INFLUENCE OF TEACHER PROFESSIONAL DEVELOPMENT ON LEARNER COMPETENCE ACQUISITION IN PUBLIC SECONDARY SCHOOLS IN MERU SOUTH SUB-COUNTY, THARAKA NITHI COUNTY, KENYA

Jacinta Kimondolo[1][i],
Rose Njihia[2],
Celestine Ndanu[3]
[1]Master's Student,
Tangaza University,
Kenya
[2]Lecturer, Dr.,
School of Education,
Tangaza University,
Kenya
[3]Lecturer, Dr.,
The Catholic University of Eastern Africa,
Kenya

Abstract:

This study investigated how teacher professional development influences learner competence acquisition in public secondary schools in Meru South Sub-County, Tharaka Nithi County, Kenya. The specific objectives were to examine the influence of teacher peer mentoring and communities of learning on learner competence. The study was anchored on Baldwin and Ford's (1988) Transfer of Training Theory, which explains how acquired skills are applied to enhance learner outcomes. A mixed methods approach was adopted using a convergent parallel design. From 38 public secondary schools, 12 were selected through stratified random sampling. The target population included 288 teachers, 1,272 Form Four students, 48 Heads of Department, and 12 principals. Stratified random sampling was used to select 168 teachers, while 144 Form Four students were selected purposively based on school exposure and diversity in gender, ability, and engagement. Principals were selected through purposive sampling based on their leadership role and were automatically included from the sampled schools. Heads of Department were also selected purposively, with four representing key subject areas per school. Data were collected using questionnaires for teachers and HoDs, interview guides for principals, and focus group guides for students. Validity was ensured through expert review and pilot testing. Reliability was confirmed via test-retest and Cronbach's alpha (0.84). Credibility of qualitative data was enhanced through triangulation, member

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[i] Correspondence: email muenijacinta19@gmail.com

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checking, and peer debriefing. Ethical approval was obtained from NACOSTI, and informed consent and assent were secured from all participants. The study found that teacher peer mentoring and communities of learning significantly improved learner competence in knowledge, skills, values, and attitudes. These strategies fostered emotional support, reflective practice, and collaborative teaching. Sustained teacher collaboration enhanced instructional quality and holistic learner development. The study recommends structured support from school leaders and education authorities, with future research focusing on learner values and the role of departmental leadership.

Keywords: teacher professional development, learner competence, teacher peer mentoring, teacher communities of learning, public secondary schools

1. Introduction

Education serves as a cornerstone for the development of human resources, profoundly influencing individual well-being and creating pathways to improved living standards (World Bank, 2022). The advancement of any nation fundamentally relies on the capabilities of its people, which are cultivated through education (Kenya National Commission for the United Nations Educational, Scientific, and Cultural Organization (UNESCO), 2019). By imparting essential knowledge, skills, values and attitudes, education develops individuals into informed, respectful, and responsible citizens (Organization for Economic Co-operation and Development (OECD), 2022). Among the key players in this process, teachers are pivotal to school effectiveness, with meaningful educational improvements hinging on their active engagement and professional growth (OECD, 2022). Thus, it is imperative for policymakers, community leaders, and parents to ensure that educators engage in ongoing professional learning, as this is integral to enhancing learner competencies (Learning Policy Institute, 2021). High-quality professional development enables teachers to acquire and refine the pedagogical practices necessary for effectively imparting the competencies learners need for the future (OECD, 2022).

Teacher Professional Development (TPD) is defined as a range of intentional, continuous learning experiences designed to enhance educators' skills, knowledge, and instructional practices (OECD, n.d). By improving teaching quality, student outcomes, and overall educational effectiveness, TPD plays a critical role in fostering these essential learner competencies. Strategies such as communities of learning, mentoring, workshops and technology integration are key components of effective TPD (Amundeeswari *et al.*, 2024). Through these strategies, high-quality TPD equips educators with the tools to improve their teaching practices and directly enhance student outcomes. These enhanced practices foster the development of learner competencies - including knowledge, skills, values and attitudes - that enable learners to apply learning in the real-world contexts and contribute to inclusive, just, and democratic societies (Gouedard *et al.*, 2020).

Ultimately, these competencies highlight the broader purpose of education, emphasizing not only academic achievement but also personal and societal growth.

Learner competence acquisition is a dynamic process shaped by multiple factors, including students' attitudes, teaching approaches, and the broader academic environment. As noted by Fonseca (2023), fostering problem-solving skills in English as a Second Language (ESL) learners requires innovative and inclusive teaching practices. These practices are most effective when complemented by teachers' guidance, supportive school policies, and well-designed reinforcement strategies. Similarly, Cetin *et al.* (2019) emphasize that high school students' attitudes towards values acquisition are malleable and can be influenced by structured teaching strategies and supportive environments. For instance, a teacher who encourages group problem-solving in a culturally inclusive classroom not only improves linguistic proficiency but also nurtures critical skills such as collaboration and adaptability.

In today's dynamic educational landscape, where demands on educators continue to grow, Teacher Professional Development (TPD) plays a crucial role in enhancing teacher effectiveness and supporting learners' acquisition of knowledge, skills, values, and attitudes. Effective TPD programs empower teachers to adopt innovative, evidence-based strategies and reflective practices tailored to diverse learner needs (Olsen & Wyss, 2022). Through continuous professional growth, educators are better equipped to design personalized learning experiences and foster critical competencies such as problem-solving, ethical reasoning, and resilience. The Global Partnership for Education Knowledge and Innovation Exchange (2024) highlights that guided independent learning - when supported by skilled teacher facilitation - significantly improves students' ability to apply knowledge in varied contexts. Moreover, teachers who integrate multiple instructional approaches, including both guided and unguided settings, help prevent misconceptions and promote flexible reasoning. This comprehensive approach nurtures well-rounded individuals, equipping them with the competencies needed to thrive in real-world environments.

Globally, education systems are increasingly aligning with the Sustainable Development Goals (SDGs), particularly SDG 4, which advocates for inclusive and equitable quality education (United Nations n.d.). Camilleri and Camilleri (2020) emphasize the need for well-qualified teachers in promoting lifelong learning opportunities, stressing the need to prioritize learner competencies and invest in robust TPD initiatives. These efforts are essential for building equitable and effective educational systems that equip learners with skills and values needed to thrive in a rapidly changing world (UNESCO, 2024).

UNICEF has long emphasized the importance of supporting teachers through comprehensive curricular and ongoing professional development, highlighting teacher professional development as essential for improving teaching methods and enhancing student success (UNICEF, 2022). Building on this, UNICEF's 2023 report emphasized the development of teachers' digital competencies and inclusive teaching approaches, supporting the integration of digital learning platforms to meet evolving educational

needs (UNICEF, 2023). Similarly, the World Bank underscores the value of sustained, context-responsive TPD programs, noting that such initiatives, when personalized, practical, and continuous, significantly improve student learning outcomes, particularly in resource-constrained settings (World Bank, 2021). By employing teaching methods such as differentiated instruction, inquiry-based learning, and integration of technology, teachers can address the diverse needs of students while fostering critical competencies such as problem-solving, communication, and adaptability. Furthermore, the World Bank's commitment to advancing Basic Education seeks to halve the global learning poverty by 2030, ensuring that children acquire fundamental skills essential for their future learning endeavors and accomplishments (World Bank, 2023).

The significance of professional development for educators is increasingly being recognized globally. Scholars worldwide have found a positive link between effective Teacher Professional Development (TPD) and learner competence acquisition. For example, a study by Olsen and Wyss (2022) in Washington, D.C., addressed the significant role of teachers in influencing student success and the challenges associated with scaling effective TPD on a global scale. The study revealed that quality TPD significantly enhances educational outcomes. Given the widespread shortage of qualified educators and urgent need for educational reforms, the study highlighted the importance of investing in adaptable, large-scale TPD to strengthen global educational systems. The study concluded that systemic reforms are essential to better support and retain educators, ensuring that they are equipped to address the challenges of 21st-century education. These findings underscore the relevance of this study, which investigates how targeted TPD initiatives can improve teacher performance and, in turn, enhance learner competence acquisition within the Kenyan educational context.

Despite the positive effect of TPD, a study conducted in Anhui, China, by Yang, *et al.* (2022) evaluated digital competencies among pre-service teachers, which revealed a gap between positive attitudes toward Information and Communication Technology (ICT) and its practical application in teaching. The study emphasized the need for enhanced ICT training to bridge this gap and enhance teaching effectiveness – an issue this study has addressed. ICT integration and use of online learning were key components of this research, which examined how these elements can be incorporated into TPD to improve teacher performance and learner competencies. Through effective TPD, teachers not only develop essential skills but also improve their teaching practices, enabling them to foster the competencies necessary for student success. To achieve this, the study adopted a holistic approach; integrating teacher workshops, teacher online learning, teacher peer mentoring and teacher communities of learning to enhance instructional effectiveness and support learner development.

Complementing these findings, Ruth and Ramadas (2019) highlighted the adoption of the Competence-Based Curriculum (CBC) as essential in addressing the unique educational challenges within Africa. Their study addressed the influence of technological advancement and globalization on African education, underscoring the need for educational frameworks that align with these demands. However, their findings

also reveal that while the Competence-Based Curriculum (CBC) has been implemented to equip learners with globally recognized competencies, it often lacks a fully embedded African context. This implies that while learners may acquire competencies that are globally recognized, they might not fully appreciate their cultural heritage and local knowledge systems. This observation was central to the present study, which examined how localized TPD programs could enhance their integration of global competencies with local relevance. By focusing on strategies such as teacher workshops, online learning, peer mentoring, and communities of learning, the study sought to empower educators with skills needed to nurture students' knowledge, skills, values and positive attitudes in a way that resonates with global and local contexts.

Extending the discussion to vocational education, Akpem *et al.* (2021) explored the influence of Teacher Professional Development (TPD) on instruction and learning outcomes in government Vocational Institutions in Ghana's Upper West Region. Their findings revealed a positive correlation between TPD participation, teaching quality, and student learning. The observed improvements in teaching quality suggested a potential to foster key competencies in students. Although the present study was conducted exclusively in public secondary schools within Meru South Sub-County, insights from vocational education and other settings were considered valuable for conceptual grounding and comparative reflection. Specifically, the study examined whether enhanced teaching quality through TPD contributed to learner competence acquisition within secondary school contexts, while drawing on diverse educational environments to enrich interpretation and highlight the broader relevance of TPD strategies for holistic learner development.

This evolution in TPD is exemplified by the work of Cho *et al.* (2021) in Ethiopia, where a partnership between a Korean educational institution and an Ethiopian science and technology institution led to a program that significantly improved primary school teachers' proficiency in learner-centered education. By emphasizing active engagement and participatory teaching methods, the program enhanced teachers' capacity to foster critical student competencies such as problem-solving, communication, and collaboration. These outcomes align with the focus of this study, which examined how TPD initiatives can equip educators with the pedagogical skills needed to cultivate key learner competencies and improve overall educational outcomes.

Rugambwa *et al.* (2022) explored the impact of school-centered TPD on student-centered instructional practices in Tanzanian high schools. The study highlighted positive effects on teaching techniques, improvisation of teaching aids, and laboratory management. These enhancements in pedagogical practice suggest a potential to foster critical thinking, problem-solving, and practical skills among students. By strengthening instructional methods and resource utilization, the program supports the development of students' knowledge, values, and attitudes - key dimensions of learner competence. This regional evidence aligns with the present study's focus on how contextually grounded TPD can empower educators to cultivate holistic competencies in learners.

In Kenya, the Teachers Service Commission (TSC) enforces Teacher Professional Development to enhance teacher performance, as mandated by the Kenyan Constitution to ensure high-quality education (Education News Hub, 2024). These TPD initiatives are guided by the Kenya Professional Teaching Standards (KePTS), which define the essential competencies for improving educational outcomes (TSC Act, 2015). As teachers improve their skills and knowledge through professional development, they become better equipped to foster the development of learner competencies such as positive values, right attitude, knowledge, and skills such as critical thinking, problem solving and effective communication. Research on the impact of TPD on education has evolved significantly, with several significant studies contributing to the understanding of its effectiveness. These studies demonstrate how well-designed TPD programs can directly enhance teachers' ability to meet the diverse needs of students, ultimately improving both teacher performance and learner competencies.

Building on Kenya's structured approach to professional development, the Teacher Performance Appraisal and Development (TPAD) system serves as a key mechanism for identifying and enhancing teaching competencies through structured evaluation and targeted support. By providing accountability and fostering continuous growth, TPAD has become a central pillar in national efforts for diagnosing teachers' strengths and performance gaps, which are then addressed through tailored TPD activities. By reinforcing the link between appraisal outcomes and professional development, TPAD promotes sustained teacher growth and instructional improvement (Teacher Service Commission (TSC), 2016).

In diverse contexts such as Kenyan refugee camps, initiatives addressing teacher professional development reveal the complexities and potential of these programs. For example, a study on TPD in Kakuma and Kalobeyei refugee camps noted the value of participatory approaches in overcoming structural barriers to teacher training (Mendenhall, 2023). This points to the broader need for adaptable strategies to enhance teacher effectiveness despite challenges. This study was conducted to explore how similarly tailored approaches could support teachers in rural and under-resourced settings of Meru South Sub-County, Tharaka Nithi County, Kenya. Unlike refugee camps, rural areas often face chronic but less visible barriers such as limited training access and geographical isolation, yet receive less targeted support. By focusing on this context, the study sought to identify practical, context-specific strategies to strengthen teacher capacity and effectiveness.

Korir *et al.* (2023) found that Teacher Professional Development (TPD) significantly improved teacher performance in Uasin Gishu County, Kenya. Teachers who participated in TPD were better equipped to adopt innovative teaching methods, leading to improved student engagement and learning outcomes. Additionally, Teacher Professional Development (TPD) also helped refine their instructional techniques, enhancing learner competencies such as critical thinking and problem-solving. In secondary schools in Kenya, TPD is essential as it improves teacher performance, fostering enhanced learner competencies by enabling educators to create better learning

environments that support cognitive, practical, and social-emotional growth. To maximize its impact, TPD must be contextualized to address local teaching challenges and priorities, thereby enhancing holistic student growth. This study examined the potential of tailored TPD strategies to strengthen teacher performance and enhance learner competencies.

Efforts in Kenya to promote TPD include mandatory workshops, online courses, and in-service training conducted throughout teachers' careers. For instance, the TSC requires teachers to renew their certificates every five years through continuous professional development programs, ensuring they stay current with pedagogical advancements (TSC, 2024). Additionally, the May 2020 policy on Mentorship and Coaching in the Teaching Service aims to professionalize teaching and enhance education quality. It outlines clear objectives, guiding principles, and defined roles for mentors and mentees, thereby creating a structured system for teacher growth and improved learner outcomes.

An exploration by Ngwacho (2019) at Kisii University, Kenya, examined the need for teacher education curriculum reforms. The study highlighted the impact of globalization on education and emphasized alignment of teacher training with Kenya's constitutional provisions (2010) and Vision 2030. The central focus was on the CBC, which aims to equip learners with relevant skills for the 21st century. Effective implementation of these reforms requires TPD programs that build teachers' capacity to foster learner competencies such as critical thinking, practical skills, and positive values. By aligning teacher education with contemporary demands, TPD ensures that educators are equipped to impart knowledge and instill attitudes that prepare learners to thrive in a rapidly changing world.

A study by Mackatiani and Ejore (2024) examined Kenya's Competency-Based Curriculum (CBC) in primary schools, emphasizing skills acquisition. The study identified challenges such as staffing shortages and inadequate training, which hinder the effective delivery of CBC objectives. It recommended enhanced resource provision to address these issues. To ensure learners acquire competencies such as critical thinking, problem-solving, and positive values, the study emphasized that TPD must play a central role. Through continuous training and support, teachers can be better equipped to implement competency-focused teaching strategies, ensuring that learners not only acquire knowledge but also develop skills and attitudes essential for holistic development.

In Tharaka Nithi County, various studies have clearly heightened the educational challenges related to teacher professional development and student skill development, while also suggesting possible solutions. For instance, Gatuura *et al.* (2023) found that discrete learning significantly improves adaptive skills among autistic learners, emphasizing the need for policy updates, educator training, and further research. While the study focused on a specific group, its findings underscore the broader importance of equipping teachers with specialized skills through TPD to enhance learner competencies - including adaptive skills, critical thinking, and problem-solving. Additionally,

exploring the student voice within TPD remains an untapped area that could further reveal how TPD impacts learner knowledge, values, and attitudes, contributing to holistic development.

A study conducted by Kinyua (2021) in Tharaka Nithi County revealed that 3% of teachers use Open Educational Resources (OER), and 92.4% teachers were unaware of them. Some teachers expressed negative attitudes towards OER, further limiting their utilization. Others faced challenges due to limited ICT skills and inadequate resources within and around the school. The limitations hinder the integration of technology in teaching and expose the critical gaps in teacher training and professional development. Enhancing TPD programs to focus on digital literacy and resource utilization could empower teachers to utilize OER effectively, thereby fostering learner competencies in areas such as independent learning, critical thinking, and digital skills, which are essential for contemporary education.

Kathuni *et al.* (2023), in collaboration with Tharaka University and Chuka University, investigated teacher preparedness for the Competence-Based Curriculum (CBC) in Tharaka Nithi County. The study revealed inadequate readiness among educators and emphasized that with adequate human resources and government-supported teacher training, educators can acquire the necessary competencies to enhance instructional quality. Such professional development initiatives have the potential to indirectly foster learner competencies such as knowledge, practical skills, positive values, and constructive attitudes - by equipping teachers to deliver more effective and high-quality education.

Existing research highlights the need for Teacher Professional Development in enhancing learner competencies - including knowledge, skills, values, and attitudes. Globally, studies have shown that effective TPD improves teaching quality and student outcomes, making it a cornerstone of educational reforms in both developed and developing countries. Across Africa, the need for context-responsive and well-resourced TPD has been emphasized to address challenges brought by globalization and curriculum shifts such as the Competency-Based Curriculum (CBC). In Meru South Sub-County, Tharaka Nithi County, Kenya, targeted interventions like discrete learning for autistic learners have demonstrated the potential of TPD in improving adaptability and problem-solving skills. However, challenges such as low digital literacy and minimal use of Open Educational Resources (OER), with only 3% of teachers utilizing them, further reveal critical gaps in teacher training and resource integration. These issues are compounded in rural areas by limited access to tailored training and ICT infrastructure. In response to these challenges, this study sought to investigate how teacher professional development influences learner competencies in Meru South Sub-County, Tharaka Nithi County, Kenya, with a focus on identifying context-specific strategies to strengthen teacher effectiveness and support holistic learner development.

1.2 Statement of the Problem

Globally, education systems aim to equip learners with essential competencies such as critical thinking, problem-solving, and digital literacy (World Bank, 2023), alongside fostering positive attitudes and values for personal, and societal success (UNESCO, 2023). However, in regions like Sub-Saharan Africa, persistent challenges such as limited teacher training and outdated pedagogical approaches continue to hinder the acquisition of these competencies (UNESCO, 2020). In Kenya, particularly rural counties like Tharaka Nithi, challenges such as minimal integration of modern pedagogical strategies and inadequate use of Open Educational Resources (OERs) contribute to weak learner outcomes and underdeveloped skills in analytical thinking, decision-making, and career awareness (Kinyua, 2021; Mbaka, Kanga, Mwanzia, & Murungi, 2023). In Meru South Sub-County, the absence of structured mentorship and career guidance programs leaves learners unprepared for academic and professional growth, which negatively affects their academic performance and achievement (Mbaka, Mwanzia, & Murungi, 2023). These gaps in learner competencies contribute to poor academic performance, increased unskilled labour, unemployment, and poverty. Moreover, failure to instill key values such as respect, teamwork, and social responsibility, undermines the region's broader socioeconomic development. Thus, this study investigated the extent to which teacher professional development (TPD) influences learner competence acquisition in Meru South Sub-County, Tharaka Nithi, Kenya, with a focus on identifying context-specific strategies to strengthen teacher effectiveness and promote holistic student development.

1.3 Research Objectives

1) To investigate the influence of teacher peer mentoring on learner competence acquisition in public secondary schools in Meru South sub-county, Tharaka Nithi, Kenya.
2) To explore the influence of teacher communities of learning in fostering learner competence acquisition in public secondary schools in Meru South sub-county, Tharaka Nithi, Kenya.

1.4 Theoretical Framework

This study is anchored on Baldwin and Ford's (1988) Transfer of Training Theory, which posits that the success of training depends on three key factors: trainee characteristics, training design, and the work environment. Building on the broader Transfer of Learning Theory (Thorndike & Woodworth, 1901; Haskell, 2001), Baldwin and Ford advanced the understanding of how structured learning is applied in practice by identifying three components: training inputs (trainee, design, and environment), training outputs (learning and retention), and conditions of transfer (opportunities for application and workplace support). Holton (1996) later expanded this framework by emphasizing the role of individual performance in determining the extent to which learning translates into workplace or classroom application.

In the context of Teacher Professional Development (TPD), the theory provides a foundation for explaining how professional learning leads to improved instructional practices and learner outcomes. Its core principles—contextual relevance, active learning and practice, feedback and reinforcement, and strong support structures—demonstrate that transfer is not automatic but requires careful alignment with real classroom challenges, opportunities to practice, ongoing feedback, and organizational support such as mentorship and peer collaboration. Together, these insights establish the theoretical basis for understanding how TPD equips teachers to apply new knowledge and skills effectively, thereby enhancing professional competence and learner achievement.

2. Literature Review

2.1 Influence of Teacher Peer Mentoring on Learner Competence Acquisition

Teacher peer mentoring entails a supportive and positive learning environment where experienced teachers guide and assist their less experienced colleagues. These mentoring programs aim to promote deep learning, improve teaching skills, and build strong interpersonal connections (Hayes & Pridham, 2019). Investigating the impact of teacher peer mentoring provides valuable insights into how these collaborative relationships enhance both teacher competence and student achievement.

In their study, Carvalho and Santos (2021) examined the transformative impact of peer learning projects in five Portuguese educational institutions, including four secondary schools and one higher education institution. The study aimed to understand teachers' and peer teacher students' (PTS) perceptions of purpose, implementation, and impact of these projects on the educational community. The study employed a qualitative approach to acquire data through structured questionnaires and in-depth interviews. The analysis involved content analysis and descriptive statistics. Notably, the study revealed that cooperation and improvement in interpersonal skills were major strengths of these projects; while organizational challenges such as reduced teacher service and coordination of learners' schedules were identified. Overall, the study underscored peer learning's positive effect, especially its potential to promote pedagogical transformation and innovation in 21st-century schools. However, the study primarily relied on teachers' subjective perceptions. This study addressed this gap by incorporating quantitative data to provide objective insights and further explore the influence of peer mentoring on learner competence acquisition in Kenyan secondary schools.

A study conducted in Germany at a medical school by Alvarez and Schultz's (2019) focused on the advancement of competencies among near-peer tutors in gross anatomy. The study employed a longitudinal mixed methods approach and tracked 24 peer tutors over 18 months, using questionnaires and interviews to assess their growth in core competencies related to physician education. The study revealed that the tutors experienced enhancements in professional behaviour, communication, responsibility, and personal skills such as self-confidence and stress management, underscoring the value of near-peer tutoring in medical training. While Alvarez and Schultz's (2019) study

focused on the competency development of near-peer tutors in a German medical school, this study investigated the influence of teacher peer mentoring in secondary schools in Meru South Sub-County, Kenya, rather than in medical institutions. Additionally, it explored the effects on learner competence acquisition, a focus missing in Alvarez and Schultz's (2019) study.

A study by Palacio and Digo (2024) in Sorsogon City, Philippines, investigated master teachers' coaching and mentoring practices. Using action research methodologies, they developed and evaluated an instructional coaching and mentoring handbook. The study engaged ten master teachers through interviews, group discussions, and thematic analysis, revealing six key themes that affirmed the handbook's effectiveness. However, the study's small sample size and focus on a specialized group of master teachers created a gap in understanding how peer mentoring influences a broader teacher population, including both experienced and novice educators.

This study addressed this gap by targeting 1,620 participants—12 principals, 288 teachers, 48 Heads of Departments, and 1,272 Form Four students—from 12 selected public secondary schools in Meru South Sub-County, Tharaka Nithi, Kenya. A sample of 366 respondents was drawn using stratified and purposive sampling techniques. Unlike Palacio and Digo's focus on handbook development for a niche group, this study extended its scope to encompass all secondary school teachers, offering a more comprehensive view of Teacher Professional Development (TPD). By integrating quantitative and qualitative designs, the study provided deeper insights into peer mentorship and its role in fostering collaborative environments that enhance teaching practices and learner competence.

Similarly, Mukeredzi and Manwa (2019) explored mentor-mentee dynamics during pre-service teacher practice in Zimbabwe. Their qualitative study, based on open-ended questionnaires from 16 student teachers, revealed valuable pedagogical and contextual learning through regular mentor meetings. However, some mentees reported ineffective mentoring. In contrast, this study focused on in-service teachers and employed a mixed methods approach, offering broader insights into sustained professional development in real classroom settings.

In their study, Prummer et al. (2024) examined South African vocational education and training (VET) managers' views on three types of mentoring approaches: individual, peer group, and expert-based key performance area (KPA) mentoring within a part-time professional leadership development program. The study used interactive qualitative analysis (IQA) for focus groups and individual interviews with program participants. The findings revealed individual mentoring as the most vital method, followed by peer group and expert-based KPA mentoring. Leadership was recognized as key to development, with emotions being the ultimate result in the mentoring framework. The study suggested further research into the role of leaders' interpersonal competencies, particularly emotional competence, and how mentoring can support their development in both formal and informal settings. The study provides empirical evidence of a three-pillar mentoring framework emphasizing individual, social, and emotional factors in

professional development for VET leaders in South Africa. While this study delves into the mentoring and leadership development within vocational education training (VET), this study delved into TPD, including teacher peer-mentoring and its impact on student competence in secondary schools.

A study conducted in Bayela State, Nigeria by Onukwu (2024) on academic mentoring among university lecturers examined the status of academic mentoring, particularly focusing on those below the rank of senior lecturer. The target population was 250 lecturers across four universities. While Onukwu's (2024) study examined academic mentoring among university lecturers, this study explored the influence of TPD, including teacher peer mentoring, on learner competence in secondary schools in Meru South Sub-County, Tharaka Nithi County, Kenya. Onukwu's research focused on higher education and mentoring effectiveness without detailing sample size, data collection, or analysis methods. This study provided detailed analysis of TPD, enhancing teacher competencies and learner competencies.

A study by Takavarasha and Uwamariya (2024) in Rwanda evaluated the mentoring of Teacher Training College (TTCs) tutors. The study employed the co-teaching approach and a qualitative multi-case design involving two TTCs. Data collection included individual interviews and questionnaires. Grounded in Social Constructivism, the study delved into collaborative teaching and learning. Although the co-teaching approach's strengths and weaknesses were identified, gaps related to the mentoring process persisted. This study focused on the influence of TPD among secondary school teachers on learner competence acquisition, unlike Takavaraha and Uwamariya's (2024) study, which focused on co-teaching and mentoring of TTC tutors. Importantly, the study recognizes that gaps related to the mentoring process have persisted. By adopting a mixed-method approach, the study delved into effective mentoring practices by exploring how TPD can enhance peer teacher mentorship. This, in turn, contributes to professional growth for secondary school teachers and ultimately leads to learner competence acquisitions.

A study by Mugisha *et al.* (2024) explored collaborative practices among secondary schools in Tanzania, focusing on how they contribute to teachers' professional development. The study employed a qualitative case study design and collected data through interviews and focus group discussions. The prevalent collaborative practices were: coaching, teaming, and mentoring, which teachers embraced to address educational challenges and enhance their teaching knowledge and skills. This study delved deeper into peer mentoring as a TPD strategy by investigating its influence on learner competence acquisition using a mixed-method approach. This differs from the study by Mugisha *et al.* (2024), which investigated mentoring as one of the collaborative practices in teacher professional development (TPD) in Tanzania using a qualitative approach.

In their study on "Effects of Teacher Mentoring on Classroom Practices of Lower Grade Primary School Teachers in Kwale County, Kenya," Muraya and Wairimu (2020) examined the impact of mentoring on classroom practices. The study aimed to assess how

mentoring influenced the instructional methods of teachers for 20 months, that is, from May 2016 to October 2028. The study observed 40 teachers from 22 public primary schools using a one-group repeated-measure quasi-experimental design. The results revealed a statistically significant effect of teacher mentoring on mean classroom practice scores; hence, the study concluded that teacher mentoring is effective and recommended its integration into formal school programs in Kenya. While Muraya and Wairimu's study focused on mentoring lower-grade primary school teachers using a quasi-experimental design over a 20-month period, this study investigated mentoring as one of the TPD among secondary teachers using a mixed-method approach. This bridges the gap in understanding how mentoring can enhance secondary education, potentially benefiting both teachers and students.

A study by Okello *et al.* (2023) aimed to determine the impact of mentoring on the job performance of newly employed teachers in public secondary schools in Thika East and West Sub-Counties, Kiambu County, Kenya. The study involved 21 principals and 21 deputy principals, 378 experienced teachers and 148 newly employed teachers. The study employed a mixed-method approach, utilizing a descriptive design. Data collection included interviews, questionnaires, focus group discussions, observation, document analysis, and secondary sources. The sample size consisted of 230 respondents. Results indicated that effective mentoring positively impacted newly employed teachers' performance. While Okello *et al.* (2023) focused on newly employed and experienced teachers, this study addressed the gap by exploring mentoring practices across the entire spectrum of in-service teachers, thereby providing a more inclusive understanding of Teacher Professional Development. Furthermore, it investigated the impact of peer mentoring on learner competence acquisition, which was not covered in Okello *et al.*'s (2023) study.

A study conducted in Embu and Tharaka Nithi Counties, Kenya, by Werimba (2024), the relationship between teacher capacity building, instructional delivery, and overall effectiveness in public secondary schools. The study employed descriptive survey methodology. The target population comprised 3884 teachers and school administrators from secondary schools in these two counties. Using a descriptive survey methodology and stratified random sampling, Werimba gathered data from 400 teachers selected from 40 schools through a questionnaire that assessed instructional delivery efficacy. The study revealed strong agreement among teachers on syllabus completion, assignment design, and collaboration design with colleagues; hence, it concluded that schools, through their boards of management, should organize school-based capacity building programs such as mentorship, peer consultation, and staff team-building activities to create opportunities for all teachers, including new entrants. While Werimba (2024) highlighted mentorship as one of the capacity-building programs, the study did not explore its direct impact on learner competence acquisition. This study filled this gap by examining the specific influence of teacher peer mentoring on learner competence, utilizing a mixed-methods approach for comprehensive insights.

A section dedicated to the significant literature resources, consulted or employed, that contributed to the study. It surveys scholarly articles, books and other sources (e.g. dissertations, conference proceedings) relevant to a particular issue, area of research, or theory, providing a description, summary, and critical evaluation of each work. The purpose is to offer an overview of significant literature published on a specific topic.

2.2 Influence of Teacher Communities of Learning on Learner Competence Acquisition

In their study, Dahri *et al.* (2021) examined the acceptance of mobile collaborative learning (MCL) among in-service teachers in Sindh, Pakistan. The study involved a descriptive survey design with 494 teachers participating in a two-week training session using a custom MCL app. The study identified 14 constructs relevant to CPD acceptance, such as performance expectancy, effort expectancy, and knowledge acquisition, forming the basis for 13 hypotheses with 55 measurement items. Analyzing data from 472 valid responses collected via WhatsApp groups during the 2021-2022 academic year, the researchers found statistically significant support for the positive impact of the CPD app on teacher engagement and long-term professional development. However, the study highlighted gaps related to the broader applicability of findings beyond their specific regional context and limited quantitative measures to connect teacher professional development initiatives directly to learner outcomes.

While both Dahri *et al.*'s (2021) study and this study examined the impact of professional development activities on teachers, their approaches and contexts differ considerably. Dahri *et al.*'s research focuses on the acceptance and effectiveness of a mobile collaborative learning app for CPD among in-service teachers in Pakistan, particularly in terms of performance expectancy and knowledge acquisition. In contrast, this study explored the influence of TPD, including teacher communities of learning, in improving learner competencies in Meru South Sub-County public secondary schools. This study, which involved a larger and more diverse population, used a mixed methods approach, combining questionnaires and interviews for a more comprehensive analysis. It also addressed gaps identified in Dahri *et al.*'s (2021) work by integrating both qualitative and quantitative measures, explicitly linking teacher professional development activities to measurable learner competencies and providing practical implications for improving educational strategies.

Khasawneh *et al.* (2023) conducted a study in Jordan which explored the impact of teacher collaboration within professional learning communities (PLCs) and collaborative teaching practices on both professional development and student academic performance. Utilizing a mixed-method design, the study combined qualitative and quantitative approaches. Although the study examined teacher variables such as qualifications, experience, self-efficacy, and professional development, which influenced the adoption of 21st-century teaching methods, it did not address the direct effects of Teacher Professional Development on students' acquisition of specific competencies. The primary focus was on academic performance rather than competence acquisition, leaving a gap in

understanding how TPD translates into students' practical skills and real-world learning adaptability.

Khasawneh *et al.*'s study emphasizes the broad impact of teacher collaboration within Professional Learning Communities (PLCs) and collaborative teaching practices on professional growth and student performance. However, it did not directly examine how Teacher Professional Development (TPD) influenced the acquisition of specific learner competencies. In contrast, this study focused on how teacher communities of learning contributed to competency development among students in Meru South Sub-County public secondary schools. Targeting a larger population of 1,620 individuals, including public secondary school teachers, Heads of Departments (HoDs), principals, and Form 4 students. This study employed a mixed-method design, utilizing questionnaires and interview guides for comprehensive analysis. By directly exploring the effects of teacher communities of learning on learners' competence acquisition and addressing the gap in Khasawneh *et al.*'s study, this research provided deeper insights into the role of TPD in fostering essential competencies beyond academic performance.

In their study, Parker *et al.* (2022) investigated the effects of Learning Communities (LCs) and Communities of Practice (CoPs) on professional development in physical education. This extensive review drew contributions from researchers at the University of Limerick (Ireland), California State University (USA), the Federal University of Mato Grosso do Sul (Brazil), Victoria University (Australia), and Seoul National University (South Korea). Covering research from 1990 to 2020, the study focused primarily on teachers. It found that LCs fostered collaboration, inquiry, and continuous improvement among diverse stakeholders, while CoPs facilitated knowledge sharing within specific professional domains. However, the study identified gaps in theoretical consistency and community development processes. The overlapping use of Learning Communities (LCs) and Communities of Practice (CoPs) often led to conceptual confusion, and there was limited evidence on their long-term impact on student learning outcomes. The authors recommended future research to clarify definitions and strengthen theoretical alignment.

While Parker *et al.*'s research examined the general impact of LCs and CoPs on professional development in physical education, the present study specifically explored how teacher learning communities influenced learner competence in public secondary schools in Meru South Sub-County, Kenya. It targeted a broader population of 1,620 individuals—including principals, teachers, HoDs, and Form Four students—and employed a mixed methods approach. The study addressed gaps identified by Parker *et al.* by clearly defining the nature of the learning communities under investigation and examining their direct impact on learner competencies. Through the integration of qualitative and quantitative data, the study generated actionable insights for strengthening educational policies and practices.

Pan (2023) examined the connections between teacher learning communities, teacher self-efficacy, and learner–centred teaching practices in Taiwan. The study included 226 teachers from 28 schools, and a descriptive survey design along with

structural equation modeling for data analysis. The results showed that involvement in teacher learning communities did not directly predict student-centered teaching practices. Instead, the impact on learner-centered teaching was entirely mediated by teacher self-efficacy. Specifically, the study identified a mediation pathway from teacher learning communities to teacher self-efficacy, then to collaborative professional learning and, ultimately, to learner-centered teaching. However, despite its valuable insights, the study primarily focused on self-efficacy as the mediating factor.

While Pan's research explored the mediating role of teacher self-efficacy in the relationship between teacher learning communities and learner-centered teaching, this study investigated the direct influence of TPD on learner competence acquisition in Meru South Sub-County public secondary schools. Although both studies use a mixed-methods approach, this study sought to offer a comprehensive understanding of how teacher communities of learning influence learner outcomes. This focus on learner competencies provided valuable insights for improving educational policies and practices, thereby enhancing the effectiveness of TPD in boosting student achievement.

A study conducted by Uworwabayeho *et al.* (2020) investigated the impact of the partnership between governmental and non-governmental institutions on the development and implementation of certified CPD programs for education leaders in Rwanda. The study employed the Kirkpatrick evaluation framework, using focus group discussions and pre- and post–surveys to assess improvements in leadership competencies among sector education officers, head teachers, deputy head teachers, school-based mentors, and tutors from teachers' training colleges. Findings indicated significant advancements in the leaders' abilities to manage and implement Professional Learning Communities (PLCs). However, the study lacked direct linkage to student outcomes, leaving a gap in understanding the direct connection between improved leadership and classroom effectiveness.

This study targeted a different population and sample size, focusing on public secondary school teachers, principals, HoDs and form 4 students. With a target population of 1620 and a sample size of 372 respondents, the study investigated how teacher collaboration within learning communities affects student competence directly. This approach shifted the focus from leadership to classroom-level interactions and learner outcomes, filling the gap identified. By incorporating a mix of qualitative and quantitative methods, this study provided a comprehensive understanding of how collaborative practices among teachers influence learner competence acquisition, thereby offering valuable insights that address the limitations of the Uworwabayeho *et al.* (2020) study.

Eadie *et al.* (2021) explored how the post-COVID-19 CAPS curriculum in South Africa could integrate 21st-century competencies into literacy education for the Foundation Phase (grades R-3). The study employed a qualitative methodology, reviewing existing literature and analyzing policy documents to assess the potential benefits of embedding these competencies in early education. It concluded that integrating competencies into structured learning programs, especially when taught in

students' native languages and supported by adequate teacher assistance, could enhance both competency development and literacy outcomes. However, the study did not focus on specific strategies or teacher professional development and was limited to the early education context, highlighting a need for further exploration on effective teacher support mechanisms.

In contrast, this study focused on secondary education and examined TPD, including communities of learning on learner competence acquisition. The study gathered primary data through surveys and interviews from a sample of 372 respondents, including secondary school teachers, principals, HoDs and form 4 students, from a target population of 1620. By analyzing how collaboration among teachers within these learning communities impacts learner competence acquisition, the study seeks to provide empirical insights that extend beyond the early education focus of Eadie *et al.*'s work. This study sought to offer valuable guidance on utilizing collaborative teacher practices to improve student competencies in a secondary education setting.

Chimbunde *et al.* (2024) conducted a qualitative study in South Africa's UMgungundlovu District, KwaZulu-Natal, to explore history teachers' understanding of PLCs and their role in enhancing curriculum implementation. Using a case study design, the researchers interviewed 10 history teachers from five schools. The study found that teachers viewed PLCs as beneficial for collaboration, professional growth, and improving teaching practices, although challenges such as time constraints and insufficient support hindered their effectiveness. The study acknowledged limitations in geographic scope, sample size, and subject focus. To address these gaps, this study included a larger and more diverse sample and proposed practical strategies to enhance PLC implementation and teacher professional development in secondary schools.

A qualitative study exploring the potential of professional learning communities (PLCs) in fostering competency-based teaching was conducted in Tanzanian secondary schools. Utilizing a case study design, the research involved interviews with 69 participants, including teachers, heads of schools, and students from secondary schools in Dar es Salaam region. The analysis revealed that teachers have yet to fully harness the potential of PLCs, as these communities currently reinforce an examination-oriented approach that prioritizes knowledge memorization over engaging students in active learning within challenging classroom environments (Mwakabenga & Paine, 2024). To address this issue, the study recommends providing teachers with training on establishing and effectively managing PLCs, thereby enhancing their capacity to improve classroom practices and promote competency-based education (Mwakabenga & Paine, 2024). The study identified gaps such as the limited utilization of PLCs' potential, a focus on examination-oriented teaching, and ineffective PLC management. This study addressed these gaps by exploring a range of professional development strategies, emphasizing active learning and competence acquisition, investigating effective implementation and management practices, and providing comparative insights into learner competence, offering practical recommendations for enhancing teacher professional development.

Gusango *et al.* (2024) conducted a study in Eastern Uganda focusing on constructivist teacher-preparation practices in selected Teacher Training Institutions (TTIs). The study aimed at developing effective strategies for transitioning into 21st century. Employing a qualitative, phenomenological approach, the study involved 15 participants, comprising tutors and students from primary teachers' colleges. Data collection methods included interviews, focus group discussions, and document analysis, followed by thematic analysis. The findings revealed that constructivist practices were partially integrated, with significant barriers including resource limitations, inadequate training, and institutional support. The study highlighted the need for more robust strategies to fully implement constructivist practices in teacher preparation.

In contrast, this study shifted focus from teacher preparation practices in TTIs to the broader context of secondary education. It examined the influence of TPD, including teacher communities of learning, on learner competence acquisition across a larger and more diverse sample of 366 respondents, including public secondary school teachers, Heads of Departments (HoDs), principals and students. Unlike Gusango *et al.*'s qualitative study with a small sample size of 15 participants, this study employed a mixed-methods approach to gather comprehensive data, integrating both quantitative and qualitative insights. By focusing on teacher communities of learning, this research explored how ongoing peer support and shared learning among teachers can directly influence learner competence acquisition. This approach not only addressed the gaps in sample size and regional focus but also provided valuable insights into how collaborative professional development strategies enhance educational outcomes in secondary schools, thus offering practical recommendations for improving secondary education in Kenya.

A study by Wakasa (2023) investigated the impact of collaborative peer supervisory competencies on instructional supervision for English teachers in public secondary schools in Kakamega County, Kenya. The study aimed to assess how peer collaboration among teachers enhances instructional supervision, ultimately improving teaching practices and instructional quality. The study employed a convergent mixed-method research design, utilizing surveys, interviews, and observational techniques. The target population consisted of 417 teachers, and 286 sample size selected through stratified random sampling to ensure representative data. The findings indicated that collaborative peer supervision significantly improved instructional supervision by fostering a supportive professional environment, enhancing trust, and promoting reflective practice. However, the study was limited to English subjects only. To address this gap, this study aimed to broaden its scope by including multiple subjects, thereby enhancing generalization of the findings. Additionally, it directly examined how TPD impacts learner competence acquisition, establishing a clearer link between supervisory practices and learner competencies.

In the context of school-to-school collaboration, Wambua (2022) conducted a study in Kenya to explore the impact of collaborative practices on students' learning outcomes. The study aimed to address the relatively underdeveloped state of collaborative teaching and learning in the Kenyan educational system. With a global perspective, macro-level

factors influencing inter-school collaboration were examined. The study employed a qualitative methodology to explore the impact of school-to-school collaboration on students' learning outcomes in Kenya. The target population consisted of educators and administrators from various schools involved in collaborative practices. Purposive sampling techniques were used to select participants who were actively engaged in such collaborations. The sample size included a diverse group of teachers and school leaders to ensure a comprehensive understanding of the collaborative practices and their effects on student learning. Data were collected through interviews, focus group discussions, and document analysis, and were analyzed thematically to identify key patterns and insights. The study revealed that school-to-school collaboration in Kenya significantly enhanced students' learning outcomes by improving educational practices and fostering professional growth among educators. Collaborative efforts facilitated better resource sharing, more effective teaching strategies, and heightened student engagement. However, the full potential of these collaborations was constrained by challenges such as limited time, insufficient support, and varying levels of commitment. Additionally, the research highlighted the need for structured frameworks and policies to support and sustain these collaborative initiatives effectively.

While Wambua's (2022) study explored the impacts of school-to-school collaboration on student learning outcomes in Kenya, this study focused on the influence of TPD on learner competence acquisition in public secondary schools. Unlike Wambua's qualitative methodology, this study used a mixed-methods approach to provide a comprehensive analysis of effective professional development strategies. Just like Wambua's study, which had a broad target population (educators and school administrators), the study targeted teachers, principals, form 4 students and HoDs, aiming to identify the most effective strategies.

Arimba *et al.* (2024) compared the effects of regular teaching methods (RTM), team-based learning (TBL), and case-based learning (CBL) on the performance of chemistry students in Maara Sub-County, Tharaka Nithi County, Kenya. The study recruited 18,611 students and selected 106 through purpose sampling using a 3×2×2 quasi-experimental factorial design. The main tool was the Chemistry Achievement Test (CAT), which had been evaluated by experts at Egerton University and had a reliability coefficient of 0.79. ANOVA, ANCOVA, t-test, means, standard deviations, and ANOVA with α=0.05 were used in the data analysis. The study's results indicated that CBL significantly enhanced student performance compared to TBL and RTM, leading to the recommendation that CBL be adopted in teaching chemistry. The focus of this study was specifically on comparing different teaching methods within the context of chemistry education.

In the broader context, this study explored the impact of TPD, including communities of learning, on learner competence across various subjects in secondary education. Unlike Arimba *et al.*'s study, which was limited to a single subject and focused on comparing teaching methods, this study adopted a more expansive approach by examining how ongoing professional development through peer mentoring and

collaborative practices influences overall learner competence. Utilizing a mixed-methods design, the study gathered data from a larger and more diverse sample of 366 participants, including public secondary school teachers, HoDs, principals, and Form 4 students. This approach not only addressed a wider range of educational strategies but also aimed to provide actionable insights into how effective teacher professional development can enhance student competencies across multiple disciplines, offering a comprehensive view of professional development's role in secondary education in Kenya.

A study conducted by Mungeria (2021) in Igembe Central, Tharaka Nithi County, Kenya, investigated the influence of collaborative learning strategies on learner achievement in accounting in secondary schools. The study found that collaborative learning strategies significantly improved learner achievement in accounting. The study included a sample from four secondary schools. The results indicated that factors like positive interdependence, interpersonal skills, and promotive interaction had a positive impact on learners' achievement. The study recommended the embracing of collaborative learning to foster an environment conducive to learner responsibility and commitment. The study focused on the collaborative learning strategy for learners, specifically in accounting and did not address the teacher professional development strategy. This study bridged this gap by delving into teacher communities of learning and other TPD strategies and their impact on learner competence acquisition, such as knowledge, skills, values, and attitudes.

3. Research Methodology

The study employed a convergent parallel mixed-method design, a one-phase design where both quantitative and qualitative data were collected and analyzed simultaneously. The broader population comprises 38 public secondary schools in Meru South Sub-County. From this pool, 12 schools were selected to form the actual study population. The target population included: 12 principals, 48 Heads of Departments (HoDs), 288 teachers, and 1,272 Form 4 students, totaling 1,620 participants. A sample of 372 participants was drawn using both probability and non-probability sampling techniques, including purposive, stratified and simple random sampling. Data collection tools included questionnaires for teachers, interview guides for principals and HoDs, and focus group discussion protocols for Form 4 students. A pilot study was conducted in two schools with similar characteristics to the sampled institutions to test the reliability and clarity of the instruments. Validation was done by research experts from Tangaza University and the Catholic University of Eastern Africa, who reviewed the instruments for clarity, consistency, and content coverage. Quantitative data were analyzed using descriptive statistics, frequencies and percentages generated through SPSS version 25 and presented using bar graphs, pie charts, and tables. Qualitative data were analyzed thematically and presented through narrative summaries and direct quotations from participants.

4. Research Findings

The researcher administered 168 questionnaires to teachers, of which 147 were duly completed and returned, yielding an 87.5% response rate. Additionally, 37 out of 48 Heads of Departments (HoDs) responded to their questionnaires, registering a 77% response rate. Focus Group Discussions were conducted with 120 out of 144 sampled Form Four students, resulting in an 83% participation rate. All 12 school principals took part in the interviews, achieving a 100% response rate. According to Fincham (2008), a response rate of 60% is adequate for social science research, while Singleton and Straits (2005) recommend 80% for sample representativeness. Therefore, the response rates in this study were considered sufficient to support reliable data analysis and enhance the credibility of the findings.

4.1 Influence of Teacher Peer Mentoring on Learner Competence Acquisition

This section examined the influence of teacher peer mentoring on learner competence acquisition in public secondary schools in Meru South Sub-County, with emphasis on knowledge, skills, values, and attitudes. Table 1 presents structured rating items from teachers and Heads of Departments (HoDs), who indicated their level of agreement or disagreement with statements related to peer mentoring practices. The analysis is further enriched by open-ended responses, insights from student focus group discussions, and interviews with school principals, providing complementary qualitative data beyond the table.

Table 1: Teachers' and HoDs' rating of the influence
of peer mentoring on learner competence acquisition

Statement	SA		A		UD		D		SD	
Teachers (n =147)	f	%	f	%	f	%	f	%	f	%
My learners are better able to articulate their understanding of complex concepts due to my enhanced teaching skills through peer mentoring	47	32	85	58	13	9	2	1	0	0
Participating in peer mentoring has significantly Enhanced my subject knowledge, enabling learners to articulate key facts more effectively	49	33	84	57	12	8	4	3	0	0
Through my participation in peer mentoring, my learners have developed better strategies for solving academic problems.	44	30	81	55	18	12	4	3	0	0
My participation in peer mentoring has significantly contributed to learners' ability to express their ideas with clarity.	43	29	84	57	13	9	7	5	0	0
Through my participation in peer mentoring, I have guided learners in fostering respectful interactions with their peers and teachers.	57	39	75	51	13	9	0	0	0	0
Through my participation in peer mentoring, learners have demonstrated significant growth in their persistence when tackling challenging	54	37	74	50	18	12	2	1	0	0

learning tasks.										
Engaging in peer mentoring helped me develop strong values and ethics, inspiring learners to participate actively in class.	62	42	72	49	10	7	4	3	0	0
Peer mentoring has instilled values and ethics in me, significantly enhancing learners' attendance and readiness for lessons.	54	37	75	51	12	8	6	4	0	0
HoDs (n = 37)										
Peer mentoring among teachers in my department has helped learners articulate their understanding of complex concepts more effectively.	11	30	24	65	2	5	0	0	0	0
Teacher peer mentoring has improved learners' ability to accurately state key facts	10	27	22	59	4	11	1	3	0	0
Participation in peer mentoring by teachers has equipped learners with better strategies for solving academic problems.	10	27	25	68	2	5	0	0	0	0
Learners effectively communicate their ideas because of improved teaching strategies from teacher peer mentoring.	6	16	28	76	2	5	0	0	1	3
Through peer mentoring, teachers have guided learners in fostering respectful interactions with their peers and teachers.	13	35	21	57	3	8	0	0	0	0
Learners show increased resilience in learning after being guided by mentored teachers	11	30	19	51	6	16	1	3	0	0
Peer mentoring by teachers in my department has encouraged learners to take a more active role in classroom discussions and activities.	11	30	22	59	3	8	1	3	0	0
There is a noticeable improvement in learners' school attendance due to enhanced teaching practices acquired workshops attended by teachers.	14	38	18	49	5	14	0	0	0	0

Teachers and HOD responses, as presented in Table 5, show that peer mentoring positively influences learners' ability to grasp and express academic content. Regarding learners' understanding of complex concepts, 90% of teachers (58% agreed and 32% strongly agreed) affirmed that mentoring enhanced their ability to support articulation of abstract ideas. HoDs reflected similar confidence, with 95% (65% agreed and 30% strongly agreed) endorsing the same. For factual recall, 90% of teachers (57% agreed and 33% strongly agreed) and 86% of HoDs (59% agreed and 27% strongly agreed) reported improvement. These figures suggest a strong and consistent endorsement across both groups, confirming that peer mentoring strengthens teaching effectiveness and deepens learner comprehension, particularly in articulating complex ideas and recalling key facts. Open-ended responses from teachers and HoDs reinforced these quantitative trends, linking peer mentoring to clearer lesson delivery, increased teacher confidence, and more collaborative, student-focused planning. Principals echoed these observations during interviews, describing mentoring as a strategic mechanism for enhancing teacher effectiveness and learner competence. One principal shared:

"Some teachers naturally step in to guide their peers, even without being officially assigned the role. I've observed that when a teacher receives support and mentoring, they tend to be more composed and confident, which helps learners grasp concepts more clearly. In subjects like Mathematics, where many students struggle, having a mentored teacher can mean the difference between ongoing confusion and real understanding." (Principal E, March 26, 2025)

Form Four students described how mentoring and group work contributed to more structured and engaging lessons. They noted that teachers explained concepts more slowly, encouraged discussion, and made learning feel more organized. One student reflected on how contextualized learning made science topics more relatable, saying:

"During our biology lesson, we cut open tomatoes, oranges, and avocados and compared how the seeds were arranged. I saw that in tomatoes, the seeds are all over inside, while in mangoes, there's just one big seed in the middle. That's when I understood the difference between axial and parietal placentation. It wasn't just a diagram — it was something I could hold, see, and explain. I even started noticing it when eating fruits at home. It made biology feel alive." (Form 4 student, FGD 5, March 18, 2025).

However, not all student responses were uniformly positive. A few highlighted disparities in teaching approaches across streams, suggesting inconsistencies in mentoring implementation. One student shared:

"Form 4 West and North both take Business Studies, but it feels like two different schools. West is ahead, already doing past papers. I've joined their class at times - it's clearer, better paced, and we get more practice than in ours." (Form 4 student, FGD 8, March 24, 2025)

These reflections affirm that while peer mentoring has clear benefits in improving lesson clarity and learner comprehension, its effectiveness may vary across subjects and streams. The disparities in content coverage and instructional pacing underscore the need for more structured and equitable mentoring frameworks within departments to ensure consistent learner access to quality teaching and revision.

Regarding problem-solving, 85% of teachers (55% agreed and 30% strongly agreed) affirmed that mentoring helped learners develop better strategies for tackling academic challenges. HoDs showed even higher confidence, with 95% endorsement (68% agreed and 27% strongly agreed). Notably, none of the respondents in either group strongly disagreed, suggesting broad approval of mentoring's role in enhancing learner problem-solving. On communication clarity, 86% of teachers (57% agreed and 29% strongly agreed) and 92% of HoDs (76% agreed and 16% strongly agreed) affirmed that learners expressed ideas more clearly due to improved teaching strategies from peer mentoring. Overall, the trend points to a strong positive link between teacher peer mentoring and the development of learner skills.

These findings were reinforced by open-ended responses from teachers and HoDs, who linked mentoring to improved lesson preparation, more effective teaching strategies, and increased classroom engagement. They noted that mentoring promoted learner confidence, active participation, and practical skills such as discipline, communication, and collaborative problem-solving. To strengthen these outcomes, respondents recommended structured mentoring programs, regular workshops, ICT integration, and increased teacher collaboration—recommendations echoed in recent studies highlighting the role of peer mentoring in advancing professional practice and learner competence (Murray & Christison, 2023).

Principals' reflections affirmed the transformative impact of mentoring on classroom dynamics and learner engagement. One principal had this to say:

"Mentoring takes effect not just in teachers' lesson delivery, but in how learners approach problems. The atmosphere in the classroom shifts—students start to trust the process more, engage more openly, take academic risks, and ask questions they previously held back."
(Principal C, March 22, 2025).

This responsiveness, shaped by teacher collaboration, was seen to encourage previously quiet learners to participate more actively. Student voices echoed these changes, linking peer interaction to deeper understanding and skill development. A Form 4 student shared: "*When we work in groups, we ask questions freely; someone else explains it using their own example, and I understand better - I remember the discussion, not just notes.*" Another student described how classroom debates boosted her confidence, which she later applied in real-life situations, such as helping her sibling prepare for a job interview. These insights illustrate how mentoring fosters not only academic growth but also real-world communication and collaborative reasoning.

On the influence of peer mentoring on values acquisition, 90% of teachers (51% agreed and 39% strongly agreed) said that mentoring helped learners engage respectfully with peers and teachers. HoDs reported similar trends, with 92% (57% agreed and 35% strongly agreed) affirming the same. On learner resilience, 87% of teachers (50% agreed and 37% strongly agreed) and 81% of HoDs (51% agreed and 30% strongly agreed) said mentoring contributed to learners' persistence with difficult tasks. During open-ended responses, teachers and HoDs noted that Meru South's overcrowded, under-resourced, and exam-driven classrooms may limit the visibility of learner resilience. One HOD explained that syllabus demands often overshadow the quiet persistence of learners, while a teacher highlighted how large class sizes make it difficult to support those who struggle silently. These insights suggest that while mentoring is widely perceived to foster values like perseverance, systemic constraints may hinder their consistent recognition across subjects and streams. As Muriuki, Onyango, and Kithinji (2023) observe, professional development equips HoDs to apply consistent, learner-focused strategies. With structured support, teachers can sustain mentoring practices that foster resilience and embed values across learning experiences.

Learner narratives reinforce the positive impact of mentoring on values development. A Form Four student described how classroom experiences had encouraged cooperation and behavioral change, noting that they were taught to help one another, often sharing books without being prompted, and that even previously rude classmates had shown noticeable improvement in their behavior.

Together, these testimonials and observations highlight how, beyond formal instruction, the social environment cultivated within the classroom plays a crucial role in shaping character. In remote settings like Meru South, where material resources may be scarce and class sizes often large, such positive shifts are particularly significant. They reflect the profound relational work teachers are doing to nurture a sense of community and mutual support. Mentorship-infused teaching in these contexts extends beyond academic learning, fostering mutual respect, empathy, and peer-led support that strengthen both individual character and overall classroom unity.

Teachers supported these observations, frequently highlighting that teacher peer mentoring fosters key values such as respect, discipline, resilience, and cooperation. One teacher, when asked about mentoring's impact on learner competencies, commented: "*creates a caring learning environment where values like patience and sharing are practiced daily.*" Another explained that students have become more active and confident through regular engagement in question-and-answer sessions. This, they noted, reflects the behavioral transformation mentoring promotes. Heads of Department echoed these patterns, observing that mentoring has helped improve discipline and interpersonal relationships among learners, and that learners now relate more respectfully both within and beyond the classroom. These insights align with research highlighting how collaborative teacher practices foster value internalization and strengthen learners' social competence (Christison & Murray, 2023). School principals reinforced these findings with grounded reflections. One principal said:

"*When teachers mentor each other, it sets a good example for learners. They see respect, cooperation, and persistence modeled daily, which influences their behavior positively. Such an environment fosters the development of important values like respect, patience, and resilience among learners.*" (Principal A, March 11, 2025)

Building on this perspective, a teacher observed that mentoring enhances feedback mechanisms and boosts learner confidence through positive role modeling. One principal during the interview echoed this view, emphasizing that peer mentoring fosters respectful interactions, academic persistence, and a strong sense of community, all essential for holistic character development.

These perspectives are echoed in Sak and Ros's (2025) findings, which emphasize that mentoring - when practiced consistently- supports learners' emotional development and encourages moral responsibility. Together, these perspectives foster not only improved behavior but also contribute to the cultivation of a resilient, value-driven school culture that supports holistic character development.

On the influence of peer mentoring on learner attitudes, 91% of teachers (49% agreed and 42% strongly agreed) said that mentoring inspired learners to participate actively in class. HoDs largely concurred, with 89% (59% agreed and 30% strongly agreed) reporting similar observations. Improvements in school attendance and readiness for lessons were also noted, with 88% of teachers (51% agreed and 37% strongly agreed) and 87% of HoDs (49% agreed and 38% strongly agreed) affirming that mentoring contributed positively to these behaviors. Teachers observed that learners had become more eager to concentrate and engage, while HoDs described classrooms as increasingly cooperative and participatory. These findings suggest that mentoring benefits extend beyond academic performance, influencing learner presence, motivation, and classroom behavior. As Principal A explained, mentoring among teachers creates a ripple effect that reaches learners:

"When teachers support one another, especially during stressful moments, it changes how they show up in class. A calm and encouraged teacher bring that positive energy to learners. Teacher-to-teacher mentoring really helps. Even if I don't step in, I can see how it improves learner engagement. It is not easy for me as a principal to intervene directly, but they know how to talk well to one another." (Principal A, March 11, 2025)

This connection was reinforced by Principal C, who noted that mentoring equips teachers emotionally and professionally to meet learner expectations, thereby promoting consistency and presence in the classroom. Research by Madel and Zimmerman (2025) supports these findings, showing that collaborative mentoring enhances classroom engagement and encourages learners to actively participate through supportive instruction. Voices from Form 4 students illustrate this vividly. A Form 4 student shared: Sometimes when I fail, I expect to be ignored. But our teacher gave me another assignment and said, 'You haven't failed, you just paused.' I felt noticed. That made me want to try again, even though the work was hard. I didn't want to give up (Form 4 student, FGD 6, March 21, 2025).

Some linked mentoring to better classroom readiness and responsiveness. One student shared, *"I used to skip school when I was tired. Now I try not to miss—our teacher makes it exciting. Even Math isn't boring anymore."* Another added, *"She jokes, teaches, listens, even tells us we're smart. I wake up looking forward to class."* These comments reflect Christison and Murray's (2023) view that peer mentoring boosts professional emotional intelligence, making teaching more engaging. Together, insights from teachers, HoDs, principals, and students show that peer mentoring drives real change: learners attend more, engage more, and come to class ready - shaped by the relational models their teachers provide.

Principals in Meru South described mentoring as both formal and informal, often emerging through subject-based pairings and departmental collaboration. Senior and confident teachers were seen as central to guiding others, especially during onboarding, with their professional conduct shaping both teaching practice and learner engagement.

Several principals emphasized that mentoring also supports emotional well-being, with counselling offices and peer networks contributing to a positive classroom climate. These observations highlight the relational nature of mentoring and the role of leadership in sustaining it. As Njoroge and Chui (2025) note, principal-led mentorship enhances teacher effectiveness and learner outcomes when grounded in empathy and shared responsibility.

Overall, the responses demonstrate a consistent pattern: teacher peer mentoring significantly strengthens learner competence across cognitive, skills, values, and attitudinal domains. This is reinforced by recent studies. Dingal (2023) found that mentoring skills among master teachers had a strong effect on instructional practices, leading to improved learner performance and engagement. TaRL Africa (2024) similarly reported that peer mentoring enhanced classroom delivery and learner outcomes in resource-constrained settings, highlighting the practical benefits of school-based support structures. In higher education, Prananto *et al.* (2025) emphasized that perceived teacher support—often cultivated through mentoring—boosts student motivation, engagement, and academic success. These findings underscore the importance of sustained mentoring cycles, collaborative planning, and cross-departmental coordination to ensure that positive impacts are consistently realized.

4.2 Influence of Teacher Communities of Learning on Learner Competence Acquisition

The second objective explored how teacher communities of learning contributed to learner competence in public secondary schools within Meru South sub-county. Table 2 presents teacher and HoD ratings on collaborative teaching practices, complemented by qualitative insights from students and principals to deepen understanding of how these communities support learner competence.

Table 2: Teachers' and HOD's rating of the influence of
participation in communities of learning on learner competence acquisition

Statement	SA		A		UD		D		SD	
Teachers (n = 147)	f	%	f	%	f	%	F	%	f	%
Communities of learning helped me create student-centered tasks, improving learners' grasp of complex concepts.	54	37	90	61	4	3	0	0	0	0
Learners recall facts better due to collaborative strategies I adopted from communities of learning	44	30	81	55	18	12	4	3	0	0
Student-cantered tasks I learned from communities of learning empowered learners to solve problems confidently.	44	30	93	63	7	5	1	1	0	0
Reflective teaching from communities of learning has encouraged learners to make gradual progress in expressing their ideas.	25	17	103	70	19	13	0	0	0	0
Communities of learning have motivated me to foster respect and teamwork among learners, enhancing classroom interactions.	60	41	81	55	4	3	1	1	0	0

My participation in communities of learning has effectively helped learners build persistence in overcoming academic challenges.	43	29	81	55	16	11	6	4	1	1
My participation in communities of learning has led to learners being more actively involved in classroom activities	47	32	85	58	7	5	7	5	0	0
The student-centered tasks I adopted from Communities of Learning improved learners' school attendance.	35	24	87	59	13	9	12	8	0	0
HoDs (n = 37)										
Participation in communities of learning by teachers have enhanced learners' ability to grasp and explain complex concepts effectively.	9	24	25	68	2	5	1	3	0	0
Participation in teacher communities enhances students' ability to state key facts accurately in various subjects	7	19	26	70	2	5	2	5	0	0
Teachers' engagement in communities of learning have strengthened learners' capacity to solve problems independently and confidently.	10	27	22	59	3	8	2	5	0	0
The exchange of best practices among teachers enhances students' ability to communicate ideas effectively in both oral and written forms.	14	38	17	46	3	8	2	5	1	3
Communities of learning have motivated teachers to foster respect and teamwork among learners, enhancing classroom interactions.	13	35	20	54	2	5	2	5	0	0
Learners in schools with strong teacher learning communities exhibit resilience in learning, even when faced with challenges.	10	27	25	68	1	3	1	3	0	0
Learners in schools with strong teacher learning communities exhibit resilience in learning, even when faced with challenges.	10	27	25	68	1	3	1	3	0	0
Teacher learning communities encourage active student participation during lessons and group discussions.	9	24	24	65	3	8	1	3	0	0
Schools with strong teacher collaboration observe good student attendance and engagement in school activities	9	24	23	62	4	11	1	3	0	0

Evidence from teachers' and HoDs' responses points to a strong endorsement of communities of learning as a strategy for improving learner comprehension and recall. Among teachers, 98% (61% agreed and 37% strongly agreed) affirmed that student-centered tasks enhanced understanding of complex concepts. Similarly, 85% (55% agreed and 30% strongly agreed) reported that collaborative strategies improved learners' ability to recall key facts. On problem-solving confidence, 93% of teachers (63% agreed and 30% strongly agreed) said that student-centered approaches helped learners tackle academic challenges more confidently. HoDs reflected similar views, with 92% (68% agreed and 24% strongly agreed) affirming improved grasp of complex concepts, and 89% (70% agreed and 19% strongly agreed) noting better factual recall.

These responses reflect a consistent trend toward positive impact. Teachers and HoDs described how peer collaboration among educators strengthens lesson delivery and improves learner understanding. They noted that sharing teaching strategies within departments leads to clearer explanations and more engaging lessons. Principals reinforced this view, observing that collaborative planning allows teachers to refine their methods, resulting in improved learner retention. Students echoed these benefits, describing how teachers now break down steps more clearly, repeat key points, and use group discussions to reinforce learning. While a few learners mentioned challenges such as rushed lessons or textbook-heavy instruction, the overall feedback supports the survey findings: communities of learning enhance instructional clarity and content retention. Their effectiveness, however, may vary depending on teaching style, delivery methods, and feedback practices.

On the role of communities of learning in supporting learner skills, 93% of teachers (63% agreed and 30% strongly agreed) affirmed that student-centered tasks improved learners' confidence in solving problems. Similarly, 87% (70% agreed and 17% strongly agreed) reported that reflective teaching enhanced learners' ability to express ideas. HoDs echoed these views, with 86% (59% agreed and 27% strongly agreed) stating that teacher collaboration helped learners solve problems independently and confidently. On communication skills, 84% of HoDs (46% agreed and 38% strongly agreed) affirmed that shared teaching practices improved learners' ability to express ideas both orally and in writing. These responses reflect widespread agreement that collaborative teaching positively influences learner skill development.

This was consistently reinforced through student reflections, teacher feedback, and principal observations. Students across focus groups linked interactive lessons, teacher encouragement, and collaborative tasks to improvements in their ability to solve problems and communicate effectively. One Form Four student explained:

"Before, I used to just write what the teacher said. But now, after the class discussions and presentations, I'm able to think through questions, come up with my own answers and explain to others. I even speak more confidently in front of others." (Form 4 student, FGD 7, March 23, 2025).

This was supported by HoDs' responses, with one HOD noting that joint lesson planning led to real-world tasks such as persuasive writing tied to local concerns - that strengthened students' reasoning and self-expression. Principals confirmed these insights:

"When teamwork happens, especially when Teacher X joins Y in class, the learners benefit immensely. A concept that seemed difficult becomes simple, and their attitude towards learning improves. That shared teaching does more than boost performance; it builds confidence and creativity in students." (Principal C, March 21, 2025).

Similarly, Principal E observed that consistent collaboration among teachers had led students to ask more thoughtful and exploratory questions, noting that learners were increasingly posing "why" and "how" inquiries, reflecting deeper levels of thinking. These findings are supported by Pan (2023), who found that communities of learning contribute significantly to learner-centered instruction when paired with teacher self-efficacy and consistent collaboration, ultimately fostering higher-order skills such as critical thinking, adaptability, and applied problem-solving. These perspectives illustrate that communities of learning are not just structural additions; they are transformative engines for learner skill development. When teachers co-plan, reflect, and adapt methods collectively, learners gain exposure to diverse thinking styles, instructional formats, and real-world task simulations that reinforce competence, resilience, and autonomy.

On the role of Communities of Learning in fostering learner values, 96% of teachers (55% agreed and 41% strongly agreed) affirmed that CoLs promote respect and teamwork. Similarly, 84% (55% agreed and 29% strongly agreed) said learners showed greater perseverance. HoDs reflected comparable views, with 89% (54% agreed and 35% strongly agreed) affirming improvements in respect and teamwork, and 95% (68% agreed and 27% strongly agreed) noting that learners remained engaged despite challenges. These responses suggest that CoLs are widely perceived to support the development of values such as cooperation, resilience, and mutual respect.

Teachers described CoLs as spaces where values are modeled and reinforced through collaborative engagement. They noted that peer interaction among educators helps foster respectful behavior, self-esteem, and teamwork among learners. HoDs observed that shared instructional practices often lead to increased learner motivation and openness. Students echoed these experiences, associating respectful treatment and cooperation with classrooms where teachers facilitated fair group work and modeled empathy. One Form Four student reflected:

"When we do things together in class, like group work or helping each other finish assignments, I start treating my classmates differently. Even the ones I don't talk to - I feel like I understand them better. It's not just about passing exams; it's about learning how to be with people and respect them even if they are slow or different." (FGD 3, March 14, 2025).

This reflects broader findings by Salami *et al.* (2025), who emphasized that participatory and culturally responsive teaching practices foster trust, empathy, and moral development among learners. Despite these positive experiences, students also expressed frustration in environments where teachers showed favoritism or failed to guide value-based interactions, leading to exclusion and tension among peers. One account exposed underlying issues of dishonesty and lack of sincerity during assessments:

"Sometimes during exams, even when the teacher is in class, you find students have planned how to cheat. Like some people write notes on their legs or desks, and the teacher just walks around and doesn't ask anything. It makes the rest of us feel like being honest doesn't matter because the ones who cheat still get better marks. It's discouraging, especially when teachers don't take it seriously." (FGD 7, March 23, 2025)

These responses reveal that moral competence suffers when teachers fail to consistently model and reinforce values. Communities of learning can provide framework for ethical growth, yet their influence depends on how actively teachers embed value-based practices. School principals confirmed the role of Communities of Learning (CoLs) in influencing learner values, though their accounts reflected both strengths and challenges. One account emphasized how teamwork can reshape learner attitudes and foster moral growth:

"Teamworking has greatly helped. Sometimes teamwork helps to change the attitudes of the learners, maybe a concept which may seem difficult to students, when teamwork happens, it is made easy and simple for learners to grasp! The negative attitude is changed towards the subject or that concept." (Principal C, personal communication, March 21, 2025).

This collaborative approach not only improves learners' attitudes toward challenging concepts but also fosters moral values such as respect, resilience, and perseverance. Other principals cautioned that limited teacher capacity, unequal participation, and minimal focus on moral guidance within CoLs can reduce their effectiveness. One principal commented:

"Guidance and counselling workshops need to be strengthened. Most learners here need it because of the background they come from. But even if guidance and counselling is emphasized, discipline must be applied. Discipline must be combined with guidance and counselling." (Principal D, March 26, 2025)

These narratives highlight that while CoLs have clear potential to enhance learners' respect, cooperation, resilience, and motivation, their success is uneven and highly contingent upon teacher commitment, structural support, and integration with values-based interventions such as mentorship and counseling. This aligns with findings by Toker Gokce (2021), who emphasized that schools serve as moral habitats where values are transmitted through teacher modeling and institutional culture. Similarly, the OECD (2021) highlighted that embedding values and attitudes in curriculum and teacher practice is essential for fostering lifelong ethical development and social cohesion among learners.

Teacher and HOD responses show strong agreement that Communities of Learning positively influence learner attitudes, particularly in classroom engagement

and attendance. Among teachers, 90% (58% agreed and 32% strongly agreed) affirmed that CoL strategies increased learner participation in classroom activities. Similarly, 83% (59% agreed and 24% strongly agreed) reported that student-centered tasks improved learner presence in school. HoDs reflected comparable views, with 89% (65% agreed and 24% strongly agreed) affirming that CoLs fostered active student involvement, and 86% (62% agreed and 24% strongly agreed) noting improvements in attendance and engagement. These findings align with Rugambwa *et al.* (2022), who emphasized that learner attitudes are most positively impacted when teachers adopt shared methodologies and learner-centered practices through school-based professional development initiatives.

Teachers described how CoLs improved their instructional approaches and created more emotionally supportive classrooms. One noted that after departmental collaboration, their composition lessons became less anxiety-inducing for learners. A HOD observed that students tend to try harder when they see teachers working together. Learners echoed these shifts, linking teacher collaboration to their own motivation and classroom involvement. One Form Four student shared:

"I used to skip school because it felt boring and useless. But things changed when our teachers started inviting teachers from other schools. I remember the day we did a joint revision with a visiting teacher—I actually enjoyed it, and I've never missed school since. When teachers work together, it makes us feel they care about how we learn." (Form 4 student, FGD 6, March 21st, 2025).

Another student explained:

"Before, teachers just taught from the textbook. But nowadays, lessons are interesting because teachers involve us. Our English teacher started using debate techniques and group stories. Now we talk more in class, and I feel more confident now - especially in giving answers, even if they are wrong." (Form 4 student, FGD8, March 24th, 2025)

These insights reflect a visible shift in learner disposition, suggesting that teacher participation in CoLs directly influences learners' confidence, engagement, and attendance.

Principals reinforced this through their field perspectives. One principal noted:

"When our teachers join hands, especially during exam setting or school-level planning, you immediately notice students changing. They get curious, they ask more questions, and they even look forward to class. I think students mirror the seriousness and cooperation they see in teachers." (Principal L, 26th March 2025).

Likewise, Principal H emphasized:

"We've seen learners becoming more confident because the teachers are more prepared and interactive. The change in attitude is visible, not just in grades but in how students engage with their teachers. You'll find quieter learners starting to raise their hands or take leadership in class groups." (Principal H, 26th March 2025)

These insights validate the quantitative data and reflect a strong alignment with Rugambwa *et al.* (2022), who found that learner attitudes are most positively impacted when teachers adopt shared methodologies and learner-centered practices through school-based professional development initiatives like Communities of Learning (CoLs). Overall, the study found out that teacher peer mentoring and communities of learning significantly enhance learner competence acquisition in public secondary schools in Meru South Sub-County. Teachers and Heads of Departments consistently reported improvements in learners' knowledge, skills, values, and attitudes, especially in areas such as critical thinking, collaboration, ethical reasoning, and adaptability. Complementary qualitative feedback from principals and students reinforced these findings, highlighting how sustained, collaborative engagement among teachers fosters holistic competence development. Despite contextual challenges like uneven implementation and limited infrastructure, the study affirms that context-responsive, relational professional development strengthens instructional quality and supports inclusive, values-driven learning.

5. Conclusion and Recommendations

This study concludes that teacher peer mentoring and communities of learning significantly enhance learner competence acquisition in public secondary schools in Meru South Sub-County. These collaborative professional development strategies foster improvements in learners' knowledge, skills, values, and attitudes. Peer mentoring promotes emotional support, reflective practice, and subject-specific collaboration, while communities of learning strengthen instructional quality through shared planning, team teaching, and joint reflection. Despite challenges such as limited time, uneven implementation, and infrastructural constraints, the findings affirm that sustained, context-responsive collaboration among educators contributes meaningfully to holistic learner development.

To strengthen the impact of peer mentoring and communities of learning, school leaders should allocate time for collaborative planning, recognize teacher innovation, and model reflective practice. Teachers should be supported to personalize these strategies based on classroom realities and learner needs.

At the policy level, the Ministry of Education and the Meru South Sub-County Directorate should establish clear frameworks for implementing and monitoring collaborative TPD, ensuring equitable access across schools. The Teacher Service Commission (TSC) should align recruitment and promotion with active engagement in peer mentoring and CoLs, while Quality Assurance and Standards Officers (QASO)

should uphold consistency and professional standards. Curriculum developers at KICD should embed collaborative pedagogies in teacher support materials, and local education offices must address infrastructure gaps to enable meaningful participation.

Further research is recommended to explore how these modalities influence the development of learner values, and how departmental structures and leadership support shape their effectiveness.

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Conflict of Interest Statement

As authors of this journal article entitled, Influence of Teacher Professional Development on Learner Competence Acquisition in Public Secondary Schools in Meru South Sub-County, Tharaka Nithi County, Kenya, we declare that we have no conflicts of interest. We have all reviewed and agreed with the contents of the manuscript, and there are no financial interests to disclose. We certify that this submission is original work and is not under consideration by any other publication.

About the Authors

Jacinta Mueni Kimondolo is a master's student at Tangaza University College, Kenya, with a strong passion for research in teacher professional development.
Dr. Rose Njihia is a Lecturer, School of Education, Tangaza University College, Kenya, with a keen interest in educational leadership research.
Dr. Celestine Ndanu is a lecturer and the Head of the Department of Undergraduate Studies in Education at the Catholic University of Eastern Africa, Kenya. Her research interests are in educational leadership and curriculum reform.

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