



How Teachers' Professional Development Influences the Implementation of Competence-Based Education in Comprehensive Schools in Mbeere North Sub-County, Embu, Kenya

By

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DOI: <https://doi.org/10.5281/zenodo.17036091>

Abstract

The study examined the influence of teachers' professional development (TPD) on the implementation of Competence-Based Education (CBE) in public comprehensive schools in Mbeere North Sub-County, Embu, Kenya. The following research question guided the study: In what ways does teachers' professional development influence the implementation of Competence-Based Education? The study was anchored on the Organizational Readiness for Change Theory. The target population included 98 public comprehensive schools with 1216 teachers, 4980 pupils from Grades Seven and Eight, and 98 head teachers. Moreover, 5 Curriculum Support Officers were also targeted. This study used both probability (Simple Random Sampling and Stratified Random Sampling) and non-probability (Purposive Sampling) techniques to obtain a representative sample from the target population. The sample size was 682 participants comprising of 15 Head Teachers, 292 teachers, 370 pupils and 5 Curriculum support officers. Questionnaire was used to collect quantitative data from teachers and qualitative data from Curriculum Support Officers and head teachers through interview guides, and a focus group discussion guide for pupils. Descriptive statistics summarized findings, and Pearson Product Moment Correlation tested relationships between TPD and CBE implementation. The study revealed that regular training, mentorship, and peer learning positively influenced CBE adoption, although inconsistencies in training relevance, resource provision, and follow-up limited effectiveness. It concluded that effective CBE adoption requires strengthened professional development support, sustained mentorship, and resource facilitation by head teachers, school boards, and the Ministry of Education.

Key Words: Competence-Based Education, Professional Development, Mentorship, Instructional Supervision, Teacher Capacity Building

Citation:

Kagendo, A.D., Theodorah, M., & Wambiya, P. (2025). How teachers' professional development influences the implementation of competence-based education in comprehensive schools in Mbeere North Sub-County, Embu, Kenya. *Journal of Africana Articles*, 3(28), 1-21. DOI: <https://doi.org/10.5281/zenodo.17036091>

INTRODUCTION TO THE STUDY

Competency-Based Education (CBE) has emerged as a global reform agenda aimed at equipping learners with practical knowledge, skills, and attitudes necessary for the demands of the 21st century. Unlike traditional content-driven models, CBE emphasizes learner-centered approaches, problem-solving, creativity, and the application of knowledge to real-life situations (UNESCO, 2021). Many countries, both developed and developing, have embraced CBE as a pathway to improve the relevance and quality of education while addressing skills mismatches in the labor market (Schleicher, 2022). However, its implementation remains a complex process-process influenced by multiple school-based and systemic factors. Among these, the role of head teachers in providing leadership through teacher professional development, ICT infrastructure, stakeholder engagement, and instructional supervision has been widely identified as crucial in ensuring that the philosophy of CBE is effectively translated into classroom practice.

Globally, teachers' professional development has been recognized as a central factor in the effective implementation of Competency-Based Education (CBE). In developed countries, school leaders play a significant role in fostering teacher growth through continuous professional development (CPD), mentoring, and training that align with competency frameworks (Schleicher, 2022). For instance, Finland and Canada have embraced participatory leadership that empowers teachers to integrate CBE pedagogy into practice, while in the United States, insufficient funding and rigid CPD programs have limited teachers' autonomy and innovation (Lindsay & Cummings, 2023). These variations suggest that professional development strongly influences how effectively CBE reforms are realized at the classroom level.

In Africa, however, teacher professional development remains inconsistent, limiting the effectiveness of CBE implementation. Studies in South Africa and Cameroon reveal that while school leaders recognize the importance of training, most teachers lack clear conceptual understanding of CBE due to inadequate capacity-building programs (Molapo, Mendy & Madiope, 2020; Tabe, 2019). Consequently, outdated teaching methods persist, reducing the intended impact of CBE reforms. In Kenya, the shift from the 8-4-4 system to CBE was designed to equip learners

with relevant 21st-century skills. Yet, research shows that the level of professional development support provided by head teachers has varied across counties. In areas like Machakos and Nairobi, head teachers who organized regular training and mentorship recorded better outcomes, while in rural settings, training remained sporadic and poorly aligned to classroom realities (Muthui, 2022; Wachira et al., 2022).

Despite the emphasis on professional development in national policies, there is limited localized research examining how head teachers in rural contexts, such as Mbeere North Sub-County, support teachers to adopt CBE pedagogy. Most studies in Kenya have focused on urban or better-resourced regions, leaving a gap in understanding the challenges and strategies needed in rural environments. This study, therefore, seeks to establish how teachers' professional development influences the implementation of CBE in public comprehensive schools in Mbeere North, thereby addressing a critical knowledge gap.

It is commonly accepted globally that competent school management is essential to the successful implementation of competency-based education (UNESCO, 2020). Head teachers should ideally engage education stakeholders, support teacher professional development, improve ICT infrastructure, and provide robust instructional supervision. Research has demonstrated that these management strategies enhanced CBE implementation and teacher preparedness (Ndayambaje & Nzabonimpa, 2019; Okello & Magezi, 2021). Similarly, Muthui (2022) discovered that head teachers who gave priority to these factors saw more successful transitions to CBE. But in rural areas like Mbeere North, where head teachers face challenges like inadequate funding, erratic oversight, and low community engagement, this ideal is still unfulfilled, which worries educators, parents, and education officials (Embu County Education Report, 2023).

Anecdotal evidence and local reports suggest that many schools lack ICT resources, adequate CPD opportunities, and clear instructional assistance, which has contributed to poor CBE fidelity. For example, just 23% of public schools in Embu county were ICT-equipped by 2022 (Embu County Education Report, 2023). Parents are still unsure of their place in the new system, and teachers say the workload at CBE is overwhelming them. The goal of the curriculum may be threatened if these difficulties continue since learners would graduate lacking the fundamental skills required in the modern workforce. Data on localized leadership initiatives in sub-counties

like Mbeere North were lacking in earlier studies. This study therefore aimed to fill that gap by assessing head teachers' management strategies in enhancing implementation of Competence-Based Education in public comprehensive schools in Mbeere North sub-county, Embu County, Kenya.

Competent administrators must exhibit all facets of school management, especially those that call on interpersonal skills (Villanueva, 2021). This is because they supervise the lessons taught by teachers, which calls for the use of effective skills. In light of this, the current study is predicated on that of Nevenglosky et al. (2019), who recognize interaction as an essential element of administrators' curriculum implementation tactics. To maximize their influence on staff and students, administrators must effectively integrate theory and practice. One of the most important skills is establishing personal connections with students, teachers, parents, support workers, and community members. Therefore, it is essential that administrators get the skills and knowledge necessary to maximize their positive impact.

In Turkey, Karacabey et al. (2022) carried up a quantitative study to look at the connection between teachers' professional development and administrators' relational capabilities, namely their communication skills. Using a cross-sectional survey design, the researchers gathered information from a sample of 1,200 instructors in response to the growing interest in the impact of educational leadership on teacher learning. The results of the study showed a strong positive relationship between administrators' communication abilities and teachers' productivity and ongoing professional growth. These findings highlight how important interpersonal leadership traits are in influencing both school culture and the professional development of individual teachers. This study supports the focus on communication training in leadership development programs and adds important empirical evidence to the field of educational leadership by emphasizing the direct impact of administrative relational abilities.

Although Karacabey et al. (2022) found a strong correlation between administrators' communication abilities and teachers' professional growth, they had shortcomings in terms of contextual nuance, geographic reach, and examination of more general relational qualities. By employing a mixed-methods approach and combining qualitative and quantitative data for a more thorough understanding, the current study addressed these limitations. study was conducted in a different school setting, which improved generalizability, and study also looked at other relational

characteristics including empathy and trust. A deeper comprehension of how management practices influence teacher professional development was made possible by this all-encompassing approach.

In a mixed-methods study, Chidumebi (2022) investigated the connection between social skills management by principals and efficient school administration in public secondary schools in Enugu State, Nigeria. Surveying all 295 principals in the region's public high schools, the study addressed two research objectives and tested two null hypotheses. The study found a strong predictive correlation between principals' administrative skills, especially their social competency, and the general efficacy of school management using both quantitative and qualitative assessments. The results highlighted the value of interpersonal skills like communication, self-control, and relational sensitivity in building effective institutional leadership and positive staff relationships. The study suggested that in order to improve staff cooperation and academic results, school principals should cultivate emotional intelligence and proactive interaction techniques. By concentrating on a sizable, context-specific population, this study highlights the critical role that social skills play in administrative performance and offers insightful information about leadership techniques in Nigerian public education.

Chidumebi (2022) concentrated on the social skills of principals and how they affect school administration, but she did not look at how these abilities affect student academic performance or teacher development. Additionally, the study was restricted to a single area, which limited how broadly the results could be applied. By investigating a wider spectrum of leadership qualities, both relational and managerial, and their direct impacts on teacher development and student outcomes, the current study filled these gaps. Additionally, by using a mixed-methods approach and broadening the geographical reach, it provided deeper, more applicable insights into successful school leadership strategies.

The study by Malebe et al. (2023) investigated how head teachers' provision of professional development (PD) opportunities affected the productivity of teachers in public primary schools located in Kenya's Nakuru County. Malebe, Ochieng, and Nyabisi used a mixed-methods design to investigate the effects of access to professional development activities including workshops, seminars, and in-service training on instructional delivery, assessment abilities, and teacher motivation in general. Contrary to expectations, the results showed no statistically significant

correlation between head teachers' provision of professional development and enhancements in teachers' job performance. Even though these results were not readily quantifiable in performance measurements, qualitative data showed that instructors appreciated professional development for its role in promoting collaboration and updating instructional skills. The study found that although most instructors value professional development opportunities, contextual factors including administrative support, follow-up procedures, and resource availability limit their impact. To increase its observable influence on teacher effectiveness, the authors advise fortifying PD implementation frameworks.

The study by Malebe et al. (2023) has a significant research gap because it focuses primarily on professional development (PD) without explicitly connecting it to the use of competency-based education (CBE). Although general work performance outcomes were evaluated, the study did not specifically look at how head teachers' support for professional development affects teachers' readiness or efficacy in providing CBE. In order to close this gap, the current study focuses on the strategic role head teachers play in supporting focused professional development that aims to increase teachers' ability to apply CBE in public comprehensive schools.

This study was guided by this research question: In what ways does teachers' professional development influence the implementation of Competence-Based Education in comprehensive schools? The study was guided by Organizational Readiness for Change (ORC) Theory by Armenakis, Harris, and Mossholder's (1993). The theory provides a comprehensive framework for examining how schools prepare for and implement reforms such as Kenya's Competency-Based Education (CBE). The theory emphasizes two key dimensions: psychological readiness, which reflects the confidence and commitment of leaders, and structural readiness, which entails resources, infrastructure, and support systems (Weiner, 2020). In Mbeere North sub-county, head teachers' belief in CBE principles demonstrates psychological readiness, while limited ICT facilities and teaching resources highlight gaps in structural preparedness. Thus, ORC enables the assessment of both leadership attitudes and systemic capacity in understanding readiness for CBE reforms.

Despite its strengths, ORC theory has limitations, especially in education. Its focus on internal readiness often overlooks external factors such as government policies, economic inequality, and community involvement that shape reform outcomes (Armenakis & Harris, 2019;

Oduor & Simiyu, 2020). Research shows that inadequate infrastructure, insufficient training, and resource scarcity undermine CBE implementation in rural Kenyan schools (Embu County Education Report, 2023). Moreover, assuming uniform readiness fails to capture differences in teachers' motivation and capabilities (Fullan, 2021). To address these weaknesses, complementary theories such as Path-Goal and Managerial Roles help explain how leadership strategies and role performance can enhance schools' adaptability to curriculum reforms.

RESEARCH DESIGN AND METHODOLOGY

The study was conducted in Mbeere North Sub-County, which is one of the four administrative sub-counties in Kenya's Embu County. It shares borders with Kitui County to the north, Tharaka Nithi County to the east, Kirinyaga County to the west, and Mbeere South to the south. The region is characterized by drylands agriculture and pastoralism and is primarily semi-arid with undulating topography. The region's socioeconomic problems include low parental income, erratic school enrollment, and inadequate infrastructure, all of which can affect the quality of education (KNBS, 2022). Because Mbeere North's distinct rural setting offers both significant potential and challenges for the implementation of competency-based education (CBE), the study was carried out there. Examining head teachers' activities here provide valuable information about local leadership approaches to enhancing curriculum adoption in resource-constrained environments (MOE, 2023).

The target population comprised 4,980 pupils, 1,216 teachers, 98 head teachers, and 5 Curriculum Support Officers (CSOs) drawn from the 98 public comprehensive schools in Mbeere North Sub-County. The inclusion of head teachers and CSOs was particularly critical, as they hold extensive expertise in the administration of primary education and possess practical insights into the teaching and learning process. Their involvement ensured that the study captured informed perspectives regarding the implementation of Competency-Based Education (CBE).

The study adopted a convergent parallel mixed-methods design, which allowed for the simultaneous collection of quantitative and qualitative data, with each analyzed separately before integrating the findings for deeper insights (Creswell & Creswell, 2018). As Komba and Mwakabenga (2019) argue, the choice of an appropriate research framework enhances the reliability of data collection and analysis, strengthening the validity of results. The quantitative

component utilized a cross-sectional survey design to examine how teacher appraisal practices, such as structured feedback, target setting, and evaluation mechanisms, influence the adoption of innovative instructional practices. This design was appropriate for determining the extent to which professional development supports the implementation of CBE.

Conversely, the qualitative component employed a phenomenological approach to capture the lived experiences of head teachers and sub-county education officers on how teacher professional development impacts CBE. Phenomenology, according to Vasileiou et al. (2018), provides an avenue to explore nuanced human experiences and perspectives, thereby making it suitable for understanding teachers' views on professional development as either an enabler or a hindrance to instructional innovation. By integrating quantitative and qualitative results, the study offered a comprehensive understanding of how teacher professional development shapes innovative teaching strategies and fosters successful implementation of CBE in Mbeere North Sub-County.

The sample size was determined using Yamane's (1967) simplified formula for finite populations, which is widely applied in educational research for ensuring efficiency and accuracy. Accordingly, 15 out of 98 public comprehensive schools in Mbeere North Sub-County were selected through stratified sampling. From these schools, 15 head teachers were chosen purposively, 292 out of 1,216 teachers were sampled through simple random sampling, while 370 out of 4,980 pupils were systematically selected. This multi-stage approach ensured balanced representation across different categories of respondents.

The study used multiple instruments to collect data. According to Creswell and Creswell (2021), data collection involves systematically obtaining information from selected participants to answer the research questions and meet the objectives of the study. In this research, multiple instruments were employed to capture both quantitative and qualitative data, ensuring a comprehensive understanding of how teacher performance appraisals influence teacher efficacy. Questionnaires were utilized to collect structured quantitative data, while interview schedules provided in-depth qualitative insights. An observation checklist was used to document observable practices related to performance appraisal, whereas focus group discussions captured collective views from participants. Additionally, a document analysis guide facilitated the examination of policy documents and appraisal reports. As emphasized by Flick (2018), the use of methodological

triangulation enhanced the credibility, depth, and dependability of the findings by integrating diverse perspectives and data sources.

Content validity was established through expert reviews from education specialists and school administrators, who assessed the tools for relevance and clarity (Heale & Twycross, 2021). To improve contextual suitability, pilot testing was conducted in schools outside the main sample, which helped identify gaps in language and structure. This process allowed for refinements that strengthened the tools' accuracy, ensuring they comprehensively addressed the research objectives (Bolarinwa, 2022).

Reliability was assessed through a pilot test and statistical analysis. The internal consistency of questionnaires was measured using Cronbach's Alpha, with a coefficient of 0.7 set as the benchmark for acceptable reliability (Middleton, 2023). For qualitative tools, reliability was reinforced through member checking, where respondents reviewed transcripts to confirm accuracy, and triangulation techniques to ensure uniformity in coding (Creswell & Creswell, 2023). These approaches minimized errors and enhanced consistency across instruments, confirming their credibility and appropriateness for gathering dependable data to address the study's research questions.

The researcher first obtained an introduction letter from the Department of Postgraduate Studies in Education at the Catholic University of Eastern Africa, which facilitated official clearance. This was followed by securing a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI). Additional authorization was obtained from the Embu County Director of Education and the Mbeere North Sub-County Education Office to access the selected comprehensive schools. Upon approval, the researcher scheduled appointments with principals to ensure data collection was conducted at agreed times, thereby minimizing interruptions to school routines and maintaining transparency of the research purpose.

To administer instruments, the researcher personally distributed questionnaires to teachers, allowing sufficient time for completion before collecting them. Semi-structured interviews were arranged with the curriculum support officers and school head teachers. These sessions involved detailed note-taking and, where necessary, audio recording to ensure accuracy of responses. Focus group discussions were conducted with groups of students to enrich perspectives, with the support

of two trained research assistants. These assistants helped moderate discussions and ensured active participation while upholding confidentiality and ethical standards throughout the process.

After data collection, the researcher, assisted by a research assistant, verified all tools for completeness and accuracy. Numerical data were coded and entered into SPSS version 27 for analysis (Pallant, 2023), with checks conducted for missing values and consistency to maintain data integrity. Descriptive statistics such as frequencies, percentages, and means summarized teacher characteristics and professional development practices. To test the relationship between teachers' professional development and Competence-Based Education implementation, Pearson Product Moment Correlation was used. Qualitative data from interviews and focus groups were transcribed, coded, and thematically analyzed in line with research objectives. Integrating qualitative insights with quantitative results allowed for triangulation, enhancing credibility. Findings were presented using tables, figures, and thematic narratives to clearly illustrate emerging patterns and relationships.

Ethical standards were carefully observed to ensure the credibility and trustworthiness of the study on how teachers' professional development influences Competence-Based Education implementation in Mbeere North Sub-County. Informed consent was obtained from teachers, principals, and other participants after they were fully briefed on the study's objectives, procedures, potential risks, and benefits. Participation was voluntary, with respondents made aware of their right to withdraw at any point without consequences (Creswell, 2021). Necessary approvals were also secured from relevant educational authorities to comply with institutional and national research guidelines. Confidentiality and anonymity were upheld by avoiding personal identifiers in the report and securely storing all data, accessible only to authorized researchers (Kumar, 2022). Ethical rigor was further strengthened by triangulating data sources and respecting participant contributions, which enhanced credibility and integrity. Adhering to these practices ensured that the findings were both reliable and ethically sound.

FINDINGS AND DISCUSSIONS

Teacher participants in this study were asked in the questionnaire to indicate the extent to which they agreed or disagreed with the statement in rating how the support of head teachers to Professional Development of their teachers contribute to successful implementation of CBE in

public comprehensive schools in Mbeere North sub-county, Embu, Kenya on a Likert scale of 1-5 where 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4=Agree, 5= Strongly Agree. Findings were presented in Table 1.

Table 1

Professional Development and Competency-Based Education Implementation (n=245)

No.	Statement	SD	D	U	A	SA
I	The head teacher facilitates regular training sessions on Competency-Based Education	53 (21.6%)	55 (22.4%)	22 (9.0%)	72 (29.4%)	65 (26.5%)
ii	The head teacher encourages participation in CBE-related workshops and seminars.	43 (17.6%)	48 (19.6%)	20 (8.2%)	110 (44.9%)	67 (27.3%)
iii	Professional development opportunities are relevant to CBE implementation.	45 (18.4%)	54 (22.0%)	21 (8.6%)	80 (32.7%)	45 (18.4%)
iv	The head teacher provides learning materials during training.	48 (19.6%)	56 (22.9%)	25 (10.2%)	76 (31.0%)	40 (16.3%)
V	Mentorship programs guided by the head teacher support CBE teaching.	38 (15.5%)	44 (18.0%)	23 (9.4%)	90 (36.7%)	50 (20.4%)
vi	Teachers are given time to attend CBE in-service courses.	34 (13.9%)	46 (18.8%)	20 (8.2%)	88 (35.9%)	57 (23.3%)
vii	The head teacher monitors the impact of training on teaching practices.	49 (20.0%)	54 (22.0%)	26 (10.6%)	69 (28.2%)	47 (19.2%)
viii	Peer learning on CBE is promoted by school leadership.	35 (14.3%)	46 (18.8%)	20 (8.2%)	84 (34.3%)	60 (24.5%)

Source: Field Data (2025)

According to the statistics, 108 (43.9%) disagreed or strongly disagreed with the statement that their head teachers lead frequent training sessions on competency-based education (CBE),

whereas 137 teachers (55.7%) agreed or strongly agreed. This indicates a reasonable level of support for professional development, but it also shows that public comprehensive schools implement it inconsistently. The Organizational Readiness for Change (ORC) theory (Weiner, 2020) states that psychological preparedness and institutional commitment are both necessary for curriculum reform to be successful. Schools are more likely to develop internal capacity for change when head teachers actively plan training. The roughly equal disagreement, however, emphasizes the necessity of overall alignment. Teachers might not have the abilities, know-how, or drive to use CBE successfully without constant leadership assistance, which would eventually impair curriculum results.

Just 91 teachers (37.2%) reported that their head teachers did not support participation in external CBE-related workshops and seminars, whereas a large 177 teachers (72.2%) agreed or strongly agreed. This points to a generally robust culture that supports professional growth. Effective leaders help their subordinates accomplish performance goals by removing barriers and giving guidance, according to the Path-Goal Theory (Northouse, 2021). Head teachers are embracing a supportive leadership style that fits in well with the requirements of CBE, which prioritize learner-centered instruction and continual educator adaptation, by encouraging teachers to participate in outside training opportunities. This strategy is especially important for keeping educators abreast of changing pedagogical practices. Additionally, it helps schools develop a feeling of purpose, which improves student results and the quality of learning.

Additionally, 99 teachers (40.4%) disagreed with the notion that professional development opportunities were relevant to the implementation of CBE, while only 125 teachers (51.1%) agreed. This suggests that while training is offered, a large portion of it might not be specifically adapted to the new curriculum's need for particular abilities and pedagogical changes. This worry is in line with research by Mwangi and Gichuhi (2021), who observed a discrepancy between the requirements for CBE implementation in Kenya and the substance of teacher training. Successful transformation, according to the ORC paradigm, depends on both the suitability and accessibility of strategies. Teachers become less motivated to put what they have learned into practice if they attend training that does not address actual classroom issues. Head teachers must thus make sure that training materials are practice-oriented and contextualized in order to effectively promote change.

Further, 104 respondents (42.5%) disagreed with the statement that head teachers should give learning resources for professional development, whereas 116 respondents (47.3%) agreed or strongly agreed. This near-split indicates that many schools still struggle to provide students with appropriate teaching resources. Without physical tools, such as CBE manuals, evaluation guides, and example lesson plans, effective training cannot be carried out. Mintzberg's Theory of Managerial Roles (2021) states that head instructors have to distribute resources and spread knowledge. A failure to perform these administrative responsibilities is reflected in the inadequate supply of materials. Additionally, the absence of resources lessens the possibility that instructors will duplicate training materials in their classrooms. Making sure that educational resources are dispersed fairly would support training efficacy and promote the real-world implementation of CBE techniques.

The mentorship statement received more positive responses; 140 teachers (57.1%) agreed or strongly agreed that head teacher-led mentorship programs improve CBE teaching, compared to 82 (33.5%) who disapproved. Beyond one-time seminars, mentoring provides continuous, contextualized support, a crucial component when implementing new curriculum frameworks like CBE. The Path-Goal Theory emphasizes how important it is for leaders to offer the direction and assistance required to break down obstacles and raise spirits. Under the new system, structured mentorship enables seasoned or more qualified educators to advise their colleagues on lesson planning, assessment design, and learner engagement tactics. In CBE settings, head teachers who make mentorship investments foster a collaborative culture that boosts self-esteem, lowers resistance to change, and increases overall instructional coherence.

Indeed, eighty (32.7%) teachers disagreed with the statement that their head teachers allow time for in-service CBE courses, while 145 teachers (59.2%) agreed. Time is a valuable resource for professional development, and school leadership's assistance in modifying schedules or workloads shows that organizational priorities include teacher learning. This highlights the interpersonal and liaison role of a head teacher, according to Managerial Roles Theory, which bridges the gap between internal scheduling dynamics and external training providers to guarantee that professional development is accessible and useful. Furthermore, according to the ORC paradigm, if institutional structures align to enable change, time allocation reflects preparedness.

Even the most enthusiastic teachers might not be able to fully engage with or apply CBE methodologies if they do not have time set aside for capacity-building.

According to the responses, only 116 respondents (47.4%) thought that head teachers kept an eye on how professional training affected their teaching methods, while 103 respondents (42.0%) disagreed. This draws attention to a critical flaw in the feedback and assessment loop that is required for the long-term application of CBE. It's challenging to determine whether training results in better classroom practices without follow-up. ORC theory states that methods for assessment and ongoing improvement are essential to maintaining change. Mintzberg's managerial monitor role also emphasizes the significance of informed intervention and performance control. Accountability is guaranteed by monitoring, which also enables targeted assistance when required. Schools that disregard this aspect risk experiencing uneven or stagnant adoption of CBE principles, which would compromise the long-term viability of capacity-building programs.

With 144 teachers (58.8%) agreeing or strongly agreeing that school leadership fosters collaboration around CBE, and 81 (33.1%) disagreeing, the final item demonstrated a comparatively strong endorsement of peer learning. Peer learning gives teachers a sense of ownership and shared accountability while facilitating group problem-solving. Additionally, it is consistent with the ORC theory, which stresses commitment to change and group efficacy. Professional learning communities that promote creativity, lessen isolation, and normalize best practices are fostered by head teachers who develop collaborative environments. The Path-Goal Theory states that this kind of leadership facilitation makes it easier for employees to meet performance targets. Promoting resource sharing and mentorship between educators enhances the effective application of CBE and fortifies the institution's overall capacity for change.

According to Table 5's findings, head teachers at public comprehensive schools facilitate professional development for the implementation of competency-based education (CBE) in a fairly supportive manner. Positive leadership influence was demonstrated by the majority of teachers who recognized being encouraged to participate in peer learning initiatives (58.8%) and attend CBE seminars (72.2%). On crucial topics including training facilitation (55.9% agree vs. 43.9% disagree), training relevance (51.1% agree), and the availability of learning resources (47.3% agree), answers were more split. These differences draw attention to irregularities in the way CBE support systems are implemented at the school level. These discrepancies might be the result of

inadequate structural support or planning by head teachers, which could impede the successful implementation of CBE practices in classrooms, according to Mintzberg's Managerial Roles Theory and Organizational Readiness for Change (Weiner, 2020).

While some schools had clearly active professional development frameworks, like regular seminars, mentoring pairings, and collaborative planning sessions, the researcher discovered through the observation checklist that other schools lacked organized attempts to assist teachers in implementing CBE. As seen in Table 5, where only 55.9% of teachers agreed that head teachers routinely arrange CBE training, there were multiple instances when lesson observation records and CPD (Continuous Professional Development) attendance registrations were either out-of-date or lacking. The 58.8% agreement on peer collaboration was confirmed by the presence of mentorship and peer learning in schools with structured support. Only 59.2% of instructors felt encouraged in attending in-service training, though, as the researcher also noted time difficulties and overcrowded schedules.

These trends were further supported by document analysis. CBE training agendas, resource lists, and post-training evaluations were evident in schools with well-kept professional development files. According to these records, 72.2% of instructors said that some head teachers promote workshop participation. In contrast, teacher support seemed informal or erratic in schools with little to no documentation, which was consistent with the 40.4% of respondents who didn't feel that training material was relevant. Furthermore, the 47.4% agreement that training impact is tracked was reflected in the dearth of systematic follow-up reporting, indicating that although there is desire, formal evaluation is lacking. This dual approach supported Table 5's contradictory findings by confirming the finding that professional development support for CBE differs greatly amongst schools.

Several head teachers who participated in interviews agreed that professional development is crucial to assisting with the implementation of competency-based education (CBE). Organizing internal training sessions and encouraging teachers to attend workshops led by Curriculum Support Officers (CSOs) were confirmed by the majority. This is consistent with Table 5's 72.2% of teachers who reported this kind of encouragement. Nonetheless, a few head teachers (MNSCPCSHT 3, 5, & 8) acknowledged that they face obstacles that make it difficult for them to offer reliable assistance, including a lack of funding, strict school schedules, and inadequate

training materials. These restrictions support the lower levels of agreement on the monitoring of training results (47.4%) and the availability of learning materials (47.3%). Although there were gaps in formal implementation and follow-up, overall, the interviews indicated a strong intent to support instructors.

One of the head teachers observed that:

We urge teachers to attend workshops at the county level and do our best to schedule sessions when CSOs are available. However, there are instances when we don't have enough money to print materials or monitor every training result. Additionally, some teachers, particularly the more senior ones, are hesitant because they believe CBE to be overly rigorous. I think we can do better with more support from the Ministry and regular mentorship (MNSCPCSHT 6 Personal Communication June 16, 2025).

This head teacher's statement (coded MNSCPCSHT 6) emphasizes the difficulties and dedication involved in assisting with the implementation of competency-based education through professional development. The head teacher attests to initiatives to support teacher preparation, including luring participants to county workshops and working with Curriculum Support Officers. Significant challenges are also recognized, though, such as budgetary limitations that make it more difficult to offer educational resources and carry out post-training evaluations. Additionally, perceptions of CBE as difficult and complicated are blamed for teacher resistance, particularly among senior staff. In addition to suggesting that regular mentorship frameworks could enhance results, the head teacher's perspective highlights the necessity of greater institutional assistance, especially from the Ministry of Education. This supports Table 5's findings, particularly those pertaining to material provision and training impact monitoring gaps.

In their interviews, Curriculum Support Officers (CSOs) generally agreed with Table 5's findings, particularly when it came to head teachers' initiatives to encourage CBE professional development. According to the majority of CSOs, head teachers actively participate in encouraging teachers to attend in-service training and working with education stakeholders to lead CBE workshops. This supports the 72.2% of teachers who feel that attending workshops relevant to CBE is encouraged. However, as seen by the 47.4% of teachers who believed that the impact of training is not adequately assessed, CSOs also voiced concerns about differences in head teachers' commitment and the lack of reliable follow-up procedures to monitor training efficacy. They

underlined that although some schools exhibit exceptional dedication, others do not plan ahead or maintain accurate records, which restricts the sustainability of CBE methods.

One of the Curriculum Support Officer remarked that:

Some head teachers have put in a lot of work, consulting with us on a regular basis, planning cluster trainings, and providing post-training support. In other instances, however, you come across schools that lack adequate documentation or monitoring of what teachers really do. This has an impact on the implementation of CBE. Training is about transformation, not just attendance, and to do that, we need robust monitoring systems, which are occasionally lacking CSO 3 Personal Communication June 23, 2025).

The inconsistent commitment of head teachers to successful professional development and the implementation of Competency-Based Education (CBE) across schools is highlighted in the CSO 3 statement. While some head teachers show excellent leadership by working with Curriculum Support Officers (CSOs), planning trainings that are cluster-based, and aiding after training, others are lacking in important areas like monitoring and documentation. The CSO stresses that genuine change should result from professional growth, not merely token compliance or workshop participation. Successful CBE implementation is thought to be hampered by the absence of regular follow-up and performance tracking. This view supports Table 5's findings, especially the low agreement rates on training impact monitoring (47.4%) and training material availability (47.3%), which imply that strong monitoring methods are essential yet frequently absent from many institutions.

The results of the current study are in good agreement with those of a study carried out in Turkey by Karacabey et al. (2022), which highlighted the significant impact that school leaders' communication abilities have on teachers' productivity and professional growth. According to Table 5 of the current study, the majority of teachers (72.2%) believed that head teachers encourage participation in workshops linked to CBE. This suggests that relational leadership attributes like encouragement and inspiration are having a good impact on teacher engagement in professional development. This is further supported by Mbangula's (2022) Namibian study, which emphasizes leadership tactics like staff motivation and resource allocation as critical factors influencing academic achievement and school effectiveness. It also echoes the significance of time provision (59.2%) and mentorship (57.1%) identified in the current study.

Malebe et al. (2023), however, offer a different perspective from Kenya, where there was no statistically significant correlation between teacher performance and professional development provision. However, their qualitative results supported the current study's finding that contextual factors, such as inadequate follow-up and uneven resource support, can lessen the effects of PD. Therefore, even though PD is highly regarded, its efficacy is largely dependent on structural support, leadership commitment, and sustainability, problems that are continuously brought up in all four studies.

The findings indicate moderate but inconsistent support for professional development. Participation in external workshops (72.2%) and peer learning (58.8%) were the strongest elements, while training relevance and follow-up monitoring were weaker (51.1% and 47.4% respectively).

Conclusion

The study established that teachers' professional development plays a critical role in the successful implementation of Competence-Based Education (CBE) in comprehensive schools in Mbeere North Sub-County. Teachers who received continuous training and mentorship demonstrated greater competence in applying learner-centered approaches and integrating practical skills in the classroom. Professional development enhanced their confidence, adaptability, and ability to align instructional strategies with CBE goals, thus improving overall teaching effectiveness and learners' acquisition of competencies.

Recommendations

It is recommended that the Ministry of Education strengthen teacher professional development through regular in-service training, workshops, and school-based mentorship programs. Adequate resources, including teaching materials and digital tools, should be provided to support competency-based instruction. Additionally, collaboration with teacher training institutions should be enhanced to ensure professional development programs are aligned with CBE requirements. School administrators should encourage a culture of continuous learning among teachers to sustain CBE implementation and improve educational outcomes.

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