TEACHERS' PREPAREDNESS AND ATTITUDES IN THE IMPLEMENTATION OF THE LOWER SECONDARY SCHOOL COMPETENCE-BASED CURRICULUM IN RUKUNGIRI DISTRICT, UGANDA

GLADYCE KACHOPE
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SEPTEMBER, 2025

DECLARATION

I, **Gladyce Kachope,** declare that the work presented in this report is original to the best of my knowledge and belief, except as acknowledged in the text, and the material has not been submitted for any award at any higher institution of learning.

Signature..... .....03/09/25.....

GLADYCE KACHOPE Date

2022/PHD/037/PS

DECLARATION ON PUBLISHED WORK

This thesis incorporates materials that have previously appeared in peer-reviewed journals, authored by the candidate as part of the dissemination of this doctoral research. These publications were developed within the scope of the study, and while certain sections have been adapted to maintain coherence and thematic consistency within the thesis, the findings remain integral to the overall objectives of the research.

Publications Arising from this Thesis

Publications

Teachers' preparedness for effective implementation of the lower secondary competence-based curriculum in Rukungiri District, Southwestern Uganda. (2025). *Journal of Research Innovation and Implementations in Education.* https://orcid.org/0009-0004-3088-7121

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Candidate's Name: Gladyce Kachope

Signature: _____

Date: 03/09/25

APPROVAL

This thesis has been submitted for examination with our approval as the university supervisors.

Signature..... Date.....3/9/2025

Dr. Imeda Kemeza, PhD
Senior Lecturer, Department of Educational Foundations and Psychology, Faculty of Science, Mbarara University of Science and Technology

Signature..... Date.....3/9/2025

Dr. Viola Nyakato, PhD
Lecturer, Department of Human Development and Relational Sciences, Faculty of Interdisciplinary Studies, Mbarara University of Science and Technology

DEDICATION

This thesis is dedicated with reverence to the memory of the Late Samwiri Daudi Kachope Muntukwonka Achaali and the Late Zebia Kachope Amooti, whose enduring legacy of wisdom, resilience, and unwavering commitment to knowledge continues to inspire my academic pursuits.

To my cherished Sisters of Our Lady of Good Counsel, whose love, sacrifices, and steadfast encouragement have formed the cornerstone of this scholarly journey, your profound support has infused every page with purpose and strength.

To all those who uphold the transformative power of education and the relentless pursuit of truth, may this work serve as a testament to perseverance, faith, and the limitless capacity of the human spirit.

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LIST OF ABBREVIATIONS AND ACRONYMS

CBC	Competency-Based Curriculum
CI	Curriculum and Instruction
CSCL	Computer-Supported Collaborative Learning
CSOs	Curriculum Support Officers
DV	Dependent Variable
GBF	Group Belonging Formation
ICT	Information Communication Technology
IV	Independent Variable
MoES	Ministry of Education and Sports
MV	Mediating Variable
NCDC	National Curriculum Development Centre
PCK	Pedagogical Content Knowledge
REE	Relationship and Expectation Establishment
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Scientists
ToC	Theory of Change
TSC	Teachers Service Commission
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USA	United States of America

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ABSTRACT

Uganda's lower-secondary Competency-Based Curriculum (CBC) requires teachers to redesign lesson delivery, assessment, and classroom facilitation. In rural districts, implementation appears uneven. This study examined teachers' preparedness, attitudes, and implementation effectiveness, tested group differences (gender, sector, education), and assessed whether attitudes mediate the preparedness–implementation link.

A pragmatic, convergent mixed-methods design was used in 13 schools (Rukungiri District). Quantitative data were collected from N = 233 teachers using 12-item Likert (1–5) scales per construct (Preparedness, Attitudes, and Implementation). Reliability was high (α: Preparedness = .913; Attitudes = .846; Implementation = .881). Parametric analyses (t tests/ANOVA, Pearson r) and PROCESS Model 4 mediation (bootstrap CIs) were applied. Qualitative data (interviews with 13 head teachers; two FGDs with student leaders) underwent inductive thematic analysis. Ethical approvals and informed consent were obtained.

Preparedness subscales centred near the midpoint with dispersion: Knowledge & Understanding (M = 3.0472, SD = 1.1345), Instructional Design (M = 3.0494, SD = 1.1299), Classroom Practice (M = 3.0418, SD = 1.1286). Attitudes were similarly neutral on average (TA total: M = 3.0071, SD = 0.8858), with subscale means: Perceptions (M = 2.9989, SD = 0.9808), Professional Motivation (M = 3.0193, SD = 1.0564), Change Orientation (M = 3.0032, SD = 1.0031). Implementation was visible but inconsistent (EI total: M = 3.0182, SD = 0.9593); the Assessment & Feedback strand showed the greatest variability. Bivariate associations were moderate and positive: TP–TA r = .615, TP–EI r = .507, TA–EI r = .585 (all $p < .001$). Group comparisons showed no significant differences by gender or employment sector for attitudes or implementation; education level showed small attitude differences (TA total: $F(2,230) = 3.723$, $p = .026$; Change Orientation: $F(2,230) = 4.536$, $p = .012$; Tukey: Master's > Diploma). Mediation indicated a significant indirect effect of preparedness on implementation via

attitudes (partial mediation; direct effect remained positive).

CBC uptake is present but uneven. The teachers exhibit foundational preparedness and constructive attitudes, yet implementation, especially competency-based assessment, remains fragile. Attitudes act as a hinge, transmitting a meaningful share of preparedness into everyday practice.

At the System level, disseminate subject-specific exemplar/task banks, mini-rubrics, and one-page competency records; provide school-embedded coaching. At the school level, protect weekly co-planning huddles, build shared task/rubric banks, and run brief observe–feedback–refine cycles. At the classroom level, pair authentic tasks with 3–4-criterion mini-rubrics, use quick feedback routines, and maintain a one-page competency tracker. Future work should include classroom observations and longitudinal designs to link teacher routines with learner outcomes.

CHAPTER ONE

INTRODUCTION

Chapter One introduces the study by establishing the context, rationale, and foundational elements that frame the investigation. It opens with a background that situates Uganda's education reforms within the broader shift to learner-centred approaches, with particular emphasis on the 2020 Competency-Based Curriculum (CBC) for lower secondary schools. While this reform seeks to improve the relevance, quality, and inclusiveness of education, its implementation has raised concerns about teacher preparedness and attitudes, especially in rural districts such as Rukungiri. The chapter therefore, sets the stage for examining these teacher-related factors as critical determinants of CBC success. It proceeds to outline the research problem, purpose, significance, objectives, and research questions, followed by the scope of the study and definitions of key terms. The chapter concludes with the presentation of the conceptual framework, which guides the analysis of how teacher preparedness and attitudes interact to shape the effectiveness of CBC implementation.

1.1 Background of the Study

1.1.1 Historical Background

Education has long been central to social transformation worldwide. Globally, many countries have shifted from traditional content-heavy curricula toward competency-based models that emphasize skills such as critical thinking, creativity, and collaboration. For example, countries like the United States, South Korea, and Finland adopted competency-based reforms to align schooling with 21st-century economic and social demands (UNESCO, 2017; Muchira et al., 2023). Across Africa, similar reforms have been attempted in Kenya, Rwanda, and South Africa, driven by concerns that colonial legacies left school systems overly academic, exam-driven, and disconnected from local realities (Makunja, 2016; Cheruiyot, 2024). While these

reforms show promise, they also face persistent challenges in teacher training, resources, and assessment alignment.

In Uganda, precolonial education relied on informal and experiential learning, while the colonial system introduced rigid, exam-focused schooling dominated by literacy, numeracy, and Christian values (Ocitti, 1994; Altbach & Kelly, 1978). Post-independence reforms sought to broaden the curriculum through agriculture, entrepreneurship, and sciences, but their impact was undermined by inadequate teacher preparation, overcrowded classrooms, and chronic underfunding (Altinyelken, 2010; Tumushabe, 2016). These structural limitations exposed the need for a curriculum that was both relevant and skills-based.

The Competency-Based Curriculum (CBC), launched in 2020 for lower secondary schools, reflects Uganda's commitment to align education with Vision 2040 and global trends in human capital development (MoES, 2020; NPA, 2020). CBC aims to nurture practical competencies such as problem-solving, adaptability, and teamwork while repositioning teachers as facilitators of learning (Namubiru et al., 2024). However, evidence shows that implementation is constrained by insufficient teacher preparedness and mixed teacher attitudes. A 2023 MoES report noted that fewer than 40% of teachers had received comprehensive CBC training, and less than half felt confident in applying learner-centered assessments. In rural districts such as Rukungiri, where schools face acute resource shortages, the capacity and motivation of teachers are especially decisive for reform success.

1.1.2 Contextual Background

The adoption of the Competency-Based Curriculum (CBC) in 2020 represents Uganda's most recent effort to address longstanding concerns about the relevance and effectiveness of its education system. Framed within Uganda's Vision 2040 and the Third National Development Plan (NDP III), the reform seeks to equip learners with competencies such as problem-solving, creativity, collaboration, and adaptability that are essential for national development and global

competitiveness (NPA, 2020; MoES, 2020). Unlike the traditional examination-driven approach, CBC calls for learner-centred pedagogy and continuous assessment, positioning teachers as facilitators of learning rather than mere transmitters of content.

Despite the clarity of national policy, implementation has revealed significant gaps in teacher preparedness and support systems. By 2023, fewer than 40% of secondary teachers had received comprehensive CBC training, and less than half reported confidence in applying the new assessment approaches (MoES, 2023). Schools continue to struggle with shortages of instructional materials, inadequate infrastructure, and high pupil-to-teacher ratios; averaging 43:1 nationally, compared to the recommended 30:1 (UNESCO, 2022). These systemic barriers make teachers' ability and willingness to interpret curriculum objectives and apply participatory methods critical for the reform's success.

The challenges are particularly pronounced in Rukungiri District, the focus of this study. As a predominantly rural area, Rukungiri faces persistent shortages of teaching resources, irregular professional development opportunities, and large class sizes that often exceed 70 students per teacher. Teachers in the district have reported difficulties in lesson planning, integrating continuous assessment, and using participatory teaching methods required under CBC (Kidega et al., 2024; Wambi et al., 2024). While some educator's express optimism about CBC's potential to improve learner outcomes, others are resistant due to the increased workload, limited guidance, and inadequate support.

This mix of interest and reluctance underscores the dual importance of teacher preparedness and teacher attitudes in determining CBC's success. Rukungiri therefore provides a relevant context for examining how these two factors interact to shape curriculum implementation in Uganda.

1.1.3 Theoretical Background

This study is anchored in two main theories that illuminate the relationship between teacher preparedness, teacher attitudes, and the implementation of curriculum reform.

Curriculum Implementation Theory (Gross et al., 1971) provides the primary analytical lens. It emphasizes that the success of curriculum reform depends on the clarity of the innovation, the capability of teachers, the availability of resources, and the presence of supportive leadership. In the context of Uganda's Competency-Based Curriculum (CBC), the theory underscores that even well-designed reforms may fail if teachers are not adequately prepared, positively motivated, and institutionally supported. Teacher attitudes are also recognized within this framework as a mediating factor that shapes the fidelity and effectiveness of curriculum enactment.

Complementing this systemic perspective, Constructivist Learning Theory (Piaget, 1972; Vygotsky, 1978) frames the pedagogical foundations of CBC. Constructivism views learners as active participants who construct knowledge through experience, collaboration, and reflection. It redefines the teacher's role from content transmitter to facilitator of inquiry-based and learner-centered processes. For CBC, this implies that teacher preparedness must extend beyond content knowledge to include the ability to design interactive learning environments, while positive teacher attitudes are essential for embracing this pedagogical shift.

Together, Curriculum Implementation Theory and Constructivist Learning Theory provide a coherent lens for this study. The former explains the systemic and institutional conditions for effective reform, while the latter accounts for the pedagogical and classroom practices through which CBC can achieve its goals.

1.1.4 Conceptual Background

This study is anchored in a simple but powerful proposition: what teachers know and can do (preparedness) will translate into what they actually enact in classrooms (implementation effectiveness) to the extent that they also believe the reform is valuable and doable (attitudes). That logic is consistent with Curriculum Implementation Theory, where fidelity depends on clarity, capability, resources, and leadership, and with Constructivist Learning Theory, where facilitation, collaboration, and authentic tasks are the engines of learning. The conceptual background therefore, specifies (i) the core constructs and their sub-constructs, (ii) the hypothesized relationships among them, including mediation by attitudes, and (iii) the way the constructs are operationalized for empirical testing.

Core constructs and boundaries

Teacher Preparedness (TP) is conceived as a multidimensional capacity encompassing three sub-constructs that move from understanding to enactment: Knowledge & Understanding of CBC (grasp of competence, progression, outcomes, and assessment purposes); Instructional Design for CBC (ability to design scenarios, projects, personalized tasks, and CBC-aligned lesson plans); Classroom Practice for CBC (orchestrating interaction, peer/cooperative learning, group discussions, and classroom management consistent with CBC).

Teacher Attitudes (TA) are treated as proximal, malleable dispositions that condition whether capability becomes routine practice. Three sub-constructs capture the cognitive, affective, and behavioral orientations most relevant to reform: Perceptions of CBC (value/relevance, perceived benefits for learners); Professional Motivation (energy, willingness to invest effort, felt responsibility); Change Orientation (openness to new methods, growth mindset, and identity as facilitator).

Implementation Effectiveness (EI) represents the day-to-day realization of CBC in classrooms along three interlocking strands: Lesson Delivery (planning and enacting competency-aligned

lessons, including Activities of Integration); Learner-Centred Practices (collaborative work, presentations, real-life problem-solving, responsive facilitation); Assessment & Feedback (use of competency-based assessment, ongoing feedback, tracking progress by competencies).

As illustrated in Figure 1: The Conceptual Framework of the Study, the model posits that while preparedness provides the foundation for reform, its impact on CBC implementation is significantly enhanced or constrained by the attitudes teachers hold toward the curriculum.

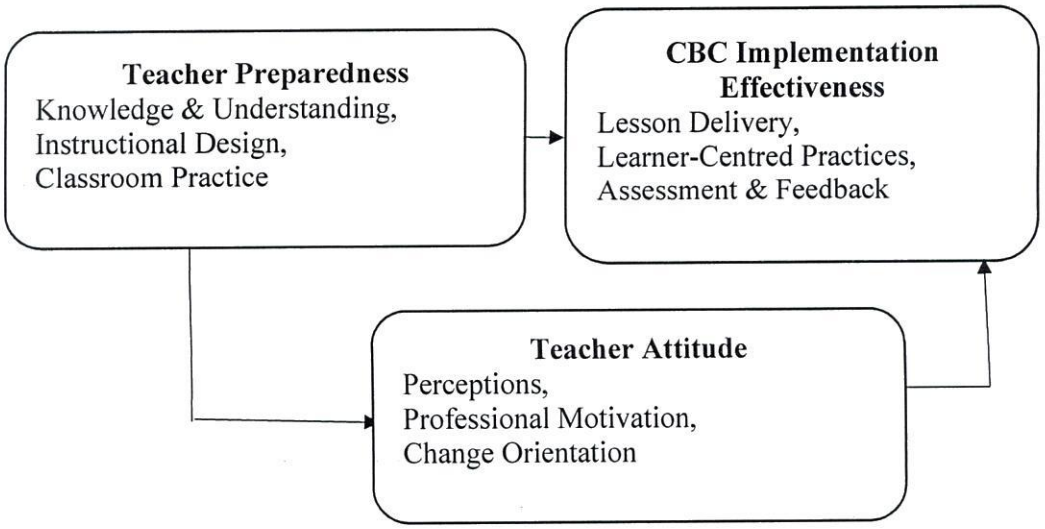


Figure 1: Conceptual framework of the study

1.2 Statement of the Problem

Uganda's Competency-Based Curriculum (CBC), introduced in 2020 to promote learner-centered and skills-based education, and continues to face major implementation challenges, especially in rural districts such as Rukungiri. National reviews show that fewer than 40% of teachers have received comprehensive CBC training, and less than half feel confident in applying learner-centered assessment methods (MoES, 2023). Large class sizes, averaging

43:1 nationally and often exceeding 70 in rural schools, further in Rukungiri district in particular, a report from the district education officer on the status of CBC in 2023 revealed that 80 % teachers were not quite knowledgeable about the implementation of CBC (Rukungiri DEO's report on status of CBC, 2023). constrain teachers' ability to deliver CBC effectively (UNESCO, 2022).

Beyond limited preparedness, teacher attitudes, including openness to change, professional identity, and motivation, play a critical role in shaping reform outcomes. Negative or indifferent attitudes can undermine classroom practice even when training and resources are provided. In Rukungiri, teachers report persistent shortages of materials, limited professional development, and weak leadership support, conditions that widen the gap between policy expectations and actual practice.

While previous studies in Uganda have highlighted barriers to CBC, few have examined teacher preparedness and attitudes together, particularly in rural contexts. Moreover, the mediating role of attitudes in linking preparedness to implementation effectiveness remains underexplored. This study therefore investigates how teacher preparedness and attitudes influence CBC implementation in Rukungiri District, providing evidence to inform policy and practice aimed at improving teacher readiness, attitude change, and curriculum fidelity.

1.3 Objectives and Research Questions

1.3.1 General Objective of the Study

To determine the influence of teacher preparedness and attitudes on the implementation of Uganda's 2020 Lower Secondary Competence-Based Curriculum in Rukungiri District.

1.3.2 Objectives of the Study

The following objectives guided the study;

1. To assess teachers' preparedness for implementing the CBC in Rukungiri District.
2. To examine teachers' attitudes toward the CBC.
3. To evaluate the effectiveness of CBC implementation in lower secondary schools.
4. To analyze the mediating role of teacher attitudes in the relationship between preparedness and implementation effectiveness.

1.3.3 Research questions

The following research questions guided this study:

1. How prepared are teachers in Rukungiri District to implement the CBC in terms of curriculum delivery, relationship-building, and group dynamics?
2. What attitudes do teachers hold toward the CBC, particularly regarding valence, openness to change, and professional identity?
3. How effective is the implementation of the CBC in terms of instructional confidence, adaptability, collaboration, and perceived support?

Hypothesis

$H0_1$ Teacher attitudes mediate the relationship between preparedness and the effectiveness of CBC implementation in Rukungiri District.

1.5 Justification and Significance of the Study

This study is justified by the urgent need to strengthen the implementation of Uganda's Competency-Based Curriculum (CBC), a flagship reform under Vision 2040 and the Third National Development Plan (NDP III). While the CBC aims to shift teaching and learning toward learner-centered and skills-based approaches, its success hinges on teachers'

preparedness and attitudes. Evidence indicates that many teachers, particularly in rural districts such as Rukungiri, remain underprepared and hold mixed attitudes toward the reform. Empirical research is therefore necessary to examine these two factors together and to assess the extent to which teacher attitudes mediate the link between preparedness and implementation outcomes.

The study's significance lies in its dual contribution to scholarship and practice. Academically, it fills a critical research gap: while previous studies have explored preparedness and attitudes separately, few have investigated their combined influence, and even fewer have tested the mediating role of attitudes. By applying Curriculum Implementation Theory and Constructivist Learning Theory, the study enriches theoretical debates on how teacher-related variables shape curriculum reform in resource-constrained contexts.

Practically, the study generates actionable insights for the Ministry of Education and Sports, the National Curriculum Development Centre, district education offices, and schools. Its findings will guide the design of targeted teacher training, in-service support, mentorship, and resource allocation strategies. Teachers will benefit from evidence that highlights specific dimensions of preparedness and attitudes requiring support, while learners and communities will ultimately gain from more effective curriculum delivery. The study is therefore significant not only for academic advancement but also for informing policy, practice, and equitable educational outcomes in Uganda.

1.6 Scope of the Study

1.6.1 Content Scope

The study focused on three key constructs central to the implementation of Uganda's 2020 Lower Secondary Competency-Based Curriculum (CBC): teacher preparedness, teacher attitudes, and implementation effectiveness. Teacher preparedness was examined in relation to curriculum delivery, relationship-building, and classroom instructional practices. Teacher

attitudes were explored through dimensions of attitudinal valence, openness to change, and professional identity. Implementation effectiveness was assessed in terms of instructional confidence, adaptability, collaboration, and perceived institutional support. The study further analyzed the mediating role of teacher attitudes in the relationship between preparedness and implementation outcomes.

1.6.2 Time Scope

The research was conducted between 2022 and 2024, a period that coincided with the early phases of CBC implementation in lower secondary schools. This timeframe allowed the study to capture teachers' initial levels of preparedness, their evolving attitudes toward the reform, and the practical challenges of translating CBC objectives into classroom practice, particularly in the aftermath of disruptions caused by the COVID-19 pandemic.

1.6.3 Geographical Scope

The study was carried out in Rukungiri District, located in southwestern Uganda. Rukungiri was purposively selected because it represents a predominantly rural context where CBC implementation faces acute challenges such as limited resources, large class sizes, and irregular professional support. The findings are therefore context-specific but also provide insights applicable to other rural districts in Uganda with similar implementation conditions.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews existing literature on teacher preparedness, teacher attitudes, and the effectiveness of implementing the Competency-Based Curriculum in lower secondary schools. It examines how teacher training, pedagogical knowledge, and institutional support shape preparedness, and how attitudes such as openness to change, professional identity, and motivation influence the uptake of curriculum reforms. The review also considers indicators of implementation effectiveness, including instructional confidence, adaptability, collaboration, and the availability of support systems. While previous studies have often addressed preparedness and attitudes separately, there remains limited evidence on how the two interact to influence implementation outcomes, particularly in rural contexts. This chapter therefore establishes the foundation for the present study by identifying the gaps in existing scholarship and highlighting the need to examine the mediating role of teacher attitudes in linking preparedness to effective curriculum delivery.

2.1 Theoretical Review

This study is grounded in two complementary theories: the Curriculum Implementation Theory (CIT) and the Constructivist Learning Theory (CLT). The Curriculum Implementation Theory developed by Gross, Giacquinta, and Bernstein (1971) emphasizes that the success of educational reform depends on four interdependent factors: clarity of the innovation, capability of implementers, resource availability, and management support. These dimensions map directly onto the challenges facing Uganda's Competency-Based Curriculum (CBC), where teacher preparedness relates to clarity and capability, implementation effectiveness is shaped by available resources and leadership support, and teacher attitudes mediate how preparedness translates into practice. The theory underscores that teachers are not passive recipients of policy

but active implementers whose skills, confidence, and perceptions determine whether reform goals are achieved (Baumert et al., 2010; Waweru, 2018).

The Constructivist Learning Theory strengthens this perspective by providing a pedagogical rationale for why teacher preparedness and attitudes matter in CBC classrooms. Rooted in the works of Piaget (1972), Vygotsky (1978), and Bruner (1996), constructivism views learners as active participants who build knowledge through experience, interaction, and reflection. It therefore redefines the teacher's role from content transmitter to facilitator of inquiry, collaboration, and problem-solving (Fosnot, 2013; Juvová, 2015). This shift demands a high level of preparedness, as teachers must be able to design learner-centred lessons and assessments. At the same time, it highlights the centrality of teacher attitudes: willingness to adopt new pedagogical practices and belief in their value become essential conditions for CBC success. In this way, constructivism helps to explain why reforms can fail even when resources are provided, if teachers remain unconvinced, unmotivated, or resistant, they often revert to traditional, exam-driven approaches (Altinyelken, 2010; Dei, 2000).

Together, these two theories offer a comprehensive framework for understanding the dynamics of CBC implementation. While Curriculum Implementation Theory provides a systemic lens that integrates preparedness, resources, and institutional support, Constructivist Learning Theory explains the classroom-level processes and attitudes that determine how reforms are enacted in practice. Their complementarity lies in showing that preparedness without positive attitudes results in superficial compliance, while attitudes without capability and support produce inconsistent outcomes. By combining structural and pedagogical perspectives, the theories jointly illuminate how teacher preparedness and attitudes interact to influence the effectiveness of CBC implementation in rural Uganda, thereby offering an appropriate and holistic foundation for this study.

Although other theoretical frameworks could have been applied, they were not adopted as the

primary lenses for this study due to their narrower scope. Diffusion of Innovations Theory (Rogers, 1962) explains how new practices spread among teachers but focuses more on adoption patterns than on preparedness or systemic support. Change Theory provides useful insights into teacher motivation and cultural change but pays less attention to structural determinants such as resources and clarity of reform (Fullan, 2006). Pedagogical Content Knowledge (PCK) is valuable for understanding the integration of subject matter and pedagogy, but it does not sufficiently account for institutional and attitudinal variables that are central to this research (Shulman, 1986). In contrast, the combination of CIT and Constructivist Learning Theory offers both systemic and pedagogical perspectives, making them the most appropriate frameworks for examining how teacher preparedness and attitudes jointly shape CBC implementation in Rukungiri District.

2.2 Conceptual Review

2.2.1 Teacher Preparedness

Teacher preparedness in the context of Uganda's CBC encompasses the training, knowledge, skills, and resources needed to deliver learner-centred instruction effectively. This includes familiarity with CBC tenets and competence in lesson planning, formative assessment, and interactive pedagogy. For instance, research in Kenya found that only around 33% of teachers were trained in CBC implementation, and most lacked confidence in designing lessons aligned with its principles (Muthoka & Mbirithi, 2025). Similarly, in Uganda's Wakiso District, professional development in CBC was shown to positively influence student academic performance when it was regular and practical (IJFMR, 2024). These studies highlight that preparedness is a foundational input for effective CBC implementation, but uneven training and limited resources constrain many teachers.

2.2.2 Teacher Attitudes

Teacher attitudes, encompassing beliefs, motivations, and openness to change—play a critical role in whether they embrace or resist CBC. In Bundibugyo and Ntoroko districts, a mixed-methods study revealed that while some teachers appreciated CBC's relevance, others expressed frustration over unclear guidelines and lack of support (Namubiru et al., 2024). In Gulu City, research on secondary school teachers found similar challenges, with attitudes influenced by workload, inadequate orientation, and school leadership gaps (Kidega et al., 2025). These findings underscore that positive attitudes are not automatic; they depend on how teachers perceive both the curriculum and the support structures around it.

2.2.3 Implementation Effectiveness

Effectiveness in CBC implementation refers to how well teachers enact learner-centered practices, confidence in instruction, and adaptability to diverse classrooms, collaboration, and use of formative assessment. In Wakiso District, higher levels of teacher development were associated with more frequent use of student-centred approaches and better academic outcomes (IJFMR, 2024). A broader synthesis of CBC experiences in African classrooms also emphasized the importance of adaptive pedagogy and collaborative planning as hallmarks of effective implementation (Tadesse et al., 2025). These outcomes demonstrate how preparedness and attitudes collectively influence whether CBC practices translate into tangible classroom innovation.

2.2.4 Relationships among the Variables

Drawing these dimensions together, the conceptual model posits that teacher preparedness provides the technical foundation (training, skills, resources), while attitudes act as a mediator, influencing how readiness is translated into actual classroom practices, or implementation effectiveness. In essence, well-prepared but unmotivated teachers may comply superficially, while motivated teachers with limited preparation may innovate within constraints. This

mediational logic aligns with findings from both Kenyan and Ugandan contexts (Muthoka & Mbirithi, 2025; Namubiru et al., 2024), and underpins the rationale for investigating how preparedness and attitudes jointly shape CBC outcomes in Rukungiri District.

2.2.5 Conceptual Gap

While studies have examined teacher preparedness or attitudes separately, there is a notable gap in research that integrates both constructs and explores how attitudes mediate the relationship between preparedness and implementation effectiveness, especially in rural Ugandan contexts. This study addresses this gap by empirically testing the mediating role of teacher attitudes within the conceptual framework, thus contributing to a more nuanced understanding of CBC implementation dynamics.

2.3 Empirical Review

2.3.1 Teacher Preparedness in Implementing CBC

Teacher preparedness has been widely recognized as a foundational determinant of successful Competency-Based Curriculum (CBC) implementation. Preparedness refers to the knowledge, pedagogical skills, confidence, and resources teachers possess to translate curriculum policy into classroom practice. In Kenya, Muthoka and Mbirithi (2025) reported that only about one-third of teachers were adequately trained in CBC methods, with many lacking confidence in lesson design and assessment. Similarly, Ugandan studies reveal that while professional development initiatives enhanced teachers' use of learner-centred pedagogy, training was often irregular, one-off, and poorly monitored (International Journal for Multidisciplinary Research [IJFMR], 2024). The Economic Policy Research Centre (EPRC, 2023) further cautioned that Uganda's cascade model of retooling teachers created uneven training depth, particularly disadvantaging rural teachers. More recently, EPRC and ACET (2025) found that although teachers were aware of CBC principles, many still struggled with curriculum interpretation and CBC-aligned assessment, indicating preparedness gaps at both technical and pedagogical

levels.

A closer look at the dimensions of preparedness reveals gaps across three key constructs: Curriculum and Instruction (CI), Relationship and Expectation Establishment (REE), and Group Belonging Formation (GBF). Research shows that teachers often manage lesson planning but struggle to integrate higher-order skills like critical thinking, problem-solving, and formative assessment into daily instruction (Cherotich et al., 2023; Wambi et al., 2024). With respect to REE, teachers in both Kenya and Uganda frequently lack training in fostering inclusive classroom relationships and setting behavioural expectations that align with CBC's emphasis on autonomy and respect, leaving classroom management more reactive than proactive (Barasa et al., 2024; Cheruiyot, 2024). Likewise, GBF remains underdeveloped, with teachers rarely facilitating group-based learning or peer collaboration due to limited training and inadequate mentorship (Mercy Chemutai et al., 2024; Kabasiita et al., 2024). These gaps highlight that preparedness is not monolithic but multidimensional, and weaknesses in any of these areas directly compromise the fidelity of CBC implementation.

Importantly, rural contexts such as Rukungiri District present additional constraints. Teachers there face overcrowded classrooms, poor access to ICT, and shortages of CBC-aligned materials, which exacerbate existing preparedness gaps and reduce opportunities for practical application of training (Achieng, 2023; Mundine, 2022). Thus, while national and regional studies recognize preparedness as critical, most tend to treat it as a single, broad construct, overlooking how its sub-dimensions interact with contextual barriers to influence practice.

The present study addresses this gap by conceptualizing teacher preparedness through the three constructs of Curriculum and Instruction (CI), Relationship and Expectation Establishment (REE), and Group Belonging Formation (GBF), and empirically testing their influence on CBC implementation. By doing so, the study moves beyond generic measures of training to provide a nuanced analysis of how preparedness shapes curriculum reform in under-resourced rural

settings like Rukungiri District.

2.3.2 Teachers' Attitude towards Implementation of the Lower Secondary Competence-Based Curriculum

Teacher attitudes have emerged as a decisive factor in determining the success or failure of curriculum reform initiatives. Attitudes encompass teachers' beliefs, values, motivations, and willingness to change their pedagogical practices, and they strongly influence how far curriculum intentions are translated into practice. In Uganda, Namubiru et al. (2024) found that while teachers appreciated CBC's focus on practical skills and learner-centred pedagogy, frustrations over heavy workloads, vague assessment guidelines, and lack of materials eroded enthusiasm. Kidega et al. (2025) similarly observed that despite recognising CBC's potential to improve outcomes, teachers in Gulu often reverted to teacher-centred methods due to fatigue, limited follow-up training, and weak institutional support. These findings show that positive attitudes can quickly shift when teachers perceive reform demands as overwhelming.

Regional and international studies confirm that teacher attitudes are shaped by context rather than being static dispositions. In Tanzania, Otieno (2025) showed that instructors' attitudes depended on perceived compatibility with existing practices and the degree of institutional support. Teachers who saw CBC as aligned with their professional identity were more open to adopting it, while those who viewed it as complex or resource-intensive resisted change. Waigera et al. (2020) and Utomo (2005) further emphasised that openness to change is enhanced when reforms are introduced through participatory processes and peer modelling, whereas top-down impositions generate resistance. Globally, OECD research highlights teacher buy-in as the linchpin of reform (Schleicher, 2018), and examples from Finland and Singapore show that attitudes remain positive when reforms reinforce professional autonomy and involve teachers in curriculum design (Choo, 2021).

These insights reveal that attitudes operate as an active filter: teachers may be technically

prepared but still fail to implement reform faithfully if they do not perceive it as valuable, achievable, or professionally affirming. Yet most existing literature treats attitudes as an outcome of CBC reforms rather than as a mediating factor in implementation. This study departs from that limitation by explicitly conceptualizing teacher attitudes as a mediator between preparedness and CBC effectiveness. It operationalizes attitudes through Valence (perceived value of CBC), Openness to Change, and Professional Identity and Growth, thereby capturing the cognitive, affective, and behavioral orientations of teachers. By empirically testing this mediating role in rural Ugandan secondary schools, the study provides new evidence on how teacher attitudes actively shape reform outcomes in under-resourced contexts.

2.3.3 CBC Implementation Effectiveness

Implementation effectiveness in CBC refers to the extent to which learner-centred pedagogy, competency development, and authentic assessment strategies are realized in classroom practice. It is commonly assessed through indicators such as instructional confidence, adaptability of pedagogy, teacher collaboration, and access to support structures. While CBC has been rolled out in Uganda since 2020, studies consistently reveal uneven levels of effectiveness across schools.

At the national level, the Economic Policy Research Centre (EPRC, 2023) and the EPRC–ACET evaluation (2025) reported that although most teachers were aware of CBC principles, many struggled to interpret the curriculum competently and apply learner-centred assessment practices. Traditional exams continued to dominate, despite policy directives favoring formative and performance-based assessment. This mismatch illustrates the persistent implementation gap between curriculum policy and classroom reality. Resource disparities further exacerbated this gap, with urban schools reporting higher implementation fidelity than rural ones.

At the district level, research in Wakiso found that schools with sustained professional development recorded higher effectiveness in lesson planning, student engagement, and collaborative learning (IJFMR, 2024). In contrast, schools that relied on irregular or superficial retooling workshops saw minimal classroom change, with CBC often reduced to rhetoric. Regional reviews reinforce these findings: Tadesse et al. (2025) noted that across Africa, CBC effectiveness is fragile in the absence of systemic enablers such as leadership support, instructional materials, and sustained mentorship.

Disaggregated evidence also highlights gaps across the four effectiveness constructs. Teachers frequently express limited instructional confidence, particularly in digital literacy and designing CBC-aligned assessments (Achieng, 2023; Wambi, 2024). Curriculum adaptability is constrained by overcrowded classrooms and resource shortages, which discourage experimentation and learner-centred methods (Cheruiyot, 2024; Kidega et al., 2025). Collaboration and learning are inconsistently facilitated; while some teachers leverage peer networks and group activities, many still rely on individualised instruction, undermining CBC's social learning goals (Chemutai, 2024; Mutai et al., 2024). Perceived support and resources remain the weakest dimension, especially in rural schools where leadership engagement and CBC-aligned materials are limited (Kabasiita et al., 2024).

Global evidence echoes these challenges. Studies from the USA and South Korea demonstrate that CBC reforms enhanced learner autonomy and problem-solving, but only when accompanied by sustained teacher mentoring and strong systemic support (Muchira et al., 2023). OECD systems such as Finland and Singapore show that reforms are most effective when teachers enjoy professional autonomy and are centrally involved in curriculum design (Schleicher, 2018; Choo, 2021). These insights highlight that effectiveness is inseparable from the interplay of teacher capacity, institutional culture, and broader systemic enablers.

Despite these insights, most existing studies emphasize structural or institutional factors while giving less attention to how teacher-level variables shape implementation. The current study addresses this gap by conceptualizing effectiveness through four constructs—Instructional Confidence, Curriculum Adaptability, Collaboration and Learning, and Perceived Support and Resources—and empirically linking them to teacher preparedness and attitudes. By doing so, it positions the teachers not merely as passive implementers but as central agents whose readiness and dispositions determine the fidelity of CBC reform in rural Ugandan schools such as Rukungiri District.

2.3.4 Mediation of Attitudes

Although teacher preparedness and attitudes have individually been studied in relation to curriculum reform, the mediating role of attitudes in linking preparedness to implementation effectiveness remains underexplored. Evidence suggests that training and resources alone do not guarantee effective CBC practices unless teachers also develop a sense of value, motivation, and ownership of the reform. In Uganda, Wambi (2022) reported that teachers who had undergone retooling still reverted to lecture-based methods when they doubted CBC's practicality or felt overwhelmed. Preparedness without positive attitudes thus resulted in superficial compliance rather than genuine pedagogical change. Namubiru et al. (2024) likewise found that teachers who perceived CBC as meaningful and aligned with their professional goals were more likely to adapt their methods, even under resource constraints. Their positive dispositions enabled them to experiment with learner-centred strategies, suggesting that attitudes can amplify or diminish the effect of preparedness.

Regional findings confirm these patterns. Otieno (2025), studying competency-based reforms in Tanzania, revealed that professional identity and openness to change predicted stronger adoption of CBC practices than training exposure alone. Teachers who internalized the value of reform demonstrated higher fidelity of implementation regardless of systemic constraints.

These findings illustrate that attitudes function as a psychological filter, conditioning how training, resources, and technical skills are translated into classroom practice. Globally, research from OECD countries similarly highlights that teacher motivation and reform buy-in significantly shape whether professional development translates into effective innovation (Schleicher, 2018). In South Korea, for instance, sustained teacher commitment was shown to distinguish genuine adoption of competency-based pedagogy from superficial compliance (Muchira et al., 2023).

Despite these insights, very few studies have formally tested attitudes as a mediating variable using robust designs such as structural path modelling or mixed methods. Most research remains descriptive, examining preparedness or attitudinal challenges separately, without empirically modelling how one influences the other. This gap is particularly notable in rural Ugandan contexts, where teachers face compounded challenges of under-resourcing, limited mentorship, and weak systemic support.

The present study addresses this gap by explicitly conceptualizing attitudes as a mediator between preparedness and implementation effectiveness. It operationalizes attitudes through Valence (perceived value of CBC), Openness to Change, and Professional Identity and Growth, and tests their mediating role in the relationship between preparedness dimensions, Curriculum and Instruction (CI), Relationship and Expectation Establishment (REE), and Group Belonging Formation (GBF), and the effectiveness of CBC implementation. By employing a mixed-methods design and Hayes' PROCESS Model 4, the study quantifies both direct and indirect effects while also contextualizing them with qualitative insights from teachers lived experiences. This dual approach advances current scholarship by moving beyond description to an integrated explanation of how teacher-level factors interact to shape CBC reform outcomes in rural Uganda.

2.3.5 Identified Empirical Gap

The reviewed empirical literature underscores the importance of teacher preparedness, attitudes, and systemic supports in shaping the implementation of Uganda's Competency-Based Curriculum. However, three critical gaps remain unresolved.

First, studies on teacher preparedness in Uganda and the region have mainly assessed the adequacy of training and access to resources without disaggregating preparedness into its multi-dimensional components. Constructs such as Curriculum and Instruction (CI), Relationship and Expectation Establishment (REE), and Group Belonging Formation (GBF) have rarely been examined in depth, leaving unanswered questions about which specific aspects of preparedness most directly influence implementation fidelity (EPRC, 2023; IJFMR, 2024; Muthoka & Mbirithi, 2025).

Second, while teacher attitudes toward CBC have been widely described, ranging from positive to ambivalent, existing research has often treated attitudes as outcomes of reform rather than as active determinants of pedagogical change (Namubiru et al., 2024; Kidega et al., 2025; Otieno, 2025). Global evidence also confirms that attitudes function as filters shaping reform adoption (Schleicher, 2018; Waigera et al., 2020), yet few Ugandan studies have conceptualized attitudes as mediators that explain how preparedness translates into classroom practice.

Third, the effectiveness of CBC implementation has mostly been linked to structural and institutional enablers such as resources, leadership, and policy enforcement (EPRC & ACET, 2025; Tadesse et al., 2025). However, teacher-level variables remain underexplored in explaining variability in effectiveness, and the mediating role of attitudes is rarely tested empirically. Although evidence from Wambi (2022) and Namubiru et al. (2024) suggests that attitudes amplify or diminish the effect of preparedness, rigorous empirical modelling, particularly in rural settings, remains scarce.

The present study addresses these gaps by adopting a holistic framework that integrates preparedness, attitudes, and effectiveness, while explicitly testing the mediating role of teacher attitudes using both quantitative (PROCESS mediation modelling) and qualitative (lived experience) approaches. By situating its analysis in Rukungiri District, the study not only fills a contextual and methodological void but also contributes theoretically by extending Curriculum Implementation Theory and Constructivist Learning Theory, and practically by generating actionable insights for policymakers, curriculum developers, and teacher-training institutions seeking to enhance the fidelity and sustainability of CBC implementation in Uganda.

CHAPTER THREE

METHODOLOGY

This chapter explains the methodological approach used to assess teachers' preparedness for Competency-Based Curriculum (CBC) implementation, examines teachers' attitudes toward the CBC, evaluates the effectiveness of CBC implementation in lower secondary schools, and analyzes the mediating role of attitudes in the preparedness–implementation relationship. It sets out the paradigm and design, the philosophical assumptions underpinning the study, the study area and population, sampling and sample size decisions, instruments and procedures, data analysis for both strands, quality assurance, and ethical considerations.

3.1 Research Paradigm and Philosophical Underpinnings

The study was guided by a pragmatic paradigm, privileging what works to answer the research questions in a complex educational setting. Pragmatism accommodates multiple forms of evidence and therefore supports combining numeric indicators with lived accounts (Creswell & Plano Clark, 2018).

Four philosophical assumptions provided the foundation. Epistemologically, knowledge was treated as plural: statistical regularities and experiential meanings were both considered valid and mutually illuminating. Ontologically, reality was assumed to be layered and context-dependent; levels of preparedness and enactment may vary across schools and teachers, so the design sought patterns while remaining open to multiple realities expressed by participants. Axiologically, the inquiry acknowledged that values shape both the questions asked and the interpretations offered; to manage this, reflexive practice and transparent presentation of participants' voices were embedded throughout. Methodologically, a mixed-methods stance was taken in which methods are selected for their utility rather than allegiance to a single tradition.

Within this paradigm, a convergent mixed-methods design with explanatory intent was used. Quantitative survey data and qualitative interview/focus-group data were collected in the same overall phase and analyzed separately; however, the qualitative strand was explicitly timed and framed to follow the quantitative results, explaining patterns detected in the survey (for example, areas of neutrality or heterogeneity). The two strands were then integrated at the interpretation stage.

3.2 Research Design

A parallel mixed-methods design with explanatory intent was used. Quantitative survey data and qualitative interview/focus-group data were collected in the same overall phase and analyzed separately; however, the qualitative strand was explicitly timed and framed to follow the quantitative results, explaining patterns detected in the survey (for example, areas of neutrality or heterogeneity). The two strands were then integrated at the interpretation stage.

3.3 Study Population

The study took place in lower secondary schools in Rukungiri District, encompassing both government and private providers located across sub-counties and town councils. The target population for the quantitative strand comprised all teachers in the sampled schools. The qualitative strand drew on school leaders, specifically head teachers, and student class leaders to add leadership and learner perspectives to the understanding of implementation on the ground.

3.4 Sampling Techniques and Sample Size

Sampling proceeded in two stages at the institutional level. First, the district was stratified by sub-counties/town councils, and from each stratum, one secondary school was randomly selected. Sector representation was ensured, yielding 13 schools in total: 6 government and 7 private. Second, teacher selection within schools followed a proportional random approach.

A teacher frame of N = 471 was assembled from staff lists. Sample size was determined using standard finite-population guidance at 95% confidence and 5% precision, which suggested a minimum of roughly $n \approx 212$ teachers. To safeguard statistical power and accommodate non-response or rounding at school level, the target was inflated by about 10% and rounded, producing n = 235 teachers. A proportional sampling fraction of approximately $235/471 \approx 0.50$ was applied to each school roster, and the corresponding number of teachers was randomly selected at each site. For the qualitative participants, one head teacher and one student class leader were purposively selected from each school to secure rich leadership and learner insights. In total, the study engaged 261 participants: 235 teachers (survey), 13 head teachers (interviews), and 13 student leaders (FGDs). Head teachers were interviewed individually, while student leaders from the 13 schools were randomly assigned to two focus-group discussions, ensuring balanced representation.

3.5 Instruments

Two instruments were used. The questionnaire was self-administered and comprised four sections: (A) biodata (gender coded 1=male, 2=female; employment status 1=government, 2=private; education level 1=diploma, 2=bachelor, 3=master's, 4=PhD); (B) Teacher Preparedness (TP) with 12 items on a five-point Likert scale, organized into three sub-constructs (Knowledge & Understanding, Instructional Design, Classroom Practice); (C) Teacher Attitudes (TA) with 12 Likert items across Perceptions, Professional Motivation, and Change Orientation; and (D) Effective Implementation (EI) with 12 Likert items across Lesson Delivery, Learner-Centred Practices, and Assessment & Feedback. Composite and sub-composite scores were computed as means, with higher values indicating more of the attribute. The qualitative guides (interview and FGD) were semi-structured and explored lesson planning and facilitation, formative assessment routines, professional development experiences, workload and motivation, resources and ICT, collaboration, and reflections on the

implementation of the CBC.

Instrument development followed a structured process. All tools were drafted by the researcher and validated through expert review involving two experienced secondary-school teachers and one university lecturer, after which they were pilot tested with teachers outside the main sample. Feedback-informed refinements to wording, sequencing, and content alignment with CBC constructs.

3.6 Data Collection Procedures

Data collection began with permissions from relevant authorities and access approvals from participating schools. Potential participants were briefed on the study aims, the voluntary nature of participation, confidentiality safeguards, and the right to withdraw at any time, after which written informed consent was obtained. The survey was administered on-site in supervised sessions to facilitate completion. Interviews with head teachers and FGDs with student leaders were scheduled at convenient times within school premises, audio-recorded with permission, and accompanied by field notes. Completed questionnaires were secured immediately, and audio files were stored on encrypted devices before being transcribed verbatim.

3.7 Data Quality: Validity, Reliability, and Trustworthiness

Content validity was supported by expert review and piloting. Reliability of the quantitative scales was assessed using Cronbach's alpha for each composite and sub-scale, with $\alpha \geq .70$ considered acceptable. Normality of composite distributions was examined using Kolmogorov–Smirnov and Shapiro–Wilk tests along with visual inspections of histograms and Q–Q plots; the results supported treating the data as approximately normal, and parametric procedures were therefore used. For the qualitative strand, credibility was enhanced through member checking, maintenance of a reflective journal documenting analytic decisions, and a

validation meeting with participants to confirm the resonance of emergent themes. An audit trail of coding decisions supported dependability and confirmability, while clear description of the district and school context supported transferability.

3.8 Data Analysis

Quantitative data were entered, cleaned, and analysed in SPSS version 26. Descriptive statistics summarised frequencies and percentages for Likert responses, and means with standard deviations for items, sub-constructs, and composites. Group comparisons used independent-samples t-tests (gender and employment status) and one-way ANOVA with Tukey post hoc tests (education level), with assumption checks and effect sizes reported. Relationships among the main variables were examined with Pearson correlations, and the mediating role of attitudes in the link between preparedness and implementation was tested using PROCESS Model 4 with bias-corrected bootstrapping. Qualitative data were analysed thematically using an Excel-assisted workflow that included familiarisation with transcripts, open coding, iterative clustering of codes into themes, review and definition of themes, and narrative synthesis illustrated with verbatim quotations. Although the strands were analysed separately, the qualitative analysis was sequenced to follow and explain key quantitative patterns as part of the convergent design's explanatory intent, and the two strands were considered together in the discussion.

3.9 Ethical Considerations

Ethical clearance was obtained from the institutional Research Ethics Committee (REC) and the National Council for Science and Technology (NCST). Administrative approvals were provided by the District Education Office and participating schools. All adult participants provided written informed consent, and appropriate permissions and assent procedures were followed for student leaders. Confidentiality was protected by removing direct identifiers and

using pseudonymous labels in transcripts and reports. Participation was voluntary with no penalties for non-participation or withdrawal. Data were stored securely with access restricted to the research team.

3.10 Limitations

As a cross-sectional investigation, the design does not permit strong causal attribution. Reliance on self-report measures introduces the possibility of social desirability and common-method variance. Time constraints within school timetables limited some interview and FGD durations. These limitations were mitigated through anonymity assurances, triangulation with qualitative evidence, reflexive documentation, and robustness checks on analytic assumptions.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF RESULTS

This chapter presents the findings of the study on teacher preparedness, attitudes, and the implementation effectiveness of the Competency-Based Curriculum (CBC) in lower secondary schools in Rukungiri District, Uganda. The results are organized according to the four research objectives and aligned with the mixed methods approach adopted in the study. Quantitative data obtained from questionnaires administered to teachers are presented using descriptive and inferential statistics, including frequencies, percentages, means, standard deviations, and graphical representations such as tables, pie charts, and bar graphs. These findings are used to explore patterns and relationships among the key variables: teacher preparedness, teacher attitudes, and the effectiveness of CBC implementation.

4. 1 Preliminary Results

This section establishes the empirical foundation for the study by summarizing the participants' characteristics, evaluating the internal consistency of the measurement scales, and assessing distributional assumptions for the composite variables. The goal is to document the composition of the sample and the psychometric adequacy of the instruments before addressing the study objectives.

Participants' characteristics are presented to contextualize subsequent analyses and to indicate whether notable imbalances exist across key demographics (see Table 1 and Table 2). Reliability evidence is then reported for the three multi-item scales, Teacher Preparedness, Teacher Attitudes, and Effective Implementation, using Cronbach's alpha to demonstrate internal consistency at the total-scale level (Table 3). Finally, tests of normality for the composite means are summarized (Table 4) to justify the use of parametric procedures in later sections, with notes on safeguards (e.g., effect sizes, robust/bootstrapped intervals) where minor deviations from normality are detected.

4.1.1 Participants Characteristics

This section summarizes the demographic characteristics of the teacher sample to contextualize subsequent reliability, normality, and objective-specific analyses. As shown in Table 1, the sample was gender-balanced, predominantly from private schools, and largely Bachelor-trained. Table 2 shows that education patterns were broadly similar across gender and employment groups.

Table 1: Summary of Participants' Characteristics (N = 233)

Characteristic	Category	f	%
Gender	Male	120	51.5
	Female	113	48.5
Employment status	Government	86	36.9
	Private	147	63.1
Education level	Diploma	47	20.2
	Bachelor	141	60.5
	Master's	45	19.3

The cohort is gender-balanced (51.5% men, 48.5% women), providing comparable group sizes for gender-based analyses. A larger share of participants teach in private schools (63.1%) relative to government schools (36.9%); this unequal split should be acknowledged when reporting group comparisons (e.g., confidence intervals) but does not, by itself, bias estimates if models are correctly specified. Educational attainment is predominantly Bachelor's level (60.5%), with meaningful representation at Diploma (20.2%) and Master's (19.3%). This profile suggests a workforce with a solid baseline of formal training, which is relevant when interpreting levels of preparedness and the uptake of CBC practices.

Table 2: Education by Gender and Employment (Counts with Row Percentages; N = 233)

A. Gender × Education

Gender \ Education	Diploma	Bachelor	Master's	Row total
Male (n = 120)	23 (19.2%)	73 (60.8%)	24 (20.0%)	120
Female (n = 113)	24 (21.2%)	68 (60.2%)	21 (18.6%)	113
Column total	47	141	45	233

B. Employment × Education

Employment \ Education	Diploma	Bachelor	Master's	Row total
Government (n = 86)	18 (20.9%)	50 (58.1%)	18 (20.9%)	86
Private (n = 147)	29 (19.7%)	91 (61.9%)	27 (18.4%)	147
Column total	47	141	45	233

Note. Values in parentheses are row percentages (i.e., proportions within each gender or employment group).

Education patterns were essentially the same across groups. By gender, Bachelor's was 60.8% (men) vs 60.2% (women); Diploma 19.2% vs 21.2%; Master's 20.0% vs 18.6%. By employment, Bachelor's was 58.1% (government) vs 61.9% (private); Diploma 20.9% vs 19.7%; Master's 20.9% vs 18.4%. All differences are small (≤ 3.8 percentage points), indicating comparable education distributions across gender and sector; we will still control for gender, employment, and education in later models for precision.

4.1.2 Reliability (Internal Consistency) Test

Internal consistency for the three study scales, Teacher Preparedness (TP), Teacher Attitude (TA), and Effective Implementation (EI), was examined prior to inferential analyses. As shown in Table 3, all three total scales demonstrated acceptable-to-excellent reliability.

Table 3: Reliability of Preparedness (TP), Attitude (TA), and Implementation (EI) Scales

Construct	Cronbach's α	k (items)
Teacher Preparedness (TP)	.913	12
Teacher Attitude (TA)	.846	12
Effective Implementation (EI)	.881	12

Note. Each scale comprises 12 Likert-type items scored 1–5.

The TP scale showed excellent internal consistency (α = .913), while TA (α = .846) and EI (α = .881) were good. Given common benchmarks (α ≥ .70 acceptable; ≥ .80 good; ≥ .90 excellent), these coefficients indicate that items within each scale coherently measure the intended construct. Accordingly, it is appropriate to compute and use scale means for subsequent normality checks, group comparisons, regressions, and mediation analyses.

4.1.3 Normality Test

Normality tests were run on the three composite means: teacher preparedness, attitudes, and implementation, and the results are summarized in Table 4.

Table 4: Normality tests for composite means (N = 233)

Variable	Kolmogorov–Smirnov D (p)	Shapiro–Wilk W (p)
Preparedness mean	.072 (.005)	.973 (< .001)
Attitudes mean	.052 (.200*)	.985 (.014)
Implementation mean	.063 (.025)	.976 (< .001)

Note. SPSS caps Kolmogorov–Smirnov p at .200 (lower bound). Each composite is the mean of 12 Likert items (1–5).

Shapiro–Wilk tests indicated statistical departures from perfect normality for all three composites, while Kolmogorov–Smirnov tests were mixed (non-significant only for attitudes). Given the sample size (N = 233) and that each composite is an average of 12 Likert items, such

deviations are expected and are unlikely to meaningfully affect inference. Parametric analyses are retained. This decision is supported by the Central Limit Theorem for large samples, the stabilizing effect of aggregating multiple items into composite means, and the established robustness of t-tests, ANOVA, and ordinary least squares regression to modest non-normality.

4.2 Teachers' Preparedness for Implementing the CBC:

Teacher preparedness was measured with a 12-item, 5-point Likert scale (1 = SD to 5 = SA; α = .913) organized into Knowledge & Understanding, Instructional Design, and Classroom Practice sub-constructs; higher scores indicate greater preparedness. This section briefly presents descriptive (vs. the neutral midpoint 3.0) and item profiles, followed by group comparisons (gender, employment, education).

4.2.1 Descriptive Statistics for Teachers' Preparedness for Implementing the CBC

This subsection summarizes frequency, central tendency, and variability for the preparedness construct to position scores relative to the neutral midpoint of 3.0 on the 1–5 scale. Table 5 presents item-level results for the Teacher Preparedness scale. Responses are collapsed into SA+A (Strongly Agree + Agree), N (Neutral), and D+SD (Disagree + Strongly Disagree), with each cell showing n and % out of N = 233. The last columns report the Mean (M) on the 1–5 scale and Standard Deviation (S.D.). Interpret $M > 3$ as a tendency to agree, $M \approx 3$ as neutral, and $M < 3$ as a tendency to disagree; larger S.D. indicates greater variability in responses.

Table 5: Teacher Preparedness items: SA+A, N, D+SD (n, %) with M and S.D. (N = 233)

Item (short)	SA+A	N	D+SD	M	S.D.
Knowledge & Understanding				**3.057**	**1.1345**
TP1: ICT integration	97 (41.7%)	31 (13.3%)	105 (45.0%)	3.06	1.496
TP2: CBC principles	88 (37.8%)	48 (20.6%)	97 (41.6%)	3.03	1.441
TP3: Use scenarios	97 (41.6%)	37 (15.9%)	99 (42.4%)	3.03	1.471
TP4: Self-assess	92 (39.5%)	37 (15.9%)	104 (44.6%)	3.07	1.469
Instructional Design				**3.059**	**1.1299**
TP5: Project-based & personalized	97 (41.6%)	38 (16.3%)	98 (42.1%)	3.03	1.478
TP6: CBC-aligned lesson plans	97 (41.7%)	36 (15.5%)	100 (42.9%)	3.03	1.481
TP7: CBC strategies	85 (36.4%)	39 (16.7%)	109 (46.8%)	3.11	1.424
TP8: Plan interactive activities	94 (40.3%)	34 (14.6%)	105 (45.1%)	3.03	1.431
Classroom Practice				**3.042**	**1.1286**
TP9: Organize for interaction	96 (41.2%)	34 (14.6%)	103 (44.2%)	3.03	1.479
TP10: Peer/collaborative teaching	95 (40.8%)	46 (19.7%)	92 (39.5%)	3.00	1.413
TP11: Facilitate discussions	88 (37.8%)	45 (19.3%)	100 (42.9%)	3.09	1.443
TP12: Manage CC classes	96 (41.2%)	32 (13.7%)	105 (45.1%)	3.05	1.433

Notes. *SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree. Percentages are based on N = 233 valid responses per item.*

Within Knowledge & Understanding (subscale M = 3.057, S.D. = 1.1345), agreement ranges from 37.8% (TP2) to 41.7% (TP1), while disagreement ranges from 41.6% (TP2) to 45.0% (TP1). Neutral responses span 13.3% (TP1) to 20.6% (TP2). Item means fall between 3.03 and 3.07 (S.D. = 1.441–1.496). TP1 (ICT integration) is nearly split (41.7% vs 45.0%, M = 3.06,

S.D. = 1.496), and TP4 (Self-assess) shows a similar pattern (39.5% vs 44.6%, M = 3.07, S.D. = 1.469). The proportions show that core familiarity is present for many teachers, but a comparable share remains unconvinced, particularly on CBC principles (TP2: 37.8% SA+A vs 41.6% D+SD, M = 3.03).

For Instructional Design (subscale M = 3.059, S.D. = 1.1299), agreement ranges from 36.4% (TP7) to 41.7% (TP6), disagreement from 42.1% (TP5) to 46.8% (TP7), and neutral responses from 14.6% (TP8) to 16.7% (TP7). Means lie between 3.03 and 3.11 (S.D. = 1.424–1.481). The most pronounced tension appears on TP7 (CBC strategies) with the lowest agreement (36.4%) and highest disagreement (46.8%) (M = 3.11, S.D. = 1.424), signaling difficulty or hesitation around enacting CBC-specific methods. Planning interactive activities (TP8) is also contentious (40.3% SA+A vs 45.1% D+SD, M = 3.03, S.D. = 1.431). Even where teachers report CBC-aligned planning (TP6: 41.7% vs 42.9%, M = 3.03), the near balance of responses indicates that lesson design aligned to competencies is not yet universally embedded.

In Classroom Practice (subscale M = 3.042, S.D. = 1.1286), agreement lies between 37.8% (TP11) and 41.2% (TP9, TP12), disagreement between 39.5% (TP10) and 45.1% (TP12), and neutral between 13.7% (TP12) and 19.7% (TP10). Means range from 3.00 to 3.09 (S.D. = 1.413–1.479). TP10 (Peer/collaborative teaching) is the only item with a clear positive balance (40.8% SA+A vs 39.5% D+SD), has the lowest variability (S.D. = 1.413), and a mean of 3.00, suggesting modest traction for peer-teaching approaches. By contrast, TP11 (Facilitate discussions) shows 37.8% SA+A against 42.9% D+SD (M = 3.09, S.D. = 1.443), and TP12 (Manage CBC classes) shows 41.2% vs 45.1% (M = 3.05, S.D. = 1.433), indicating that facilitating group processes and managing collaboration-heavy classrooms remain challenging for many.

Synthesis and implication. Exact percentage compositions reveal consistent tendencies toward disagreement on several practice-proximal items, especially TP7 (CBC strategies: 36.4% SA+A, 46.8% D+SD), alongside TP8 and TP12, while TP10 stands out as a relative strength (40.8% SA+A vs 39.5% D+SD). Subscale means (Knowledge & Understanding 3.057, Instructional Design 3.059, and Classroom Practice 3.042) confirm an overall neutral level of preparedness with large S.D.s, meaning preparedness is uneven across teachers. In practical terms, professional development should concentrate on hands-on CBC strategies, routine planning of interactive activities, and collaborative classroom management, while leveraging the foothold in peer/collaborative teaching to spread effective practices.

4.2.2 Teacher Preparedness- Group Comparisons by Gender, Employment, and Education

To examine whether teacher preparedness differs across demographic groups, independent-samples t tests (for gender and employment) and a one-way ANOVA (for education) were conducted. The full results are reported in Table D2 (gender), Table D3 (employment), and Table D4 (education).

Table 6: Preparedness by gender: independent-samples t tests (N = 233)

Measure	t	df	p	Mean Difference (Male − Female)	95% CI [Lower, Upper]
Average preparedness	0.519	231	.604	0.07097	[−0.19829, 0.34023]
Knowledge & Understanding	0.154	231	.878	0.02294	[−0.27069, 0.31656]
Instructional Design	0.530	231	.596	0.07865	[−0.21362, 0.37092]
Classroom Practice	0.752	231	.453	0.11132	[−0.18045, 0.40309]

Note. Levene's tests were non-significant for all outcomes; equal variances were assumed.

Independent-samples t tests showed no statistically significant gender differences in teacher preparedness. For the overall composite, the mean difference between males and females was small and non-significant, $t(231) = 0.519$, $p = .604$, with a 95% CI that included zero [−0.198, 0.340]. The three sub-constructs, Knowledge & Understanding, Instructional Design, and

Classroom Practice, were likewise non-significant (all $p \geq .453$), and Levene's tests indicated homogeneity of variances. These results suggest that preparedness levels are comparable for male and female teachers, with no evidence of practically meaningful gender gaps on any preparedness dimension.

Table 7: Preparedness by employment status: independent-samples t tests (N = 233)

Measure	t	df	p	Mean Difference (Government − Private)	95% CI [Lower, Upper]
Average preparedness	1.332	231	.184	0.18797	[−0.08999, 0.46594]
Knowledge & Understanding	1.705	231	.090	0.26153	[−0.04069, 0.56375]
Instructional Design	1.052	231	.294	0.16137	[−0.14079, 0.46353]
Classroom Practice	0.920	231	.359	0.14102	[−0.16098, 0.44301]

Note. Levene's tests were non-significant; equal variances were assumed.

Comparisons between government and private school teachers indicated no statistically significant differences in overall preparedness, $t(231) = 1.332$, $p = .184$, 95% CI [−0.090, 0.466]. Sub-construct analyses were also non-significant: Knowledge & Understanding ($t(231) = 1.705$, $p = .090$), Instructional Design ($t(231) = 1.052$, $p = .294$), and Classroom Practice ($t(231) = 0.920$, $p = .359$). Although Knowledge & Understanding showed the smallest p value, its confidence interval crossed zero, indicating no reliable sector difference. Variance homogeneity held across tests. Overall, preparedness appears similar across employment sectors, with any observed differences small in magnitude.

discussions, and guiding student presentations and demonstrations. As one teacher put it, *"I usually prepare tasks and give learners to discuss and report back. I guide them. That is how I teach these days."* (Teacher). Learners recognized the same shift: *"Sometimes we are grouped to discuss topics, which helps us learn from each other, especially in science and social studies."* (Student). Lesson design was frequently tied to real-life contexts through community-based tasks, role-plays, and problem-solving activities intended to cultivate practical competencies.

Assessment practices. Preparedness also encompassed a transition toward continuous, formative assessment. Teachers reported using projects, presentations, peer evaluation, and weekly class tasks in place of sole reliance on end-of-term examinations: *"I no longer rely on end-of-term exams only. I assess learners weekly based on classwork, presentations, and projects."* (Teacher). The shift, however, brought challenges of documentation and workload, particularly in maintaining portfolios: *"Marking portfolios is time-consuming, but it gives a better picture of what learners know and can do."* (Teacher).

Professional development and support. Initial training was widely valued for introducing CBC concepts and planning tools. One participant noted, *"We attended a CBC workshop organized by the Ministry. It helped us understand how to design competence-based lesson plans."* (Teacher). Yet many described limited follow-up and a lack of on-site support: *"Since that one training last year, we have not had any follow-up or support supervision."* (Head Teacher). Requests recurred for school-based mentoring, co-planning, observation, and feedback to consolidate skills.

Motivation and contextual conditions. Teachers often expressed a philosophical alignment with CBC's focus on demonstrable competencies, *"I like the CBC because it focuses on what learners can do, not just cramming content."* (Teacher), but motivation was constrained by

workload, resource shortages, and large classes: *"CBC increases our workload. You plan more, mark more, and yet the salary is the same."* (Teacher). Leaders acknowledged that even where training had been provided, insufficient equipment and materials impeded day-to-day enactment.

4.2.4 Summary of Results on Teachers' Preparedness

Quantitatively, overall preparedness and its three sub-constructs (knowledge & understanding, instructional design, and classroom practice) clustered around the neutral midpoint on the 1–5 scale, with substantial variability across teachers. The clearest practice gaps appeared in CBC-supportive strategies, planning interactive lessons, and collaborative classroom management. No statistically significant differences emerged by gender, employment sector, or education level, indicating broadly comparable baselines across groups.

The qualitative evidence adds important texture to these patterns. Teachers described a genuine shift in planning and delivery toward facilitation, setting tasks, organizing group discussions, and linking lessons to real-life contexts (e.g., "I usually prepare tasks and give learners to discuss and report back. I guide them."). Many reported active adoption of formative assessment (weekly tasks, projects, peer evaluation), while also flagging the documentation burden of portfolios (e.g., "Marking portfolios is time-consuming, but it gives a better picture..."). Professional development was widely valued for introducing CBC concepts, yet was often one-off with limited follow-up or coaching, leaving teachers asking for school-based mentoring, co-planning, observation, and feedback. Motivation toward CBC's competency focus was philosophically positive, but workload, resource shortages (ICT, textbooks), and large classes constrained day-to-day enactment.

4.3 Teachers' Attitudes toward the CBC

Teachers' attitudes toward the CBC were assessed using a 12-item, 5-point Likert scale (1 = SD to 5 = SA) across three sub-constructs: Perceptions, Professional Motivation, and Change Orientation. This section presents item-level results, sub-construct descriptive, group comparisons (gender, employment, education), and correlations with Preparedness and Implementation to set up the mediation analysis.

4.3.1 Descriptive statistics for teachers' attitudes towards the CBC

To locate specific areas of endorsement or reservation, the combined agreement (SA+A), neutrality (N), and disagreement (D+SD) alongside the mean (M) and standard deviation (S.D.) for each attitude item is summarized in Table 8 below.

Table 9: Teachers' Attitudes: Item-level response distribution (N = 233)

Item (short)	SA+A	N	D+SD	M	S.D.
Perceptions				**2.9989**	**0.98082**
TA1: Improves competencies	96 (41.2%)	43 (18.5%)	94 (40.3%)	3.03	1.435
TA2: Practical & relevant	100 (42.9%)	30 (12.9%)	103 (44.2%)	2.99	1.494
TA3: More engaging	99 (42.5%)	32 (13.7%)	102 (43.8%)	2.99	1.420
TA4: Learners benefit	98 (42.1%)	32 (13.7%)	103 (44.2%)	2.99	1.452
Professional Motivation				**3.0193**	**1.05641**
TA5: Motivated daily	101 (43.3%)	25 (10.7%)	107 (45.9%)	3.00	1.493
TA6: Confident to implement	100 (42.9%)	38 (16.3%)	95 (40.7%)	2.99	1.443
TA7: Feel responsible	94 (40.3%)	32 (13.7%)	107 (45.9%)	3.06	1.450
TA8: Invest extra time	96 (41.2%)	32 (13.7%)	105 (45.1%)	3.02	1.443
Change Orientation				**3.0032**	**1.00309**
TA9: Open to new approaches	99 (42.5%)	43 (18.5%)	91 (39.1%)	2.99	1.444
TA10: Positive change	98 (42.1%)	38 (16.3%)	97 (41.6%)	3.03	1.465
TA11: Collaboration essential	104 (44.6%)	34 (14.6%)	95 (40.8%)	2.98	1.488
TA12: Keep learning	99 (42.5%)	37 (15.9%)	97 (41.6%)	3.00	1.413

Overall, the table shows a broadly neutral attitudinal profile with substantial spread. Across items, agreement (SA+A) typically falls around 41–45%, disagreement (D+SD) sits close by at 39–46%, and the neutral band (N) is modest, generally ~11–19%. Because endorsement and

reservation are of comparable size, item means cluster at the scale midpoint (most M ≈ 2.98–3.03 on the 1–5 scale), while standard deviations are large (S.D. is 1.41–1.49), indicating heterogeneous views rather than uniform neutrality.

Within Perceptions (subscale M = 2.9989, S.D. = 0.98082), responses are finely balanced. For instance, TA2 (Practical & relevant) records 42.9% agreement and 44.2% disagreement (M = 2.99, S.D. = 1.49), and TA3 (More engaging) shows 42.5% versus 43.8% (M = 2.99, S.D. = 1.42). TA1 (Improves competencies) is almost symmetrical (41.2% vs 40.3%, M = 3.03, S.D. = 1.44), and TA4 (Learner's benefit) mirrors this (42.1% vs 44.2%, M = 2.99, S.D. = 1.45). Neutral responses in this block range 12.9–18.5%, suggesting some uncertainty but not enough to explain the near-3.0 means; rather, the means reflect counterbalancing endorsement and reservation.

In Professional Motivation (subscale M = 3.0193, S.D. = 1.05641), the effort-cost items draw slightly more reservation. TA5 (Motivated daily) has 43.3% agreement against 45.9% disagreement (M = 3.00, S.D. = 1.49) with the lowest neutral share in the table (10.7%), indicating more decisive positions. TA8 (Invest extra time) also tilts negative (41.2% vs 45.1%, M = 3.02, S.D. = 1.44). TA7 (Feel responsible) shows 40.3% agreement and 45.9% disagreement, yet its mean is slightly above 3 (M = 3.06, S.D. = 1.45), implying that when teachers do agree, they lean toward stronger agreement levels. TA6 (Confident to implement) is the most balanced here (42.9% vs 40.7%, M = 2.99, S.D. = 1.44). Together, these patterns point to motivation and time/ownership as the main pressure points: confidence can be present, but sustaining effort and accepting added load garners hesitation.

The most favorable results appear in Change Orientation (subscale M = 3.0032, S.D. = 1.00309). TA11 (Collaboration essential) shows the highest agreement in the table (44.6%) with 40.8% disagreement (M = 2.98, S.D. = 1.49), and TA9 (Open to new approaches) pairs 42.5% agreement with the lowest disagreement in the set (39.1%; M = 2.99, S.D. = 1.44). TA10

(Positive change) and TA12 (Keep learning) are also slightly positive (42.1–42.5% vs 41.6%; M ≈ 3.00–3.03, S.D. ≈ 1.41–1.47). Neutral responses in this block range 15.9–18.5%, consistent with a modest pocket of indecision. Substantively, teachers are more open to trying new approaches, collaborating, and continuing to learn than they are resistant to change, although a sizable minority remains unconvinced, hence means remain close to 3.0.

In sum, percentage compositions across items show a near one-to-one balance between agreement and disagreement, means sit at the midpoint as a consequence of that balance rather than widespread neutrality, and large S.D.s signal polarization within the sample. The pattern suggests attitudinal strengths in openness, collaboration, and ongoing learning (TA9–TA12), contrasted with reservations around sustained motivation, personal responsibility, and extra time (TA5, TA7, TA8). Programmes that lower the day-to-day cost of CBC are well aligned to shift the motivation-related items, while existing receptivity to change can be leveraged through peer collaboration and continuous learning structures.

4.3.2 Group Comparisons by Gender

This subsection tests whether teachers' attitudes toward the CBC differ by gender using independent-samples *t* tests for the composite attitude score and each sub-construct (Perceptions, Professional Motivation, Change Orientation), with Levene's test assessing variance homogeneity and $\alpha = .05$ (two-tailed; Male $n = 120$, Female $n = 113$), as shown in Table 10.

Table 10: Attitudes by gender: independent-samples t tests with group means (N = 233)

Measure	Male M (SD)	Female M (SD)	t	df	p	Mean Diff (M−F)	95% CI [Lower, Upper]
Attitudes	2.9826 (0.9373)	3.0332 (0.8309)	−0.435	231	.664	−0.0506	[−0.2797, 0.1786]
Perceptions	3.0000 (1.0162)	2.9978 (0.9464)	0.017	231	.986	0.0022	[−0.2517, 0.2561]
Professional Motivation	2.9833 (1.1137)	3.0575 (0.9955)	−0.535	231	.593	−0.0742	[−0.3475, 0.1991]
Change Orientation	2.9646 (1.0453)	3.0442 (0.9591)	−0.605	231	.546	-0.0797	[−0.3391, 0.1798]

Table 10 compares male and female teachers on the overall attitude composite and its three sub-constructs using independent-samples t tests. Across all outcomes, no gender differences are statistically significant: overall attitudes ($t(231) = -0.435$, $p = .664$), Perceptions ($t(231) = 0.017$, $p = .986$), Professional Motivation ($t(231) = -0.535$, $p = .593$), and Change Orientation ($t(231) = -0.605$, $p = .546$). The reported mean differences are very small (from −0.0797 to 0.0022 on a 1–5 scale), and every 95% confidence interval includes zero (e.g., overall attitudes: [−0.2797, 0.1786]).

Substantively, this pattern indicates gender parity in attitudes toward the CBC: male and female teachers report comparable levels of perceived value, motivation, and openness to change. For practice, attitude-building strategies do not need gender-specific tailoring. For analysis, gender may be retained as a covariate for completeness, but it is unlikely to confound relationships among attitudes, preparedness, and implementation.

4.3.3 Group Comparisons by Employment Status

This subsection examines whether teachers' attitudes toward the CBC differ by employment sector, comparing government (n = 86) and private (n = 147) teachers using independent-samples t tests for the total attitude score and each sub-construct (Perceptions, Professional Motivation, Change Orientation). Levene's test is used to assess homogeneity of variances, a two-tailed $\alpha = .05$ is applied, and results are reported as mean differences with 95% confidence intervals.

Table 11: Attitudes by employment status: independent-samples t tests with group means (N = 233)

Measure	Gov M (SD)	Priv M (SD)	t	df	p	Mean Diff (Gov−Priv)	95% CI [Lower, Upper]
Attitudes	3.0727 (0.9171)	2.9688 (0.8678)	0.863	231	.389	0.1039	[−0.1332, 0.3409]
Perceptions	3.0058 (1.0117)	2.9949 (0.9658)	0.082	231	.935	0.0109	[−0.2520, 0.2738]
Professional Motivation	3.0959 (1.0868)	2.9745 (1.0394)	0.846	231	.398	0.1214	[−0.1613, 0.4042]
Change Orientation	3.1163 (1.0144)	2.9371 (0.9939)	1.318	231	.189	0.1792	[−0.0887, 0.4471]

Table 11 compares teachers' attitudes between government (n = 86) and private (n = 147) schools using independent-samples t tests. Across all outcomes, no statistically significant differences were detected, and all 95% confidence intervals include zero.

For the overall attitudes composite, government teachers (M = 3.0727, SD = 0.9171) and private teachers (M = 2.9688, SD = 0.8678) did not differ, $t(231) = 0.863$, $p = .389$, mean difference = 0.1039, 95% CI [−0.1332, 0.3409]. For Perceptions, means were virtually identical (3.0058 vs. 2.9949), $t(231) = 0.082$, $p = .935$, mean difference = 0.0109, 95% CI [−0.2520, 0.2738]. For Professional Motivation, the difference was small and non-significant (3.0959 vs. 2.9745), $t(231) = 0.846$, $p = .398$, mean difference = 0.1214, 95% CI [−0.1613, 0.4042]. Change Orientation showed the largest numerical gap (3.1163 vs. 2.9371) but remained non-significant, $t(231) = 1.318$, $p = .189$, mean difference = 0.1792, 95% CI [−0.0887, 0.4471].

Interpretation. Attitudes toward the CBC, overall and by sub-construct, are comparable across employment sectors. The observed mean differences (0.0109 to 0.1792 on a 1–5 scale) are small and imprecise given the confidence intervals. Standard deviations within groups (0.8678 to 1.0868) indicate considerable within-sector variability, exceeding any between-sector separation. Implication: attitude-building efforts can be designed uniformly for government and private schools; sector membership is unlikely to confound relationships among attitudes, preparedness, and implementation.

4.3.4 Group Comparisons by Education Level

This subsection tests whether attitudes differ by highest qualification—Diploma (n = 47), Bachelor's (n = 141), and Master's (n = 45), using one-way ANOVA ($\alpha = .05$) for the total attitude score and each sub-construct; where the omnibus test is significant, Tukey HSD is used to identify specific pairwise differences.

Table 12: Attitudes by education level: means, ANOVA, and Tukey post hoc (N = 233)

Measure	Diploma M	Bachelor M	Master's M	F(2,230)	p	Partial η^2	Significant Tukey contrasts ($\alpha = .05$)
Attitudes	2.7110	3.0514	3.1778	3.723	.026	.031	Master's > Diploma ($p = .030$); Bachelor vs Diploma n.s. ($p = .057$); Bachelor vs Master's n.s. ($p = .677$)
Perceptions	2.7447	3.0195	3.2000	2.591	.077	.022	No significant contrasts
Professional Motivation	2.7447	3.0869	3.0944	2.008	.137	.017	No significant contrasts
Change Orientation	2.6436	3.0479	3.2389	4.536	.012	.038	Bachelor > Diploma ($p = .042$); Master's > Diploma ($p = .012$); Bachelor vs Master's n.s. ($p = .497$)

The omnibus tests indicate education-level differences in teachers' attitudes toward the CBC on the overall composite and on Change Orientation, with small effect sizes. For the composite, the ANOVA was significant, $F(2, 230) = 3.723$, $p = .026$, partial $\eta^2 = .031$. Group means rose

with qualification; Diploma 2.7110, Bachelor 3.0514, Master's 3.1778, and Tukey HSD showed Master's > Diploma ($p = .030$), while Bachelor vs Diploma narrowly missed significance ($p = .057$) and Bachelor vs Master's was non-significant ($p = .677$). Thus, teachers with Master's degrees hold more favorable overall attitudes than Diploma holders, and Bachelor-level attitudes sit between the two without a reliable separation from either group.

For Change Orientation, the ANOVA was also significant, $F(2, 230) = 4.536$, $p = .012$, partial $\eta^2 = .038$. Means again increased with qualification, Diploma 2.6436, Bachelor 3.0479, Master's 3.2389; and Tukey tests identified Bachelor > Diploma ($p = .042$) and Master's > Diploma ($p = .012$), with Bachelor vs Master's non-significant ($p = .497$). This pattern indicates that openness to change is lower among Diploma-qualified teachers than among Bachelor's- or Master's-qualified peers.

By contrast, Perceptions and Professional Motivation did not differ significantly across education levels ($p = .077$ and $p = .137$, respectively; partial $\eta^2 = .022$ and .017). Substantively, the education effect is specific: it concentrates on overall attitude level and especially change orientation, rather than on perceived value or motivation per se. In practice, attitude-building may be delivered universally, with lightly targeted supports for Diploma-qualified teachers to strengthen change orientation (e.g., mentoring, structured trials of new approaches, and co-planning), given the small but consistent gaps identified.

4.3.5 Qualitative Results on Teachers' Attitudes toward the CBC

Through iterative coding, statements about perceived value, structural pressures, and professional identity coalesced into three themes: a positive disposition toward CBC, reluctance rooted in structural challenges, and an evolving professional identity oriented toward facilitation and continuous learning.

Positive disposition toward CBC. Many teachers described the reform as energizing classroom life: *"CBC has made teaching enjoyable and dynamic."* (Teacher). They also valued its emphasis on critical thinking and skills: *"CBC promotes critical thinking and skills development."* (Teacher). These perspectives show an appreciation for learner agency and applied learning that aligns with the reform's purposes.

Reluctance rooted in structural challenges. Alongside this endorsement, participants identified practical barriers that temper enthusiasm. Workload pressures were prominent: *"CBC has doubled our work with schemes, lesson plans, and learner tracking."* (Teacher). Others pointed to readiness and resourcing gaps at rollout: *"We were told to implement before proper training or materials were given."* (Teacher). These experiences produced ambivalence—support for the goals of CBC coupled with concern about how to sustain them under current conditions.

Evolving professional identity. Teachers reported a reframing of their role toward facilitation: *"I now guide more than I lecture. Learners do the exploration."* (Teacher). This identity shift was paired with a commitment to ongoing professional growth: *"To survive CBC, you must keep upgrading yourself."* (Teacher). Attitudes thus encompass both endorsement of the reform's intent and recognition that it requires continuous learning to implement well.

4.3.6 Summary of Results on Teachers' Attitudes towards CBC

On average, attitudes were neutral, with wide dispersion across respondents. Item patterns showed a balanced mix of endorsement and reservation: respondents were most positive about openness to new approaches, collaboration, and continuing to learn, while hesitations clustered around day-to-day motivation, personal responsibility for CBC success, and investing extra time. Group comparisons indicated no differences by gender or employment sector. Small differences by education level appeared in change orientation and the overall attitude

composite, with Diploma-qualified teachers less positive than peers holding higher qualifications.

The qualitative themes explain these distributions: teachers value CBC's engagement and skill orientation ("enjoyable and dynamic"; "promotes critical thinking") but temper their enthusiasm in light of workload and readiness/resource gaps ("doubled our work"; "before proper training or materials"). Many articulate an emerging facilitator identity and the need for continuous development, signaling willingness to adapt when supported.

4.4 Effectiveness of CBC Implementation

Effective implementation of the CBC was measured with a 12-item, 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree; $\alpha = .881$), organized into three facets that mirror classroom practice: Lesson Delivery, Learner-Centred Practices, and Assessment & Feedback. The purpose here is to (i) describe item-level implementation patterns to locate concrete strengths and gaps (Table I2), and (ii) test whether implementation differs by gender, employment sector, or education level.

4.4.1 Descriptive statistics for the effectiveness of CBC implementations

Table 13 reports, for each implementation item, the percentage composition in agreement (SA+A), neutral (N), and disagreement (D+SD), alongside the mean (M) and standard deviation (S.D.). This layout shows exactly where implementation appears more embedded and where reservations remain.

Table 13: Descriptive statistics for Effective Implementation of CBC (N = 233)

Item (short)	SA+A	N	D+SD	M	S.D.
Lesson Delivery					
EI1: Plan around competencies	100 (42.9%)	43 (18.5%)	90 (38.6%)	2.98	1.417
EI2: Materials aligned to CBC	92 (39.5%)	37 (15.9%)	104 (44.6%)	3.05	1.461
EI3: Integrate ICT effectively	94 (40.3%)	38 (16.3%)	101 (43.3%)	3.04	1.447
EI4: Apply Activities of Integration	92 (39.5%)	39 (16.7%)	102 (43.8%)	3.04	1.454
Learner-Centred Practices					
EI5: Facilitate collaboration	95 (40.8%)	37 (15.9%)	101 (43.3%)	3.03	1.488
EI6: Peer/cooperative methods	96 (41.2%)	44 (18.9%)	93 (39.9%)	2.98	1.434
EI7: Real-life problem solving	95 (40.8%)	34 (14.6%)	104 (44.6%)	3.0687	1.43374
EI8: Adapt to feedback/progress	100 (42.9%)	32 (13.7%)	101 (43.3%)	3.01	1.491
Assessment & Feedback					
EI9: Competency-based assessment	95 (40.8%)	33 (14.2%)	105 (45.1%)	3.04	1.445
EI10: Feedback improves competencies	98 (42.1%)	35 (15.0%)	100 (42.9%)	3.00	1.470
EI11: Self- and peer-assessment	102 (43.8%)	37 (15.9%)	94 (40.3%)	2.96	1.479
EI12: Monitor/record progress by competencies	102 (43.8%)	31 (13.3%)	100 (42.9%)	3.01	1.475

Item means sit at or near 3.00 (range 2.96–3.0687), with large S.D.s (range 1.417–1.491), showing split opinions rather than uniform neutrality. Percentages confirm this balance: SA+A

typically 39.5–43.8% and D+SD 38.6–45.1%. Within Lesson Delivery, EI1 records the lowest disagreement (38.6%) and a moderate mean (2.98), whereas EI2–EI4 show higher disagreement (43.3–44.6%), indicating preparation of CBC-aligned materials and use of AoI are uneven across teachers. For Learner-Centred Practices, EI6 (peer/cooperative methods) has 41.2% agreement against 39.9% disagreement, while EI7 (real-life problem solving) shows 40.8% vs 44.6% (M = 3.0687), highlighting a tension between valuing authentic tasks and consistently guiding them. In Assessment & Feedback, EI11 and EI12 have the highest agreement (43.8% each), yet EI9 (competency-based assessment) posts the highest disagreement (45.1%), pointing to assessment practices as a key implementation bottleneck. Overall, the pattern reflects mixed implementation across all three facets; the larger S.D.s underscore heterogeneity, some classrooms enact CBC consistently, others do not.

4.4.2 Group Comparisons by Gender

To examine whether implementation differs by gender, independent-samples t tests compared male (n = 120) and female (n = 113) teachers on the composite and each sub-construct, with Levene's test confirming variance homogeneity and $\alpha = .05$ (two-tailed). Table I4 presents group means, tests, and confidence intervals.

Table 14: Implementation by gender: t tests with group means

Measure	Male M (SD)	Female M (SD)	t	df	p	Mean Diff (M−F)	95% CI
Implementation	2.9736 (0.97966)	3.0656 (0.93921)	−0.731	231	.465	−0.0920	[−0.3400, 0.1560]
Lesson Delivery	3.0333 (1.09762)	3.0243 (0.99551)	0.065	231	.948	0.0090	[−0.2620, 0.2800]
Learner-Centred Practices	2.9896 (1.10689)	3.0575 (1.04956)	−0.480	231	.632	−0.0679	[−0.3467, 0.2109]
Assessment & Feedback	2.8979 (1.07174)	3.1150 (1.09943)	−1.526	231	.128	−0.2171	[−0.4974, 0.0632]

None of the comparisons is statistically significant (all $p \geq .128$). Confidence intervals for mean differences all include zero, indicating no reliable gender differences in overall implementation or in any facet. Any observed numerical gaps (e.g., Assessment & Feedback, −0.2171) are small and imprecise.

4.4.3 Group Comparisons by Employment Status

Independent-samples t tests compared government (n = 86) and private (n = 147) teachers on the composite and each sub-construct, using $\alpha = .05$ and reporting mean differences with 95% CIs. Table I5 summarizes the results.

Table 15: Implementation by employment status: t tests with group means (N = 233)

Measure	Gov M (SD)	Priv M (SD)	t	df	p	Mean Diff (Gov−Priv)	95% CI
Implementation	3.0329 (0.98280)	3.0096 (0.94857)	0.179	231	.858	0.0233	[−0.2338, 0.2804]
Lesson Delivery	3.0174 (1.08790)	3.0357 (1.02620)	−0.128	231	.898	−0.0183	[−0.2990, 0.2624]
Learner-Centred Practices	3.1250 (1.02164)	2.9626 (1.10817)	1.111	231	.268	0.1624	[−0.1257, 0.4505]
Assessment & Feedback	2.9564 (1.14030)	3.0306 (1.05981)	−0.501	231	.617	−0.0742	[−0.3658, 0.2174]

No sector differences are statistically significant (all $p \geq .268$). Implementation is broadly comparable in government and private schools; within-sector variability (SD ≈ 1.02–1.14) exceeds any between-sector separation.

4.4.4 Group Comparisons by Education Level

Opening sentence. One-way ANOVA tested differences across Diploma (n = 47), Bachelor's (n = 141), and Master's (n = 45) on the composite and each sub-construct ($\alpha = .05$). Where the omnibus test is significant, Tukey HSD identifies pairwise contrasts. Results are in Table I6.

Table 16: Implementation by education level: ANOVA and Tukey post hoc (N = 233)

Measure	**F(2,230)**	**p**
Implementation	2.133	.121
Lesson Delivery	2.215	.111
Learner-Centred Practices	1.494	.227
Assessment & Feedback	1.898	.152

No pairwise contrasts reached significance (all $p \geq .095$). Homogeneous-subset output orders the means as Diploma < Bachelor < Master's on several measures, but with non-significant omnibus tests, these differences are not statistically reliable.

Explanation and interpretation. Implementation does not differ significantly by qualification, either overall or by facet. Although the means trend upward with higher education in the subset tables, the evidence does not support concluding real differences at $\alpha = .05$.

4.4.5 Qualitative Results on Effectiveness of CBC Implementation

Codes describing classroom practice were grouped into three implementation themes: lesson-delivery routines, learner-centred practices, and assessment and feedback, with a cross-cutting theme of implementation constraints.

Lesson-delivery routines and learner-centred practices. Accounts depict classrooms where teachers set tasks, organize group discussions, and guide presentations, signaling regular use of active methods. As one teacher explained, *"I usually prepare tasks and give learners to discuss and report back. I guide them."* (Teacher). A student echoed the collaborative experience: *"Sometimes we are grouped to discuss topics, which helps us learn from each other."* (Student). Such descriptions indicate that key elements of learner-centred delivery are present in practice.

Assessment and feedback. Teachers described routine use of ongoing assessments, weekly tasks, projects, and presentations, and emphasized the diagnostic value of artefacts such as portfolios: *"I no longer rely on end-of-term exams only... I assess learners weekly based on classwork, presentations, and projects."* (Teacher). Feedback practices were framed as part of everyday instruction, even if systems for documenting competency progress remain demanding.

Implementation constraints. Across the implementation themes, participants pointed to workload, training depth, and materials as persistent constraints. The sentiment that some schools were asked to implement before adequate preparation or resources were in place recurred: *"We were told to implement before proper training or materials were given."* (Teacher). These conditions shaped both the consistency and depth of implementation across classrooms

4.4.6 Summary and Implications

Quantitatively, agreement and disagreement on the implementation items were closely balanced, keeping means near 3.0 and standard deviations large, indicating heterogeneous enactment across classrooms. Comparative tests showed no significant differences by gender, employment sector, or education level, suggesting broadly similar baselines across groups.

The qualitative narratives explain this variability: teachers describe authentic use of learner-centred routines and regular formative checks, yet also emphasize documentation load, limited rubrics/tools, and resource gaps that make consistent implementation difficult. In practical terms, improvement efforts should therefore be universal and classroom-facing, with emphasis on (i) planning around competencies (clarifying routines for task design, AoI use, and real-life linkage), (ii) adapting to learner feedback within lessons, and (iii) strengthening assessment & feedback systems especially competency-based assessment, through ready-to-use rubrics, simplified record-keeping templates, and light digital or paper workflows. Layering these tools with brief, school-based coaching (co-planning, observe-feedback cycles) would reduce burden while helping teachers stabilize the routines they are already attempting to use.

4.5 Mediation Analysis: Do Teachers' Attitudes Mediate the Preparedness → Implementation Link?

These objective tests whether teachers' attitudes (TA) mediate the association between teacher preparedness (TP) and effective implementation (EI) of the CBC. TP, TA, and EI are the composite scale means reported earlier (reliabilities: TP $\alpha = .913$; TA $\alpha = .846$; EI $\alpha = .881$). Mediation was examined using PROCESS Model 4 with bias-corrected bootstrap confidence intervals (5,000 resamples). Gender (1 = male, 2 = female), employment status (1 = government, 2 = private), and education level (1 = diploma, 2 = bachelor, 3 = master's; PhD where present) were included as covariates.

4.5.1 Mediation Results

Reference to tables. Table 16 presents the path coefficients for the mediator and outcome equations; Table 17 reports the indirect effect with its bootstrap 95% confidence interval.

Table 17: Mediation of Preparedness (TP) → Implementation (EI) by Attitudes (TA), controlling for gender, employment, and education (PROCESS Model 4; N = 233)

Path / Model	B	SE	t	p	95% CI
a: TP → TA	0.615	0.052	11.854	< .001	[0.513, 0.717]
b: TA → EI (controlling TP)	0.439	0.066	6.657	< .001	[0.309, 0.569]
c′: TP → EI (direct, controlling TA)	0.237	0.066	3.588	< .001	[0.107, 0.367]
c (total): TP → EI (no mediator)	0.507	0.057	8.940	< .001	[0.395, 0.619]
Mediator model R^2 (TA on TP & covariates)	0.378				
Outcome model R^2 (EI on TP, TA & covariates)	0.377				

Note. Collinearity was acceptable (TP–TA r = .615; VIF ≈ 1.61).

Table 18: Indirect effect of TP on EI via TA (bias-corrected bootstrap; 5,000 resamples)

Effect	Indirect (ab)	Boot SE	95% CI (LLCI, ULCI)
TP → TA → EI	0.270	0.0466	[0.179, 0.361]

The total effect of preparedness on implementation was positive and statistically significant (B = 0.507, 95% CI [0.395, 0.619]), indicating that higher preparedness is associated with more effective CBC implementation. Preparedness also predicted more positive attitudes (a path: B = 0.615, 95% CI [0.513, 0.717]). When preparedness and attitudes were entered simultaneously, attitudes remained a strong predictor of implementation (b path: B = 0.439, 95% CI [0.309, 0.569]), while the direct effect of preparedness was reduced yet still significant (c′ = 0.237, 95% CI [0.107, 0.367]).

The indirect effect through attitudes was statistically significant (ab = 0.270, 95% BCa CI [0.179, 0.361]), supporting mediation. A useful summary indicator; the proportion mediated is ab/c = 0.270/0.507 ≈ 53%, suggesting that just over half of the preparedness–implementation association operates via teachers' attitudes. Model fit was consistent with these patterns: the mediator model explained 37.8% of the variance in attitudes, and the outcome model explained

37.7% of the variance in implementation. None of the demographic covariates showed a reliable association with EI in the mediation model.

The data support partial mediation: preparedness influences implementation both directly and indirectly by shaping teachers' attitudes. Strengthening attitudes, especially the change-orientation components identified in Objective 2, appears to be a credible mechanism for converting preparedness into consistent classroom practice, therefore, the hypothesis is retained.

4.5.2 Summary of Results for Mediation of Attitudes

Mediation testing showed that teachers' attitudes significantly mediate the relationship between teacher preparedness and effective CBC implementation. Preparedness was positively associated with more favorable attitudes, and, in turn, those attitudes were positively associated with implementation. When attitudes were included in the model, the direct link between preparedness and implementation remained significant, indicating partial mediation rather than full mediation. The indirect effect was statistically reliable (bootstrap confidence interval excluded zero), and the pattern held after adjusting for gender, employment status, and education level. In practical terms, strengthening implementation requires twin investments: building teachers' preparedness (skills, tools, routines) and supporting attitudes (confidence, change-orientation, motivation), so that capability more consistently translates into classroom practice.

CHAPTER FIVE

DISCUSSION

This chapter interprets the findings through a pragmatic, convergent mixed-methods lens. Quantitative results establish overall patterns in teacher preparedness (TP), attitudes (TA), and implementation effectiveness (EI), while qualitative interviews and focus groups explain how and why those patterns emerged in classrooms. The discussion begins with an overall synthesis and then addresses each objective in turn: preparedness, attitudes, implementation, and mediation, linking the results to Curriculum Implementation Theory (Gross, Giacquinta, & Bernstein, 1971) and Constructivist Learning Theory (Piaget, 1972; Vygotsky, 1978). The chapter then draws cross-cutting implications for practice and policy, reflects on methodological strengths and limitations, proposes directions for future research, and closes with a brief synthesis.

5.1 Teachers' Preparedness for Implementing the CBC

This objective examined teacher preparedness as a multidimensional construct comprising three mutually reinforcing sub-constructs: Knowledge & Understanding of CBC principles, Instructional Design for CBC (planning scenarios, projects, personalized tasks, and alignment to competencies), and Classroom Practice for CBC (orchestrating interaction, peer/cooperative learning, group discussions, and classroom management). Conceptually, this layering follows Curriculum Implementation Theory (CIT), which holds that implementation fidelity depends on the interplay of clarity, capability, resources, and leadership support (Gross, Giacquinta, & Bernstein, 1971), and it is pedagogically anchored in Constructivist Learning Theory (CLT), which reframes teachers as facilitators of inquiry and collaboration (Piaget, 1972; Vygotsky, 1978). Treating preparedness as layered rather than unitary, therefore, allows a sharper reading of where CBC is taking root and where it is stalling.

Taken as a whole, the quantitative profile clustered around the midpoint of the 1–5 scale with

substantial dispersion, signaling that a segment of teachers is moving decisively toward CBC while many remain tentative. The qualitative strand clarifies this heterogeneity: several teachers described tangible shifts to task-based and discussion-led lessons, I guide them", and learners corroborated this experience, "Sometimes we are grouped to discuss topics, which helps us learn from each other." These emergent routines sit squarely within CLT's emphasis on collaborative knowledge construction, yet teachers and head teachers also reported thin follow-up after initial workshops and persistent shortages of CBC-aligned materials and ICT, "Since that one training last year, we have not had any follow-up or support supervision." This configuration closely mirrors Ugandan and regional evidence of uneven retooling depth and resource constraints (MoES, 2023; EPRC, 2023; EPRC & ACET, 2025), precisely the pattern CIT predicts when clarity, capability, resources, and leadership do not advance together.

Within Knowledge & Understanding, respondents generally demonstrated a basic grasp of competence, progression, and outcomes, while asking for clear exemplars and rubrics to anchor these ideas in daily practice. This finding converges with national estimates of limited comprehensive training coverage and lingering uncertainty around competency progression and assessment language (MoES, 2023; EPRC, 2023), and it aligns with Kenyan evidence that awareness often outpaces deep pedagogical understanding (Muthoka & Mbirithi, 2025). In CLT terms, concepts without concrete models tend not to alter routines; teachers oscillate between telling and facilitating when "what counts as evidence" of a competency remains abstract. In CIT terms, the deficit is one of clarity of the innovation rather than motivation per se (Gross et al., 1971). The present disaggregation therefore nuances the literature by showing that conceptual blind spots are not uniform; they cluster around "how to see" progression in everyday work, which explains why teachers sought practical rubrics and worked examples (MoES, 2023; EPRC & ACET, 2025).

For Instructional Design, items on project-based learning, personalization, scenarios, and CBC-

aligned lesson plans were near neutral with wide spread. Interviews attributed this to design workload and thin resource banks: many teachers are willing to design tasks but cannot sustain from-scratch creation week after week. This reading accords with Ugandan and continental reviews that identify planning burden and scarce exemplars as primary bottlenecks to sustained CBC design (IJFMR, 2024; Tadesse et al., 2025) and echoes mixed-methods work noting that, absent adaptable task banks, enthusiasm erodes under administrative load (Namubiru et al., 2024). At the same time, our rural data add nuance to more pessimistic portrayals by documenting "islands of practice": regular task cycles, community-based scenarios, and collaborative planning in some schools, moves that CLT would expect when teachers recognise the value of authentic tasks and peer learning (Piaget, 1972; Vygotsky, 1978). In CIT's vocabulary, capability exists, but resources and management support are insufficient to routinize design across the staff (Gross et al., 1971), which helps explain the observed dispersion.

Turning to Classroom Practice, orchestration of interaction, peer/cooperative learning, and discussion likewise centred near the midpoint, with narratives confirming regular group work and presentations alongside fragile facilitation in crowded rooms with limited space and ICT. These constraints echo national indicators of high pupil–teacher ratios and material shortfalls (UNESCO, 2022; EPRC, 2023; EPRC & ACET, 2025) and are consistent with district-level accounts that large classes and infrastructure gaps depress the consistency of learner-centred routines (Kidega et al., 2025; Wambi et al., 2024). CLT helps explain the direction of travel—teachers are adopting collaborative inquiry, while CIT explains the instability: without time, simple tools, and leadership that protects collaboration, the fidelity of new practices fluctuates (Gross et al., 1971). The present data, therefore concur with structural diagnoses in the literature but contribute granularity by showing precisely where routines break down (e.g., sustaining small-group accountability and timely feedback in large classes).

Positioned against the broader evidence base, the study confirms core patterns, irregular, one-off training; material and ICT shortages; and assessment-related uncertainty (MoES, 2023; EPRC, 2023; Tadesse et al., 2025), yet it also diverges from uniformly negative portrayals by documenting concrete constructivist routines in a rural setting, suggesting that willingness outruns support. Theoretically, the findings affirm and refine CIT by demonstrating that preparedness shortfalls are systemic—rooted not only in individual capability but in the quartet of clarity, resources, and leadership support (Gross et al., 1971), and they ground CLT in observed practice by showing facilitation, collaboration, and authentic tasks already present, albeit inconsistently (Piaget, 1972; Vygotsky, 1978). Critically, the study also addresses a conceptual gap identified in the review: rather than treating preparedness as a single undifferentiated score, it disaggregates into knowledge & understanding, instructional design, and classroom practice, thereby indicating where preparedness is thinnest and why variability persists (EPRC, 2023; EPRC & ACET, 2025).

In sum, preparedness in Rukungiri is neither absent nor assured. It converges with national and regional literature on structural constraints (MoES, 2023; EPRC, 2023), extends that literature by evidencing everyday constructivist routines in a rural context (Namubiru et al., 2024; Kidega et al., 2025), and refines theory by mapping sub-construct-specific deficits to CIT's dimensions and CLT's facilitation mandate (Gross et al., 1971; Piaget, 1972; Vygotsky, 1978). This positioning clarifies that the route to stronger preparedness is not persuasion alone but practical clarity (worked exemplars and rubrics), load-reduced design (co-planning and contextual task banks), and stabilized facilitation that make CBC both valuable and doable under prevailing constraints (UNESCO, 2022; EPRC & ACET, 2025; Tadesse et al., 2025).

5.2 Teachers' Attitudes toward the CBC

Framed as a multidimensional construct, teachers' attitudes were examined across three sub-constructs: Perceptions of CBC (value and relevance), Professional Motivation (energy and willingness to invest effort), and Change Orientation (openness to new methods and professional growth). Conceptually, this structure aligns with Curriculum Implementation Theory (CIT), which treats implementers' perceptions as proximal determinants of fidelity, and Constructivist Learning Theory (CLT), which locates teachers' willingness to facilitate inquiry at the heart of classroom change (Gross, Giacquinta, & Bernstein, 1971; Piaget, 1972; Vygotsky, 1978). Treating attitudes in this layered way moves beyond "for/against" sentiment and clarifies the different routes by which reform buy-in enables everyday CBC practice.

Overall, the attitudinal profile centred close to the midpoint with wide dispersion, indicating that while many teachers are persuaded of CBC's value, others remain cautious. The qualitative strand helps explain this ambivalence. On the one hand, participants described the reform as energizing and meaningful, "CBC has made teaching enjoyable and dynamic" and "CBC promotes critical thinking and skills development", capturing the value beliefs that CLT would predict when teachers observe students thinking, discussing, and creating (Piaget, 1972; Vygotsky, 1978). On the other hand, the same teachers emphasised workload, documentation, and readiness gaps, "CBC has doubled our work with schemes, lesson plans, and learner tracking" and "We were told to implement before proper training or materials were given", highlighting feasibility concerns that CIT recognises as critical filters between policy and practice (Gross et al., 1971). This value-versus-feasibility tension mirrors Ugandan and regional evidence that attitudes are context-sensitive rather than fixed traits (Namubiru et al., 2024; Kidega et al., 2025; Otieno, 2025) and is consistent with international syntheses showing that teacher buy-in depends on perceived doability, professional autonomy, and visible support (Schleicher, 2018; Choo, 2021).

Within Perceptions of CBC, many teachers endorsed the curriculum's relevance for competencies and real-world skills, frequently linking their positive views to learner engagement they now observe. This converges with studies reporting broad philosophical agreement with CBC's purposes across East Africa while noting persistent uncertainty about assessment alignment and progression (Namubiru et al., 2024; Tadesse et al., 2025). Our data add nuance by showing that positive perceptions were strongest where teachers had concrete exemplars to point to (e.g., projects, presentations, community-based tasks). In CIT terms, clarity of the innovation, made tangible through worked examples and shared rubrics, appears to bolster perceptions, while abstract messaging without tools leaves value beliefs fragile (Gross et al., 1971).

For Professional Motivation, narratives revealed a push–pull dynamic. Teachers described satisfaction from active classrooms and visible learner growth, yet they also reported that planning, tracking, and feedback demands sapped energy and blunted enthusiasm. This pattern aligns with evidence that motivation maps closely onto process feasibility rather than rhetoric; when systems simplify routines and recognise effort, motivation stabilizes, but in the face of administrative load, it declines (Kidega et al., 2025; Schleicher, 2018). The present findings, therefore, extend prior work by specifying which routines tip the balance, designing tasks week-to-week and maintaining continuous-assessment records, and by implying load-reduction levers (shared task banks, minimal rubrics, light documentation) that are likely to yield the biggest motivational dividends in low-resource schools (Tadesse et al., 2025).

In Change Orientation, many participants voiced readiness to keep learning, "To survive CBC, you must keep upgrading yourself", and several described a shifting professional identity from lecturer to facilitator, "I now guide more than I lecture. Learners do the exploration." Such statements are classic CLT signatures and echo regional findings that openness grows where teachers experience early wins and collegial support (Otieno, 2025). At the same time, our

quantitative comparisons indicated small education-level differences concentrated on this sub-construct and the overall attitude composite, with Diploma-qualified teachers somewhat less positive than Bachelor's or Master's peers. Prior literature similarly links formal qualification and professional identity to reform openness, suggesting that confidence and access to exemplars moderate change orientation (Namubiru et al., 2024; Otieno, 2025). This pattern points to light, targeted scaffolds, mentoring, co-planning, and try–reflect–refine cycles, that can lift change orientation where initial confidence is lower without segmenting support by gender or school sector (Schleicher, 2018).

Positioned against the broader evidence base, the study concurs with Ugandan and regional accounts that teacher attitudes are broadly ambivalent because value beliefs (CBC is worthwhile) coexist with feasibility doubts (CBC is hard to do under current conditions) (Namubiru et al., 2024; Kidega et al., 2025). It extends that literature by locating attitudes within the three sub-constructs and by showing, through qualitative testimony, how concrete tools and peer routines strengthen perceptions, motivation, and openness. It also refines the theoretical framing by making explicit the CIT–CLT bridge: attitudes are not merely an outcome of exposure to reform but a mechanism that translates capability into fidelity, particularly when CLT-consistent "wins" (active tasks, visible learning) and CIT-consistent supports (clarity, resources, leadership) converge (Gross et al., 1971; Piaget, 1972; Vygotsky, 1978). Finally, the absence of reliable differences by gender or employment sector, alongside small education-level effects, suggests an equity-oriented improvement strategy: universal attitude-building supports that reduce planning and assessment burden for all teachers, with modest additional scaffolding where qualification is lower (Schleicher, 2018; Choo, 2021).

In practical terms, these findings argue for three connected moves. First, consolidate perceptions by pairing every abstract CBC principle with a worked example and a short, ready-to-use rubric, so value beliefs are grounded in what the work looks like in class (Tadesse et al.,

2025). Second, lift motivation by reducing routine burdens: curate school-level task banks, standardise minimal documentation, and institutionalise short co-planning huddles that convert preparation into a shared rather than solo endeavour (Kidega et al., 2025). Third, nurture change orientation through protected collaboration time, peer observation with rapid feedback, and recognition of incremental improvements, conditions shown internationally to stabilise teacher buy-in and sustain innovation (Schleicher, 2018; Choo, 2021). Read together, the sub-constructs show how attitudes can become the hinge that turns technical readiness into everyday CBC practice, a mechanism taken up formally in the mediation analysis that follows.

5.3 Effectiveness of CBC Implementation in Lower Secondary Schools

In this study, implementation effectiveness was examined as a multidimensional construct spanning three sub-constructs: Lesson Delivery (planning and enacting competency-aligned lessons, including the Activities of Integration), Learner-Centred Practices (collaborative work, presentations, problem-solving, responsive facilitation), and Assessment & Feedback (competency-based assessment, ongoing feedback, and progress monitoring). This layering is theoretically consistent with Curriculum Implementation Theory (CIT), which locates fidelity at the intersection of clarity, capability, resources, and leadership (Gross, Giacquinta, & Bernstein, 1971), and with Constructivist Learning Theory (CLT), which predicts that authentic tasks, collaboration, and formative feedback are the classroom mechanisms through which learners construct knowledge (Piaget, 1972; Vygotsky, 1978).

Overall, the quantitative pattern centred close to the scale midpoint with wide dispersion, indicating that many teachers are enacting key routines while others struggle to routinize them. The qualitative strand illuminates this heterogeneity: teachers described regular use of weekly tasks, group discussions, and presentations, "I usually prepare tasks and give learners to discuss and report back. I guide them", and a deliberate shift away from one-off examinations, "I no longer rely on end-of-term exams only. I assess learners weekly based on classwork,

presentations, and projects." At the same time, participants pointed to documentation load, large classes, and material/ICT shortages as persistent frictions: "Marking portfolios is time-consuming, but it gives a better picture of what learners know and can do." This configuration closely converges with national and regional reviews that portray CBC enactment as uneven, with assessment alignment particularly fragile and resource conditions determinative (EPRC, 2023; EPRC & ACET, 2025; Tadesse et al., 2025). It is also exactly what CIT would predict when supports advance unevenly, and what CLT would anticipate when teachers perceive instructional value but face process constraints (Gross et al., 1971; Piaget, 1972; Vygotsky, 1978).

Lesson Delivery. Evidence from both strands shows teachers planning around competencies and applying AoI, but with variability driven by class size, time pressures, and thin resource banks. This aligns with Ugandan and district-level accounts: schools that receive sustained, practice-focused development show stronger lesson structuring, whereas irregular workshops seldom consolidate routines (IJFMR, 2024; EPRC, 2023). Our rural data add nuance by documenting competency-oriented planning cycles even where infrastructure is lean, suggesting that willingness and partial capability are present but require load-reduced supports, co-planning time, adaptable task banks, and short observe–feedback–refine cycles, to stabilise (EPRC & ACET, 2025; Tadesse et al., 2025).

Learner-Centred Practices. Classrooms frequently featured group work, student presentations, and problem-solving, corroborated by learner accounts, "Sometimes we are grouped to discuss topics, which helps us learn from each other." This pattern converges with CLT's expectation that teachers who see engagement gains tend to persist with facilitation (Piaget, 1972; Vygotsky, 1978) and diverges from the most pessimistic portrayals that depict rural implementation as largely rhetorical. The fragility that remains, difficulty maintaining small-group accountability and feedback in crowded rooms, maps directly to doable micro-supports

that the literature identifies as high-leverage: roles and protocols for group work, time-bounded reporting frames, and brief feedback routines (Schleicher, 2018; Choo, 2021). In CIT terms, the capability is visible; what is missing is management protection of collaboration time and simple tools that make facilitation repeatable (Gross et al., 1971).

Assessment & Feedback. Of the three sub-constructs, this was the weakest and most variable, echoing national evaluations that formative assessment is the hardest piece to stabilise (EPRC, 2023; EPRC & ACET, 2025). Teachers value artefacts like portfolios for providing a fuller picture of learning, yet the workload of documenting, judging, and recording competencies undermines consistency. This mirrors regional syntheses that call for shared minimalist rubrics, streamlined record-keeping (paper or light-digital), and brief calibration huddles so teachers align judgements without unsustainable paperwork (Tadesse et al., 2025). CLT underscores why this matters: without timely, usable feedback, the learning loop that makes authentic tasks effective is broken; CIT explains why adoption stalls when process complexity is high and tools are scarce.

Group differences. No statistically reliable differences in implementation effectiveness emerged by gender, employment sector, or education level, a pattern that diverges from some urban-centric studies that report sector advantages, but converges with evidence from resource-constrained districts where constraints are broadly shared (EPRC & ACET, 2025). The implication is equity-oriented provision: universal, school-embedded supports that lower design and assessment load for everyone, with only light tailoring by qualification where confidence is lower (Schleicher, 2018).

Positioning in the literature and theory. Read against existing work, the findings confirm the central diagnosis, implementation is present but uneven; formative assessment is the pressure point; resources and leadership matter (EPRC, 2023; Tadesse et al., 2025), while extending it by specifying teacher-level pathways that are feasible in rural settings: co-planning routines,

shared task and rubric banks, simple facilitation protocols, and short feedback cycles (Choo, 2021; IJFMR, 2024). The results affirm CIT by showing that fidelity rises where clarity and support simplify processes, and they ground CLT by documenting authentic tasks, collaboration, and feedback loops as the mechanisms that already work when made doable (Gross et al., 1971; Piaget, 1972; Vygotsky, 1978).

Implications. Strengthening implementation effectiveness in Rukungiri is thus less about ideological persuasion and more about making the core routines light and repeatable. Concretely, schools should: protect short, weekly co-planning huddles to script competency-aligned tasks; adopt ready-to-use rubrics and one-page records to cut assessment friction; normalise brief observation–feedback–refine cycles to stabilise facilitation; and ensure basic materials/ICT are in place for group work. These moves mirror conditions under which competency reforms have consolidated in better-resourced systems (Muchira et al., 2023; Schleicher, 2018) while being realistically adaptable to rural Ugandan secondary schools. They also lay the ground for Objective 4: as processes become simpler and early wins accumulate, teacher attitudes—especially motivation and change orientation—are likely to strengthen, enabling preparedness to translate more fully into everyday CBC practice (Namubiru et al., 2024; Otieno, 2025).

5.4 Teachers' Attitudes as a Mediating Pathway between Preparedness and Implementation

This objective tested the hypothesized mechanism that teacher preparedness (TP) translates into implementation effectiveness (EI) in part through teachers' attitudes (TA). The model was specified at the composite level (TP → TA → EI) and interpreted through the study's sub-constructs: preparedness as Knowledge & Understanding, Instructional Design, and Classroom Practice; attitudes as Perceptions of CBC, Professional Motivation, and Change Orientation; and implementation as Lesson Delivery, Learner-Centred Practices, and Assessment &

Feedback. Conceptually, this pathway is grounded in Curriculum Implementation Theory—which foregrounds implementers' perceptions as proximal determinants of fidelity (Gross, Giacquinta, & Bernstein, 1971)—and Constructivist Learning Theory, which predicts that teachers' willingness to facilitate inquiry, collaborate, and use authentic assessment is the classroom engine of learning (Piaget, 1972; Vygotsky, 1978).

The results supported a partial mediation pattern. Preparedness was positively related to both attitudes and implementation, and the indirect path through attitudes was statistically significant, while the direct path from preparedness to implementation remained positive, indicating that attitudes transmit a meaningful share of preparedness into practice but do not exhaust its influence. Interpreted through sub-constructs, gains in Knowledge & Understanding appeared to strengthen Perceptions (teachers viewing CBC as coherent and worthwhile), mastery in Instructional Design lifted Professional Motivation (energy and willingness to invest effort), and success in Classroom Practice bolstered Change Orientation (openness and professional identity as facilitator). In turn, these attitudinal shifts most readily expressed themselves in Lesson Delivery and Learner-Centred Practices, while Assessment & Feedback improved when positive attitudes were paired with usable tools (shared rubrics and simplified records).

This mediated pattern converges with Ugandan and regional accounts that have long described—but seldom tested, the idea that training and resources alone do not secure reform fidelity when teachers doubt feasibility or value (Wambi, 2022; Namubiru et al., 2024; Otieno, 2025). It also aligns with international syntheses that teacher buy-in rises when reforms are made doable, supported, and professionally dignifying (Schleicher, 2018; Choo, 2021). By formally locating attitudes as the hinge between capability and enactment, the present study addresses the empirical gap identified in the review, where attitudes were typically treated as outcomes of CBC rather than mechanisms that channel preparedness into classroom routines.

Read against CIT, the findings refine the theory's emphasis on clarity, capability, resources, and leadership by showing that perception-building is not an add-on but a load-bearing beam in low-resource systems: even when capability improves, fidelity falters if teachers experience CBC as laborious or opaque (Gross et al., 1971). Through the CLT lens, the pathway explains why observable classroom "wins" (active talk, productive struggle, peer explanation) are so potent: they reinforce attitudes that, in turn, sustain facilitation and experimentation (Piaget, 1972; Vygotsky, 1978). The study also helps reconcile mixed portrayals in the Ugandan literature. While some accounts stress resistance, the present evidence suggests a subtler value, feasibility tension: when clarity and tools reduce complexity, attitudes strengthen and the indirect effect grows; when process burden rises (notably in formative assessment), attitudes weaken and the direct effect must carry more of the load (EPRC, 2023; EPRC & ACET, 2025; Tadesse et al., 2025).

Two practical implications follow. First, improvement should be twin-track: deepen preparedness and cultivate attitudes. On the preparedness side, the highest returns are likely from worked progression maps, ready-to-use task banks, and micro-cycles of try–observe–feedback–refine that stabilise design and facilitation (IJFMR, 2024; Tadesse et al., 2025). On the attitudinal side, the same moves strengthen Perceptions and Motivation by making CBC feel coherent and doable, especially when paired with recognition and protected co-planning time (Schleicher, 2018; Choo, 2021). Second, because Assessment & Feedback remains the most fragile implementation sub-construct, the TA → EI link benefits from minimalist rubrics, one-page tracking sheets, and brief calibration huddles; these tools convert positive attitudes into repeatable assessment routines under real workload constraints (EPRC, 2023; EPRC & ACET, 2025).

In sum, Objective 4 positions attitudes as the active conduit through which preparedness becomes everyday CBC practice. The mediated pattern concurs with descriptive Ugandan

findings (teachers innovate when they believe CBC is valuable and doable), extends the literature by testing the mechanism in a rural district, and bridges CIT and CLT by showing how structural supports and classroom wins co-produce the attitudinal energy that carries reforms forward (Gross et al., 1971; Piaget, 1972; Vygotsky, 1978; Namubiru et al., 2024; Otieno, 2025). Strengthening CBC in contexts like Rukungiri therefore requires not only increasing what teachers know and can do, but also systematically shaping what they believe about the worth and workability of the reform, so that preparedness reliably becomes practice.

5.5 Synthesis of the Discussion

Situated within Curriculum Implementation Theory (CIT), these results reaffirm that fidelity depends not only on teacher capability but also on clarity, resources, and management support; crucially, they elevate implementer perceptions, the attitudinal filter, from a background condition to a load-bearing mechanism (Gross, Giacquinta, & Bernstein, 1971). Where clarity was strengthened with worked examples, progression maps, and shared rubrics, attitudes, especially perceptions of CBC's value and feasibility, improved, and classroom routines stabilized. Where process complexity remained high (notably in continuous assessment), attitudes softened and the direct effect of preparedness had to carry more of the load. Through the lens of Constructivist Learning Theory (CLT), the qualitative accounts of group work, presentations, problem solving, and routine feedback show the pedagogy of CBC already at work; importantly, visible classroom "wins" reinforced teacher motivation and change orientation, which, in turn, sustained facilitation and experimentation (Piaget, 1972; Vygotsky, 1978). In short, CIT explains the systemic conditions under which preparedness and attitudes take effect, while CLT explains the classroom mechanisms through which they do.

Conceptually, the study advances the field in three ways. First, it disaggregates preparedness into Knowledge & Understanding, Instructional Design, and Classroom Practice, moving beyond global scores and pinpointing where friction is greatest (design workload; operational

management of active classes). Second, it frames attitudes across Perceptions, Professional Motivation, and Change Orientation, showing how concrete supports (task banks, minimalist rubrics, co-planning huddles) strengthen each facet; this reframes attitudes from a downstream sentiment to an active conduit linking capability to enactment. Third, by testing mediation in a rural district and narrating the mechanism with qualitative evidence, the study addresses a noted empirical gap in Uganda and the region, where attitudes were often described but rarely modelled as mediators. These contributions both concur with national and regional diagnoses of uneven CBC enactment and resource constraints (MoES, 2023; EPRC, 2023; EPRC & ACET, 2025; Tadesse et al., 2025) and extend the literature by specifying feasible, teacher-level pathways suited to low-resource settings.

Answering the main objective, the evidence supports a twin-track conclusion: strengthen preparedness and cultivate attitudes simultaneously. On the preparedness side, the most effective levers are practical clarity and load reduction, worked exemplars, contextualized task banks, and short try–observe–feedback–refine cycles. On the attitudinal side, the same moves elevate perceived value and feasibility, especially when paired with protected collaboration time and recognition of incremental gains. Implemented together, these supports enlarge the indirect (mediated) pathway while also bolstering the direct pathway from preparedness to practice. Within the study's theoretical frame, this means tightening CIT's quartet (clarity, capability, resources, leadership) so that teachers can enact CLT-consistent routines, authentic tasks, collaboration, and feedback, steadily and at scale. Conceptually, the validated model (Preparedness → Attitudes → Implementation, with a retained direct path) offers a parsimonious account of CBC dynamics in Rukungiri and a transferable logic for similar districts: make CBC both valuable and doable, and the system's technical gains will reliably convert into everyday classroom practice.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

This chapter distils what the study reveals about how teachers' preparedness and attitudes jointly shape the effectiveness of CBC implementation in Rukungiri District, and translates those insights into actionable recommendations. Using a pragmatic, convergent mixed-methods design, the study integrated scale data with interview and focus-group narratives to understand both the extent of change and the conditions under which change is sustained in ordinary classrooms.

6.1 Key conclusions

Teachers' Preparedness (Objective 1). Preparedness is present but uneven. On average, it sits near the mid-point of the scale with wide variability across teachers. Disaggregating the construct shows relatively greater certainty on Knowledge & Understanding of CBC than on Instructional Design and Classroom Practice. The main friction points are the weekly design workload (project tasks, scenarios, personalized learning plans) and the operational management of active classes in constrained settings. No meaningful differences emerged by gender or employment sector, indicating a broadly shared baseline across school types.

Teachers' Attitudes (Objective 2). Attitudes are balanced between endorsement and reservation. Teachers generally value CBC's aims and show openness to change and willingness to keep learning, but everyday motivation is blunted by documentation demands and scarce materials. Small differences by education level appear in favor of Bachelor's and Master's over Diploma on change orientation; gender and sector differences are negligible. In short, value beliefs are positive; feasibility beliefs are fragile.

Effectiveness of CBC Implementation (Objective 3). Implementation is visible but inconsistent. Lesson delivery and learner-centred practices (group work, presentations, problem-solving) are frequently in use; assessment and feedback is the weakest and most

variable strand, chiefly due to workload and a lack of shared, usable tools for competency judging and record-keeping. Again, gender and sector do not materially differentiate implementation, pointing to system-wide rather than subgroup-specific constraints.

Mediating role of attitudes (Objective 4). Attitudes partially mediate the preparedness → implementation link. Preparedness improves implementation both directly and indirectly through attitudes; the indirect pathway grows stronger where teachers experience the work as coherent and doable (clear exemplars, simple tools, collegial routines). This mechanism clarifies why one-off training does not reliably translate into classroom change and why small, visible "wins" in class amplify the return on capacity building.

6.2 Integrated position within the theoretical and conceptual frameworks

Read through Curriculum Implementation Theory, the findings show that fidelity rises when clarity, capability, resources, and leadership move together; implementers' perceptions (attitudes) are not peripheral but a load-bearing part of the system. Seen through Constructivist Learning Theory, the classroom mechanisms that make CBC work, authentic tasks, collaborative learning, and timely feedback, are already present in many rooms and become stable when teachers believe they are worthwhile and have routines that make them doable. Conceptually, the study contributes by (i) disaggregating preparedness into knowledge, design, and practice, (ii) structuring attitudes into perceptions, motivation, and change orientation, and (iii) demonstrating attitudes as the active conduit that turns capability into enactment. The overarching answer to the main objective is therefore twofold: raise preparedness while lowering the cognitive and administrative cost of doing CBC, so that attitudes can transmit gains into everyday practice.

6.3 Recommendations

6.3.1 Policy and system level

At system level, the priority is to convert retooling from episodic workshops into continuous, job-embedded support. National agencies should curate subject-specific exemplar banks of tasks, scenarios, and mini-rubrics aligned to competency progressions, and distribute them in printable and offline-friendly formats. Assessment guidance should be simplified to one-page competency records per unit and a small set of calibrated rubrics so the paperwork burden drops sharply. District teams should schedule termly school-based coaching visits that focus on co-planning and quick feedback cycles, and work with head teachers to protect short collaboration windows on timetables. Resource budgeting should prioritize the basics that enable active methods, printable task packs, chart paper, markers, and low-cost timer/rotation tools, before heavier ICT.

6.3.2 School leadership and management

Within schools, head teachers can make the reform doable this term by institutionalizing three routines. First, protect a weekly 45–60-minute co-planning huddle per subject where teachers adapt exemplar tasks, agree on one mini-rubric, and script the coming week's lesson moves. Second, adopt a school-wide task and rubric bank (on paper or shared drive), so no teacher starts from a blank page. Third, run brief observation–feedback–refine cycles: a 10-minute drop-in with one concrete suggestion, followed by a quick re-look the next week. To stabilise learner-centred classes, leaders can standardise facilitation protocols (roles, turn-taking, reporting frames) and attention and time cues across subjects. Lightweight, monthly calibration huddles where teachers mark two sample artefacts together will align judgements without long meetings. Mentoring pairs should be formed with particular attention to supporting Diploma-qualified teachers while keeping support universal and non-stigmatizing.

6.3.3 Teacher practice

At the classroom level, teachers can lock in wins by pairing authentic tasks with simple structures. Each task should be accompanied by a three- or four-criterion mini-rubric and a two-stars-and-a-wish feedback routine to keep assessment formative and fast. Small-group work benefits from assigned roles, time-boxed activities, and short reporting frames (e.g., 60-second summaries). A one-page competency tracker per class can replace sprawling grade books and make progress visible to learners. Sharing artefacts and reflections during the weekly huddle spreads effective moves quickly and keeps motivation buoyant.

6.3.4 Professional development design

Professional learning should follow short cycles: plan one task together; teach it; exchange two pieces of learner work; adjust the rubric; repeat. Lead teachers can host demonstration lessons and debriefs focused on one micro-practice (e.g., setting up peer assessment). External inputs (district, NGOs, universities) should plug into these cycles rather than sit apart from them. Recognition should privilege demonstrated classroom routines over attendance certificates to reinforce the behaviors that strengthen attitudes and implementation.

6.3.5 Monitoring and improvement

Monitoring should be light and useful. Schools can track three indicators termly: proportion of lessons using a shared task+mini-rubric, frequency of co-planning huddles, and a quick pulse on teacher motivation. A short end-of-term moderation meeting, using anonymized learner artefacts, can check alignment and feed goals into the next term's huddle plans. District reports should summarize what worked and circulate two or three usable exemplars rather than only compliance statistics.

6.4 Limitations and directions for future research

Evidence is cross-sectional and centred on one district; self-report scales may inflate or mute true practice, and observational data were not collected systematically. Future studies should

include classroom observations, longitudinal designs that track cohorts across terms, and experimental or quasi-experimental trials comparing different load-reduction packages (e.g., paper vs. light-digital assessment tools). Modelling school-level effects and linking teacher practice to learner outcomes would further test the theory of change validated here.

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APPENDICES

Appendix I: Questionnaire for Teachers

Tick one option per statement.

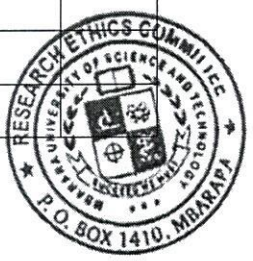
Scale: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA).

Section A: Background (use numeric codes)

Variable	Options & Codes
Gender	1 = Male, 2 = Female
Employment status	1 = Government, 2 = Private
Highest education level	1 = Diploma, 2 = Bachelor, 3 = Master, 4 = PhD

Section B: Teacher Preparedness toward CBC Implementation (12 items)

Code	Sub-construct / Item (short phrasing)	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)
TP1	I can integrate ICT in teaching/learning.					
TP2	I understand CBC principles (competence, progression, outcomes).					
TP3	I can use scenarios in my lessons.					
TP4	I self-assess my teaching activities.					
TP5	I apply project-based and personalized learning.					
TP6	I design lesson plans aligned to CBC competencies.					
TP7	I use CBC-supportive strategies (e.g., personalization).					
TP8	I plan for interactive, learner-centred activities.					
TP9	I organize the classroom for learner interaction.					
TP10	I use peer/collaborative teaching effectively.					
TP11	I facilitate group discussions well.					



TP12	I manage CBC classes and collaborate smoothly.					
TA1	CBC improves learner competencies.					
TA2	CBC is practical and relevant in Uganda.					
TA3	CBC is more engaging than traditional methods.					
TA4	My learners benefit when I apply CBC strategies.					
TA5	I am motivated to apply CBC in daily teaching.					
TA6	I am confident I can implement CBC successfully.					
TA7	I feel responsible for CBC success in my class.					
TA8	I am willing to invest extra time for CBC lessons.					
TA9	I am open to new approaches required by CBC.					
TA10	I view CBC as a positive change.					
TA11	Collaboration with colleagues is essential for CBC.					
TA12	I will keep learning to improve my CBC practice.					
EI1	I plan lessons around competencies, skills, and values.					
EI2	I prepare materials aligned with CBC requirements.					
EI3	I integrate ICT effectively during lessons.					
EI4	I apply the Activities of Integration (AoI).					
EI5	I facilitate collaboration (group work, projects).					
EI6	I use peer/cooperative learning methods.					
EI7	I guide learners to solve real-life problems.					



EI8	I adapt teaching to learner feedback/progress.					
EI9	I use competency-based assessment methods.					
EI10	I give feedback that improves competencies.					
EI11	I use self- and peer-assessment.					
EI12	I monitor and record learner progress by competencies.					



Appendix II: FGD Guide for Students

This guide is designed to explore students' views on teacher preparedness, attitudes, classroom experiences, and suggestions regarding the Competency-Based Curriculum (CBC).

1. Can you tell us about yourself, your class, age, gender, and how long you have been learning under the CBC system?

2. How prepared do you think your teachers are to teach using the CBC approach? Probe: Have they explained CBC to you? Do they use more practical or activity-based lessons? Can you tell if they were trained?

3. How do your teachers' attitudes affect how CBC is taught and how you learn? Probe: Are they excited, unsure, or not interested? Do you feel encouraged when a teacher is motivated?

4. How would you describe your learning experience under CBC? Probe: Are lessons more engaging than before? Do you work in groups or present in class? Do teachers support your learning?

5. Do you think a teacher's attitude influences how well they perform, even if they are prepared? Probe: Have you seen trained teachers who still struggle? Do confident teachers help you learn better?

6. What would you suggest to improve CBC implementation in your school? Probe: Are learning materials or ICT tools available? What kind of support do students or teachers need?

Thank you very much.



Appendix II: Key Informant Interview (KII) Guide

This guide seeks to understand headteachers' insights on the preparedness, attitudes, and effectiveness of teachers in implementing the Competency-Based Curriculum (CBC) in lower secondary schools.

1. Please briefly introduce yourself, your role, how long you have served as a headteacher, and your experience with CBC implementation.
2. How prepared are your teachers to implement the CBC in terms of curriculum delivery, classroom methods, and student engagement? Probe: Have most teachers received CBC-specific training? What differences have you observed between trained and untrained teachers?
3. What attitudes do teachers in your school display toward CBC? Probe: Are they enthusiastic, indifferent, or resistant? How does their attitude affect their teaching and learners' engagement?
4. How effective is CBC implementation in your school? Probe: Are teaching methods learner-centred? Do teachers effectively adapt content and utilise group work? How do students respond to CBC teaching?
5. In your opinion, how does a teacher's attitude influence the relationship between their preparedness and actual classroom performance under CBC? Probe: Can a motivated but less-trained teacher still perform well? Do trained teachers with negative attitudes underperform?
6. What challenges are you facing as a school in implementing CBC? Probe: Are there shortages in materials, infrastructure, or training? How are you supporting teachers to overcome these challenges?
7. What would you recommend to improve the successful implementation of CBC at your school and district level? Probe: What support do schools, teachers, and learners need from the Ministry, district, or development partners?

Thank you very much.



Appendix IV: Informed Consent Form

MBARARA UNIVERSITY OF SCIENCE AND TECHNOLOGY
RESEARCH ETHICS COMM ITTEE
P.O. Box 1410 Mbarara, Tel: +256-48-543-3795, Fax: +256-48-542-0782
E-mail: irc@must.ac.ug, mustirb@gmail.com
INFORMED CONSENT FORM

This document outlines the research study and expectations for potential participants. It should be written in layman terms and typed on MUST-REC letterhead.

Instructions
The wording of this document should be directed to the potential participant not MUST-REC.
If a technical term must be used, then define it the first time it is used and any acronyms or abbreviations used should be spelled out the first time they are used.
All the sections of this document must be completed without any editing or deletions.
Please use a typing font that is easily distinguishable from the questions of this form.
Preferably the font size should be 12.

Study title.
Teachers' Preparedness and Implementation of Uganda's Secondary School CompetenceBased Curriculum (CBC) in Rukungiri District

Principal Investigator(s)
GLADYCE KACHOPE- a PhD student at Mbarara University of Science and Technology (MUST).
Introduction
What you should know about this study:
You are being asked to join a research study.
This consent form explains the research study and your part in the study.
Please read it carefully and take as much time as you need.
You are a volunteer. You can choose not to take part and if you join, you may quit at any time.
There will be no penalty if you decide to quit the study.

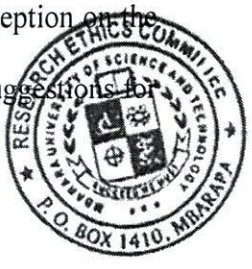
Brief background to the study
In 2020, the Ministry of Education and Sports (MOES), through the National Curriculum Development Centre (NCDC), rolled a new competency-based curriculum for lower secondary students. The new curriculum is an effort to improve our education practice to produce holistic learners ready to thrive in the world after school. Uganda's lower secondary school competency-based education covers the following seven core competencies; communication and collaboration, critical thinking and problem solving, creativity and imagination, citizenship, digital literacy, learning to learn, and self-efficacy. The values that inform learning are; love, responsibility, respect, unity, peace, patriotism, social justice, and integrity. Learners are expected to master and incorporate these values and competencies for their application in life . Teachers are central to curriculum implementation and they require deliberate efforts and training that retools and prepares them for a new way of teaching and learning. Therefore, this study will investigate the effect of teacher preparedness on the implementation of Uganda's lower secondary competence-based curriculum.

RESEARCH ETHICS COMMITTEE
P.O. BOX 1410, MBARARA

Purpose of the research project.
The overall objective of the study is to determine the effect of teacher preparedness on the implementation of Uganda's 2020 competence-based secondary school curriculum in Rukungiri district.
The study will be conducted in 15 government-aided secondary schools. All the full-time teachers on the government payroll and part-time teachers will be all be included in the study. Privately recruited teachers will also be included because these would effectively represent teachers in private schools. A total of 235 teachers including the head-teachers will be included in the study. Students from the same schools will be selected and included in the study where by each class will be represented by 5 students and each school represented by 20 students making it a total of 300 students in the whole study from fifteen schools. Some members of board of governors from the same schools and members from NCDC and the Ministry of Education and Sports at the national level will also take part in the study. You have been chosen among those to volunteer in this research study and you are kindly requested to only answer the questions from the questionnaire or the guide provided to the best of your knowledge. The information provided will only be used to investigate the effect of teacher preparedness on the implementation of Uganda's lower secondary competence-based curriculum.

Why you are being asked to participate?
You have been selected to participate in this study because the researcher trusts that your experience with the knowledge about teaching of the competence based curriculum, you will have reliable information that will enable her to analyze the effect of teacher preparedness on implementation of the Uganda's lower secondary competence based curriculum.
Procedures
The research is not carried out experimentally and it only requires to answer the questions that are asked to you by the investigator. You are therefore requested to sign this consent form as a sign that;
You have been informed about this study's purpose, procedures, possible benefits and the risks.
You have been given the chance to ask any questions concerning the study before you sign.
You have agreed voluntarily to participate in this study.

Risks or discomforts
This research study has been approved by the Research Ethics Committee (REC) and thus there are no legal risks associated with it. Answers that will be provided will not be recorded by your name, your identity will not be mentioned anywhere and thus there is 100% confidentiality to all the participants. In case of feelings of discomfort, that is you identify any risks associated, you are fee to opt out of this study without any one stopping you.
Benefits
Teachers play a crucial role in the implementation of any curriculum and thus a study about Teacher preparedness on the implementation of Uganda's lower secondary competence-based curriculum will give us the following benefits;
The findings of the study will aid education stakeholders like teachers, parents, administrators, and curriculum specialists in Uganda in recognizing institutional related determinants that affect CBC implementation in schools.
The findings of the study will aid academic stake holders to know the importance of teacher's preparedness on the implementation of CBC in the secondary schools so as make informed decisions on the implementation.
The study will generate information that might positively change teacher's perception on the implementation of the CBC.
The findings may also assist curriculum designers and operators by providing suggestions for



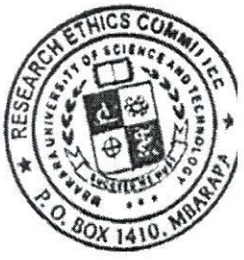
the design and execution of proper planning for better CBC execution, as well as indicating additional areas of CBC implementation that deserve further investigation.
Results may also aid writers of curricular and practitioners by shedding light into the formulation of correct planning for better CBC delivery, and highlighting additional areas of CBC implementation that require further research.
The findings of the study might be used by the Uganda National Curriculum Development Center to organize seminars, workshops, training/ teaching programs in order to prepare teachers adequately for implementation of the CBC.

Incentives or rewards for participating.
Your participation in this research study is voluntary and there will be no payments for participating in it however your participation is highly appreciated and valued.
Protecting data confidentiality.
All the basic research ethics will be followed and observed hence all the information provided to us will be treated with the utmost confidentiality. Your identity and security is the investigators first priority when dealing with the given data.

Protecting subject privacy during data collection
Your personal privacy will be ensured where by your name will not be included on the statements made by you or on the responses from the interview guide or questionnaires.
Right to refuse or withdraw
Human dignity will strictly be respected and the study will not at any moment reveal the identities of the respondents and as participants, it is your right to participate or not. What happens if you leave the study?
My request is that you take part in this research study willingly and respond to the questions asked to you by the investigator for the success of this research however you have the right to withdraw from the study at any point in time without loss of anything or any penalty. Who do I ask/call if I have questions or a problem?
In case of any questions or problem related to this research study, feel free to contact us;
Gladyce Kachope- Researcher 0772665921 kachopeg@gmail.com gladycek@yahoo.co.uk

Assoc. Prof. Paul Alele
Chairman, MUST-REC
P.O. Box 1410 Mbarara
Tel: 0485433795/0773573372

What does your signature or thumbprint on this consent form mean?
Your signature on this form means
You have been informed about this study's purpose, procedures, possible benefits and risks
You have been given the chance to ask questions before you sign
You have voluntarily agreed to be in this study



Name of adult participant	Signature/Thumbprint of participant/ Parent/Guardian/Next of Kin	Date
Name of person obtaining consent	Signature	Date
Print Name of witness	Signature or thumbprint or mark	Date

RESEARCH ETHICS COMMITTEE
JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
P.O. BOX 1410, MBARARA

Appendix II: Permission letter from Rukungiri Municipality

Mbarara University of Science and Technology (MUST)
P.O. Box 1410,
Mbarara,
Uganda.

Rukungiri Municipal Council
MUNICIPAL EDUCATION OFFICER
03 JUL 2025
P.O.Box 117, Rukungiri

30th Sept 2024

Municipal Education Office
Rukungiri District

Subject: Request for Permission to Conduct Research in Municipal Schools

I hope this letter finds you well. I am Kachope Gladyce , a PhD student at Mbarara University of Science and Technology (MUST), currently undertaking research on **[Teachers' preparedness and implementation of Uganda's secondary school competence-based curriculum (CBC)]**. I am writing to formally seek permission to conduct research in municipal schools within your jurisdiction.

I assure you that all ethical considerations, including confidentiality and informed consent from participants, will be strictly adhered to.

I kindly request your authorization to engage with school administrators, teachers, and students as part of my study. I am willing to provide additional details regarding the research and comply with any guidelines set by your office. Additionally, I would be grateful for any recommendations or support your office can offer to facilitate this process.

Thank you for considering my request. I look forward to your positive response.

Sincerely

.....

KACHOPE GLADYCE

PhD Program, MUST

Appendix IIII: Permission letter from Rukungiri District

Mbarara University of Science and Technology (MUST)
P.O Box 1410,
Mbarara,
Uganda

30th Sept 2024

District Education Office
Rukungiri District

Permission Granted
DISTRICT EDUCATION OFFICER P. O. Box 74 RUKUNGIRI

Subject: Request for Permission to Conduct Research in Rukungiri secondary Schools

I hope this letter finds you well. I am Kachope Gladyce , a PhD student at Mbarara University of Science and Technology (MUST), currently undertaking research on **[Teachers' preparedness and implementation of Uganda's secondary school competence-based curriculum (CBC)]**. I am writing to formally seek permission to conduct research in Rukungiri Secondary schools within your jurisdiction.

I assure you that all ethical considerations, including confidentiality and informed consent from participants, will be strictly adhered to.

I kindly request your authorization to engage with school administrators, teachers, and students as part of my study. I am willing to provide additional details regarding the research and comply with any guidelines set by your office. Additionally, I would be grateful for any recommendations or support your office can offer to facilitate this process.

Thank you for considering my request. I look forward to your positive response.

Sincerely

.....

KACHOPE GLADYCE

PhD Program, MUST

Appendix VII: UNCST Letter

Uganda National Council for Science and Technology

A semi-autonomous Government Agency established by an Act of Parliament of the Republic of Uganda

Our Ref: SS3363ES **7 August 2025**

Gladyce Kachope
Mbarara University of Science and Technology
Mbarara

Re: Research Approval: **TEACHERS' PREPAREDNESS AND IMPLEMENTATION OF UGANDA'S SECONDARY SCHOOL COMPETENCE-BASED CURRICULUM (CBC) IN RUKUNGIRI DISTRICT**

I am pleased to inform you that on **07/08/2025**, the Uganda National Council for Science and Technology (UNCST) approved the above referenced research project. The Approval of the research project is for the period of **07/08/2025** to **07/08/2026**.

Your research registration number with the UNCST is **SS3363ES**. Please, cite this number in all your future correspondences with UNCST in respect of the above research project. As the Principal Investigator of the research project, you are responsible for fulfilling the following requirements of approval:

1. Keeping all co-investigators informed of the status of the research.
2. Submitting all changes, amendments, and addenda to the research protocol or the consent form (where applicable) to the designated Research Ethics Committee (REC) or Lead Agency for re-review and approval **prior** to the activation of the changes. UNCST must be notified of the approved changes within five working days.
3. For clinical trials, all serious adverse events must be reported promptly to the designated local REC for review with copies to the National Drug Authority and a notification to the UNCST.
4. Unanticipated problems involving risks to research participants or other must be reported promptly to the UNCST. New information that becomes available which could change the risk/benefit ratio must be submitted promptly for UNCST notification after review by the REC.
5. Only approved study procedures are to be implemented. The UNCST may conduct impromptu audits of all study records.
6. An annual progress report and approval letter of continuation from the REC must be submitted electronically to UNCST. Failure to do so may result in termination of the research project.

Appendix VIII: REC Approval Letter

Mbarara University of Science & Technology
P. O. Box 1410, Mbarara
RESEARCH ETHICS COMMITTEE
30 SEP 2025
APPROVED
VALID UNTIL DATE SHOWN ABOVE

30/09/2024

To: Kachope Gladyce

Mbarara University of Science and Technology

Type: Initial Review

Re: MUST-2024-1706: TEACHERS' PREPAREDNESS AND IMPLEMENTATION OF UGANDA'S SECONDARY SCHOOL COMPETENCE-BASED CURRICULUM (CBC) IN RUKUNGIRI DISTRICT

I am pleased to inform you that at the **171st** convened meeting on **05/09/2024**, the MUST Research Ethics Committee meeting voted to approve the above referenced application.
Approval of the research is for the period of **30/09/2024** to **30/09/2025.**

As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re-review and approval **prior** to the activation of the changes.
3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Continuing review application must be submitted to the REC **eight weeks** prior to the expiration date of **30/09/2025** in order to continue the study beyond the approved period. Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of all documents approved in this application by MUST Research Ethics Committee:

No.	Document Title	Language	Version Number	Version Date
1	Proposal clean copy	English	2	[illegible]
2	Assent form	English	1	[illegible]
3	Informed Consent forms	English	1	[illegible]
4	Data collection tools	English	1	[illegible]

Yours Sincerely

Dr. Paul Alele
For: MUST Research Ethics Committee