidance every term, not just at transition points, aligning with developmental perspectives (Peterson & Nisenholz, 1992; Super, 1990).
- **Expand School Clusters and Shared Resources.** Form clusters of geographically proximate schools to share specialised facilities and teachers, addressing resource disparities (Mwangi & Ndung'u, 2023).
- **Delay Full Specialisation.** Keep pathways broad in Grade 10, deferring deeper specialisation to Grades 11-12, addressing developmental concerns (Super, 1990).
- **Decouple University Admission from Rigid Pathways.** Universities and TVET institutions should accept multiple subject combinations and use competency-based criteria, reducing inequality (Brunello & Checchi, 2007).
- **Introduce Hybrid Pathways.** Allow combinations such as STEM plus Arts or STEM plus Social Sciences, reflecting interdisciplinary real-world careers (KICD, 2020).
- **Create a National Learner Profile and Digital Portfolio.** Build a centralised digital system tracking continuous assessment, projects, co-curricular achievements, and aptitude assessments for evidence-based guidance (MoE, 2019).

Limitations and Future Research

This analysis has limitations: as a policy critique, it relies on existing literature of varying quality; CBC's rapid evolution may date findings quickly; and it focuses on structural factors rather than learners' lived experiences. Future research should pursue longitudinal studies tracking learners' career trajectories from pathway selection through post-secondary outcomes. Qualitative investigations of how learners experience the perceived finality of selection would provide complementary insights. Finally, experimental pilots of proposed reforms (e.g., modular credit systems in selected schools) could generate evidence to guide national policy.

Conclusion

This paper critically examined Kenya's CBC early career pathway selection mechanism (Grades 10-12) using Super's vocational development theory and critical policy analysis. The analysis identified fundamental tensions between CBC's stated intentions and operational outcomes.

International evidence from OECD countries and sub-Saharan Africa shows that early tracking entrenches inequalities and penalises late-blooming learners (Brunello & Checchi, 2007; Lavrijsen & Nicaise, 2017). Africa's high youth unemployment, skills mismatches, and NEET crisis demand flexible education systems. Kenya's CBC was designed to meet these demands by offering three broad pathways and replacing the exam-dominated 8-4-4 system with a competency-based, learner-centred approach (KICD, 2017; MoE, 2019). However, developmental psychology, resource constraints, and implementation gaps severely undermine this promise.

The comparison between 8-4-4 and CBC reveals a "flexibility paradox": CBC has greater structural flexibility on paper but offers less practical flexibility for switching pathways than the older system. The 8-4-4 delayed specialisation until ages 16 -18, allowing natural exploration. CBC requires pathway choice at ages 14 -15, when vocational identity is still fluid. Objective, culturally validated assessment tools are rarely deployed; most placement decisions rely on subjective teacher recommendations. Shortages of trained counsellors and inequitable resource distribution further entrench the gap between policy and practice (Mwangi & Ndung'u, 2023; Odhiambo & Ooko, 2021).

Theoretical implications show that while Super's framework offers universal insights on developmental flexibility, its individualistic assumptions may not align with collectivist African contexts. Calls for indigenising career psychology and institutionalist approaches (Ituma et al., 2025; Stead & Watson, 2025) point to the need for contextual adaptation.

Key Findings

- Developmental mismatch: Age 14 -15 is premature for irreversible career commitments; exploration requires flexibility (Super, 1990; Lavrijsen & Nicaise, 2017).
- Flexibility paradox: CBC is theoretically flexible but operationally rigid; "choice" often reflects school availability, not aptitude.
- Implementation gaps dominate outcomes: Insufficient teacher training, poor infrastructure, and counsellor shortages mean holistic placement does not materialise.
- Psychometric infrastructure underdeveloped: No standardised, culturally validated tools; recent KNEC/KUCCPS initiatives remain unevaluated.
- Reforms must preserve genuine flexibility: Modular credits, switching windows, bridging courses, hybrid pathways, delayed specialisation, and decoupling university admission.
- Ultimate success depends on career adaptability: The measure is whether learners can navigate change and revise preferences, not policy documents (Savickas, 2005).

Kenya's CBC is a bold reform, but its early pathway selection mechanism risks becoming a new form of rigidity. Without urgent attention to resource allocation, counsellor training, psychometric infrastructure, and systemic flexibility, the reform will fail to deliver learner-centred, equitable education. If Kenya implements the evidence-based reforms outlined, CBC can become a model for Africa; if not, it will perpetuate the inequalities it was designed to dismantle.

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