

**SOCIAL CONSTRUCTION OF KNOWLEDGE THROUGH CONTINUOUS
PROFESSIONAL DEVELOPMENT IN PUBLIC PRIMARY TEACHER
TRAINING COLLEGES IN NYERI AND MURANG'A
COUNTIES, KENYA**

BY

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DECLARATION

Declaration by Candidate

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DEDICATION

To my daughter, Inayah Kyla, I am grateful for the love, patience and understanding; they have been more than I could ask for. You have been my pillar throughout this PhD journey. It is to you that I dedicate this thesis.

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ABSTRACT

Continuous professional development (CPD) for teachers is a critical area of teacher development globally and across various contexts. It has been advocated for as an intervention that improves teacher quality, education reforms, and subsequent quality in education. While CPD is good at retooling the teachers in the advent of the new education reform, the result of this retooling has not fully translated to the professional growth of teachers, given their inability to surmount many related challenges. The purpose of the study was to assess how tutors socially construct knowledge through Continuous Professional Development in Public Primary teacher training colleges in Nyeri and Murang'a Counties. The study objectives were: To explore tutors' view on the social construction of knowledge acquired through CPD; to analyse the CPD training process on tutors' social construction of knowledge; to evaluate the relationship between the nature and level of tutors' involvement in CPD and their social construction of knowledge and lastly was to assess the association between the frequency and duration taken in CPD training and tutors' social construction of knowledge. Bronfenbrenner's Ecological theory of human development and the Social Constructivist theory of knowledge construction by Vygotsky, Piaget, and Bruner guided the study. The study embraced an interpretivist philosophical paradigm. It adopted a qualitative approach using phenomenological design. With a target population of 92 respondents, a sample size of 38 was used. Purposive sampling was used to select study sites and key informants; which included the principals and resource persons from the Ministry of Education. Stratified, proportionate, and simple random sampling approaches were used to select the tutors. Data was collected through in-depth interviews and focus group discussions. Qualitative data was analysed thematically and then reported in narrative form. However, quantitative data from respondents' demographic information was analysed through descriptive statistics. The study findings revealed the following; the majority of the tutors interpreted CPD as a professional practice that helps them to upgrade their expertise; collaborative activities are the most effective method of tutor construction of knowledge; they were unhappy with being imposed on programmes without their participation; short and infrequent workshops are ineffective. The study concluded that: CPD is an important programme in furthering tutors' professional capacity; cascade models of CPD training fail to provide a sustained and collaborative environment for tutors' social construction; lack of involvement does not address tutors' training needs; inadequacy of time hinders effective knowledge construction. The study recommends that: The Ministry of Education (MOE) needs to enhance CPD training for retooling of tutors; the MOE to develop a more inclusive and tutor-friendly CPD model based on their needs analysis; the MOE should involve tutors while devising CPD training; and the MOE should provide adequate duration for the CPD training for the tutors to realise the benefits of training.

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ABBREVIATIONS AND ACRONYMNS

CPD	Continuous Professional Development
ECDE	Early Childhood Development Education
MOEST	Ministry of Education Science and Technology
NACOSTI	National Commission for Science, Technology and Innovation
PLC	Professional Learning Community
PPTC	Public Primary Teachers Training Colleges
PTE	Primary Teacher Education
SbTD	School –based Teacher Development
TPD	Teachers Professional Development
TPAD	Teacher Performance Appraisal Development
TTC	Teachers Service Commission
UNESCO	United Nations Educational, Scientific and Cultural Organisation

CHAPTER ONE

BACKGROUND TO THE STUDY

1.0 Overview

This chapter focuses on the background to the study with a global overview of CPD practice. This contextualised the research as a global education practice. The global perspective is also set against the African context and the current CPD provision in Kenya. The chapter also delineates the statement of the problem and states the purpose of the study. It shed light on the area of tutor social construction of knowledge against the gaps in the practice of tutors in training colleges in the Kenyan context. A justification and the significance have been discussed, while the study objectives and research questions have been highlighted in line with the purpose of the study. Further, the chapter discussed the theoretical and conceptual framework. Lastly, the chapter concludes by highlighting the scope of the study, the limitations, and by giving the operational definitions of key terms used in the study.

1.1 Background to the Study

The 21st century is witnessing a cultural and educational paradigm shift that has warranted a new approach to the professional development of teachers (Ucan,2016; Obuya, 2024). The advancement in education reforms, combined with the results of globalisation, has seen many countries around the world, such as Finland, South Korea, Canada, and Cuba, place a high value on teacher education both at the initial stage and through the provision of school-based professional learning (Hardman, 2017; Dachi, Elliot, Hebzor, Ntekini & Buhinda, 2015). Additionally, many countries, through education leaders, do acknowledge the new face in the education realm, new demands on the side of the teacher, as well as the new demands on the type of teaching-learning process that should be carried out (Sheninger, 2014).

Since these are pertinent issues that are responding to reforms in education systems, quality CPD programmes/training for teachers are inevitable. Such an observation explains why many countries, through the Ministry of Education, have constantly revised their education practices and have invested heavily in the CPD for their teachers. For instance, countries such as Belgium, Denmark, Finland, Hungary, Ireland, Norway, Sweden, and Switzerland have succeeded highly in this. All this is done based on the belief that in any educational reform, teachers are usually at the heart of it and therefore they must be involved. Additionally, Lowe and Prout (2019) posit that no amount of effort in policy reforms will make education more effective unless teachers are involved in the same process. This requires the teachers to execute the demands of such reforms in their respective classrooms. High-quality CPD is, therefore, an irresistible key problem in nearly every proposal to improve education accordingly.

Research shows that CPD, as an avenue to develop and maintain skills among teachers, has gained a global appeal. For instance, from the UK, evidence shows that CPD was used, albeit in vocational training, to provide pedagogic education and opportunities for training teachers in England, Wales, and Norway to share ideas and improve the practice (Lloyd & Payne, 2012; Darling-Hammond, Hyler & Gardner, 2017). Additionally, in the United States (US), Redman et al. (2018) demonstrated that participation in CPD among K-12 in-service teachers had increased their self-efficacy, validated the modelling of sustainable behaviour, and also increased their capability to link action to content. In response to this, an effective programme for continuous development is deemed important in helping tutors learn and refine their pedagogical skills as they enter and continue being in the workforce in readiness to teach, as well as students' outcomes (Srinivachariu, 2019; Yokozeki & Engina, 2017).

The effectiveness of teachers' CPD has also been explored from the Asia-Pacific context. Cheng and Li (2020) studied how effective practitioner research was as a teacher CPD strategy. They determined that CPD enhanced teachers' use of evidence to support teaching and learning reflections, and also redefined their roles. Martin and Thomson (2018) have hitherto shown that CPD policies and practices need to reflect cultural practices, beliefs, and values to avoid conflict. Additionally, according to Widayati, MacCallum, and Woods-McConney (2021), CPD has been reported as an activity for teachers' improvement. Meanwhile, the notion of social and cultural orientation in teachers' CPD was also reported by Mansour et al. (2014) in the Saudi Arabian context. They established that CPD should be conducted at the institutional level to enhance social interaction and collaboration in authentic contexts.

Studies have revealed that in some countries such as the United States of America, and Great Britain; some Asian countries such as China, Japan, Indonesia, India, and Pakistan; African countries such as Nigeria, Ghana, South Africa, Senegal, Tunisia, and Kenya, among others, have had to revise their teacher training curriculum to produce more competent teachers who are effective in their teaching (Akram, 2018; Kikegbusi, Gloria & Eziamaka, 2016; Miller, 2017; Podolsky et al., 2019).

However, what is evident is that despite an emphasis on the high demand for effective teachers and trainers in the education sector across the globe, this has not been realised in different countries and therefore poses a threat to the promotion and future of education. For example, in India, Swargiary and Baglari (2018) noted that teachers were ineffective in their processes as evidenced by poor content mastery, poor instructions, and low student outcomes in standard tests, examinations, and projects. In Sweden, Toropova, Myrberg, Johansson and Myrberg (2019) noted that most of the

teachers did not fully understand their expectations in their profession and were not satisfied with their work.

In the USA, Malik and Tirmizi (2019) noted that some teachers were not able to give timely feedback to their students, while others were not audible to all students and could not manage the students in a classroom. In Vietnam, Tien (2018) noted that most teachers produced low student achievement, had poor content knowledge, poor instructional planning and delivery, and were unable to carry out classroom management roles as specified in the contract of employment.

Furthermore, global evidence shows that those countries that perform highly, including Finland, Canada, South Korea, and Cuba, leverage the professional development of teachers. However, the story of CPD in Africa seems different. What emerges from the array of studies on teachers' CPD in the African context is that teachers' CPD ought to be understood as a sociological construct based on the constructed reality inherent in social constructivism. Several studies point out the challenges CPD programs have faced over time for instance; From South Africa, research shows that despite the good intentions of CPD, participating teachers often receive it differently, perhaps due to differences in personal circumstances, poor or non-participation of teachers in CPD activities and lack of clear policies resulting to many teachers' strikes as a result of dissatisfaction with working conditions and policies implemented in the education sector (Bernadine 2019; Mwila et al., 2022).

In Ethiopia, Tulu (2019) identifies challenges such as a lack of peer coaching for peer evaluation, high workload for those who participate in CPD, mentors and facilitators lacking the required knowledge and skills, and time constraints, among others. These challenges hinder teachers from effectively constructing knowledge. Moreover, in

Nigeria, Kikegbusi, Gloria, and Eziamaka (2016) noted that teachers lacked the required competencies for effective teaching, resulting in the demotion of ineffective teachers. In Rwanda, it was noted that teachers were dissatisfied with their working conditions and lacked the necessary competencies in content delivery to their students, as evidenced by poor teaching methods, underutilization of instructional materials, and poor academic achievement of students (Ngendahayo & Askell-Williams, 2016). Additionally, in Tanzania, Makunja (2016) noted that teachers were unable to cover the syllabus as expected in the curriculum implementation plan and also reported several cases of teachers quitting the profession by citing dissatisfaction with their work. Focusing on both Tanzania and Uganda, Ngussa and Waiswa (2017) noted that teachers lacked proper preparedness in their teaching, such as a lack of lesson plans and schemes of work, and therefore became ineffective in their teaching.

In Kenya, challenges related to CPD provision include: scarcity of time, busy schedules, heavy teaching loads (Simiyu, Bwire & Ondigi, 2021). Other challenges, as quoted by Mabele, Likoko, and Onganyi (2023), cite other challenges related to CPD provision, such as potential resistance by teachers to attend CPD trainings, misalignment of training goals, and training expenses, among others.

Kennedy (2005) argues that CPD is often regarded as a means of implementing reform or policy changes. This can serve to mask questions relating to the fundamental purpose of such activity. The same author suggests that one test of teachers' CPD is in its capacity to equip teachers individually and collectively as shapers, promoters, and well-informed critics of reform. The same author provides nine models of continuous professional development of teachers that can be used depending on different circumstances. These models are Training, Award-bearing, Deficit, Cascade, Standards-based, Coaching or Mentoring, Community of Practice,

Action Research, and the Transformative model (Kennedy, 2014, as quoted in Abakah, Widin, and Ameyaw, 2022).

In regard to the above, William (2022) posits that the training model is effective in introducing new knowledge to teachers. An award-bearing model of CPD, on the other hand, can be used to encourage quality assurance and continuity among the teachers (Kamarulzaman & Cuthrell, 2022). Additionally, Bahriadi, Suriansyah and Sulaiman (2022) assert that the Deficit model is appropriate in providing a remedy for the perceived weaknesses in individual teacher performance.

According to Saljooghi and Salehi (2016), the Cascade Model is widely used in disseminating information from a few trained Key Resource Teachers (KRTs) to other teachers. The Standards-based Model emphasises the adherence of teachers to the set standards in the education system (Ravhuhali, Kutame, & Mutshaeni, 2015). The Coaching or Mentoring Model, on the other hand, covers several CPD models but is done on a one-to-one confidential basis between two teachers, while the Community of Practice Model involves more than two teachers and is not on confidential grounds (Mwai & Muchanje, 2018). Huang (2016) asserts that the Action Research Model involves carrying out research within a community of practitioners to establish the weaknesses and strengths of teachers with respect to carrying out their professional duties. Lastly, the Transformative Model refers to the combination of a number of CPD models with a view to transforming a teacher into a better self (Betemariam, 2017).

In Kenya, there is a call for a new educational system. One such paradigm shift is in the social construction of knowledge, which is inherent in the Competency-Based Curriculum (CBC) that focuses on the economy and society at large (Akala, 2021). So

far, the new system has been implemented at the primary level of schooling (Republic of Kenya, 2019). Following this development, continuing teacher professional support has become critical to the implementation of this curriculum. Research demonstrates that teachers are not adequately prepared to handle the CBC due to a lack of a clear understanding of the CBC concept (Momanyi & Rop, 2020). However, proponents of CBC argue that the idea is a good one that only requires empowered tutors (Luvinzu, 2021).

To enhance quality of education, the Kenyan government, through the Ministry of Education, teachers in Early Childhood Development and Education (ECDE), Secondary Teacher Education, Technical Teacher Education, Special Needs Teacher Education, and Primary Teacher Education (PTE) in all public institutions are expected to undergo Teacher Continuous Professional Development (TCPD) on regular basis to develop their personal and professional qualities in terms of improvement in their knowledge, skills and practice (Ministry of Education, 2018). One of the common TCPD programs carried out among trainers in Public Teacher Training Colleges (PTTCs) in Kenya is the school-based teacher development (SbTD) program, which is implemented nationally to train tutors for diverse emerging concepts in the sector (Wambugu, Stutchbury & Dickie, 2019).

In a move to improve educational quality, public primary teacher training colleges in Kenya have since designed continuous professional development (CPD) interventions targeting tutors, in line with recommendations reflected. In a move to improve educational quality, public primary teacher training in Sessional paper No 14 of 2012 (Republic of Kenya, 2012) and reinforced in Sessional paper No.1 of 2019 (Republic of Kenya, 2019), United Nations Educational, Scientific and Cultural Organization's (UNESCO) Education 2030 Incheon Declaration requiring teachers to be given

quality professional development (Marope, 2016; Report from National Education Strategic Plan, 2018-2022) on teachers' participation in Continuous Professional Development. Continuous Professional Development is critical to the successful implementation of the CBC. For tutors in public primary teacher training colleges, it is a noble move that may not only maintain a pool of well-equipped teachers but is also likely to demystify the CBC concept for tutors.

Notwithstanding the elaborate programmes that have been undertaken to ensure that quality education is being achieved, the issue of achieving quality CPD training programmes is still missing in many developing countries, including Kenya. Various scholars have identified several factors that teachers wrestle with as they get involved in CPD programmes in Kenya. For instance, not factoring sociocultural considerations into CPD interventions (Betty, 2016). There is also a failure to involve teachers in CPD planning and design (Gathara, 2019). Bulimo (2017) and Njenga (2024), on the other hand, blame the failure to align training needs and the lack of an effective policy. Chepkuto, Sang, and Chumba (2018) point to irregular provision of CPD opportunities. Other studies have gravitated towards a lack of support from institutional administrators (Kagema & Irungu, 2018). In another study, Kamau and Wachira (2019) noted that there was a high turnover of teachers, low morale when performing their teaching duties, and a lack of commitment to the tasks and responsibilities given. Obonyo (2017) further noted that teachers were dissatisfied with their teaching, and if they were to start over again, most of them would not choose to be teachers. Susan and Imonje (2019), on the other hand, reported that teachers were unable to cover the syllabus and that they were not competent in communication skills in their teaching. Wanjala (2017) further indicated that most teachers did not prepare for lessons and did not utilise teaching-learning time well.

The Cascade Model of CPD has, however, been criticised as one of the main models of CPD training, having shortcomings such as not giving teachers enough training time; it therefore does not address the expectations of the training (Watene, Choge & Kodak, 2020; Makindi, Adhiambo, & Gikuhi, 2016). Similar sentiments are found in Betty (2016), who blames this model for CPD training in Kenya as a contributor to the apathy towards CPD, arguing that it is time to change. Additionally, Chepkemoi, Ahmed and Kipngetich (2013) report the other challenges, such as having poorly sustained CPD programs that lack follow-up to support the acquisition of new knowledge and skills, in addition to a lack of institutional ownership of programmes. Additionally, Njuguna (2018) reveals that CPD programmes are hardly conducted, thus denying teachers a chance to improve their skills, amongst other benefits.

The literature outlined in this background from the global, regional, and national perspectives revealed the need to enhance the quality of education through CPD. The literature further provides the challenges posed by these intervention strategies to enhance CPD training. Additional reviews of related studies in this background to this study reveal a disconnect between the various CPD provisions made to the tutors and the application of those skills and knowledge in their teaching and learning activities. With research evidence pointing to apathy among teachers towards CPD, continuing research needs to take a trajectory that probes participating tutors' development of knowledge and understanding as a social-constructivist. This, therefore, warranted an inquiry into sociological perspectives conforming to social structures that modify the behaviours of an individual.

It is in this background that the current study sought to examine the social construction of knowledge amongst college tutors in selected public primary teachers' training colleges in Kenya. The study examined how tutors actively participated in

constructing knowledge through various platforms such as communities of practice, mentoring, peer-to-peer learning, coaching, team teaching, dialogues, and presentations in various workshops, seminars and conferences. The focus of this study was to investigate CPD as an educational structure that empowers teachers.

With respect to this, the current study utilised Bronfenbrenner's Bio Ecological theory of Human Development and Social Constructivist theory by Vygotsky, Bruner, and Piaget to guide an in-depth understanding of how tutors co-created knowledge through the acquisition of continuous professional development in selected public primary teachers' training colleges in central Kenya.

1.2 Problem Statement

The implementation of quality education has been ongoing for a number of years, with various interventions being tried and tested. From the review of various studies, research has demonstrated that CPD for tutors has several benefits for them geared towards improvement of their classroom practices. (Njenga,2023; Andres, Pedro and Maria,2023; Chen and Lubna,2024). In addition, studies have pointed out the various efforts that have been instituted to provide teacher CPD through in-service courses, workshops, and other forms. These efforts are being employed by the Teachers Service Commission (TSC), who call for a mandatory retraining of teachers, and the heavy government spending to implement the National Education Sector Strategic Plan (NESSP, 2018) to achieve quality education. While CPD is good at retooling the teachers in the advent of the new education reform, the result of this retooling has not fully translated to the professional growth of teachers in relevance to the quality and Kenya's mission in education (Mabele, Likoko, & Onganyi, 2023; Simiyu, Bwire and Ondigi, 2021). Therefore, teachers are unable to measure up to the task owing to the many challenges.

Although the aforementioned call targets primary, junior, and senior secondary school teachers in Kenya, it highlights gaps that exist when designing CPD interventions. One such gap is that in designing these programmes, the social-cultural diversity of teachers is not factored in, failure to involve teachers when planning and designing CPD interventions, lack of institutional ownership of the programmes, and a lack of follow-up to support the implementation of newly acquired methods and knowledge. This observation also points out that CPD studies in Kenya have neglected issues on how teachers best socially construct knowledge through CPD, in addition to the social structures that have an impact on the same.

In order for CPD interventions to meet their objectives in the Kenyan context, there ought to be a rethink on how teachers construct knowledge to maximise the knowledge and social actions of their participation in the intervention. Besides, it would be ideal to focus on institutions that are tasked with the direct responsibility of training teachers in relation to the multiple contexts and multifaceted social structures that can be employed to facilitate tutors' social construction of knowledge through acquiring CPD in selected public teachers' training colleges in Kenya.

In an attempt to improve the Continuous Professional Development of tutors across the globe, sociologists and behavioural scientists have explained how intervening programs can modify actions of tutors (Drakensberg and Malmgren,2013; Weisner, 2008). It is this realisation that prompted the search for better and more practical ways of addressing this challenge. This study, therefore, intended to fill the above gap by examining the various social structures as reflected in the process, person, tutors' ecological environment, as well as how the time factor interacts to influence tutors' social construction of knowledge through CPD programmes for tutors in teacher training colleges in Kenya.

1.3 Purpose of the Study

The purpose of the study was to find out how tutors socially construct knowledge through the acquisition of CPD in public primary diploma teacher training colleges in Murang'a and Nyeri Counties of Central Kenya.

1.4 Objectives of the Study

The study was guided by the following specific objectives;

- i. To examine tutors' views of social Construction of Knowledge through Continuous Professional Development.
- ii. To analyse the role of Continuous Professional Development training processes on tutors' social construction of knowledge.
- iii. To investigate the relationship between the nature and level of tutors' involvement in Continuous Professional Development and their social construction of knowledge.
- iv. To assess the association between the frequency and duration taken in the CPD training and tutors' social construction of knowledge.

1.5 Research Questions

- i. How do tutors view social construction of knowledge through Continuous Professional Development?
- ii. What is the role of the Continuous Professional Development training process in tutors' social construction of knowledge?
- iii. How are the nature and level of involvement of tutors in Continuous Professional Development and their social construction of knowledge?

iv. What is the association between the frequency and duration taken in the Continuous Professional Development training and tutors' social construction of knowledge?

1.6 Assumptions of the Study

- i. The basic assumption of this study is that tutors, administrators and key informants are aware of the CPD programmes as stipulated in the Ministry of Education via the Teachers Service Commission, and so they were in a better position to provide objective responses to research questions.
- ii. The study further assumes that the variables used to measure how teachers socially construct professional knowledge through CPD are in line with sociological theories used in the study.
- iii. That the findings of this study would lead to a better understanding of how tutors socially construct knowledge to improve policies and practices for CPD programmes.

1.7 Justification of the Study

Continuous Professional Development programmes are amongst the key drivers of improving quality education (Dadds, 2014; Darling-Hammond, Hyler & Gardner, 2017; Njenga, 2018). In 2018, the Ministry of Education in Kenya rolled out a new curriculum termed Competency Based Education in a bid to improve education reforms and quality, whose main implementers are teachers. The teachers, therefore, need to be effectively trained in their teacher training colleges for the Ministry to realise the set goals of the Competency-Based Education. This shifts the focus to teacher trainers in the various teachers' training colleges in Kenya. The role of a tutor in preparing a future generation of qualified and competent teachers is key to achieving a quality education. Teachers' Continuous Professional Development is

therefore an irresistible tool in achieving this. This insight calls for a study on how they socially construct knowledge through CPD training. However, despite the key responsibility that tutors play in the education realm, there is inadequate literature on how tutors construct knowledge (Wamalwa, 2023; Kisirikoi & Kamanga, 2018).

Additionally, there is scant knowledge about the varied contexts, processes and frameworks for teacher educators' professional development and how social construction of knowledge occurs in their contexts. Therefore, evidence of such challenges poses a threat to the achievement of quality education, which is one of the blueprints that is envisaged in the Kenyan 2030 development plan. The above insights justify the need to carry out the current study.

1.8 Significance of the Study

The findings of this study are expected to be disseminated to the teachers, the Ministry of Education and other key stakeholders to provide a deep understanding of the Continuous Professional Development programme.

To the education stakeholders such as the Ministry of Education, Teachers' Service Commission (TSC), and Kenya Institute of Curriculum Development (KICD), the findings identify the challenges that have existed in the past and so form a basis for the formulation of the recommendations to enhance CPD programmes for tutors in teacher training colleges, in addition to designing more effective and responsive teacher training.

To the policy makers, the findings of the study could help adopt standards for professional development to guide the design, evaluation and funding of professional learning provided to educators.

To future researchers, this study is significant as it contributes to the previously limited research on the critical areas of tutor social construction of knowledge through CPD. In addition, the research unearthed multidimensional and interrelated factors that have an impact on tutors' social construction of knowledge, implying that it is a combination of many factors.

Additionally, the study has provided a method for future researchers who intend to conduct studies on tutors in Kenyan teacher training colleges, as well as others in African countries. This study employed a phenomenological design that helped the study to investigate the lived experiences of tutors in relation to CPD training; this way, it laid the groundwork for future research to be replicable and modified.

Lastly, by promoting best practices and addressing common challenges, this research contributes to improving the research quality of teacher education.

1.9 Scope and Delimitation of the Study

This study was bounded in terms of content, geographical/contextual and methodological scope. To begin with is the content scope, which highlights the boundaries of the study in terms of the research questions/objectives. In this case, the content scope is tutors' social construction of knowledge through the acquisition of Continuous Professional Development.

Secondly, there is the geographical/contextual scope of the study. This refers to a specific location in which the study was carried out. The research was undertaken in the selected Primary Teachers Training colleges in Nyeri and Murang'a Counties of Central Kenya. This way, the study was limited to two public primary teacher training colleges in Nyeri and Murang'a counties of Central Kenya. It therefore excluded all the other public and private primary teacher training colleges. However, there is a

possibility of generalisation of findings to other primary teacher training colleges if the same conditions and circumstances obtain.

Thirdly is on the methodological scope, which gives the boundaries of the study. The study is purely qualitative.

1.10 Limitations to the Study

- i. First, the study was limited to two public TTCS in Murang'a and Nyeri Counties of Central Kenya. The bias of this was mitigated through the use of a simple random sampling technique to get the sample size, thus ensuring representation from other Counties.
- ii. Secondly was the unavailability of participants who could not find time to be interviewed or to join focus group discussions according to the initial plan. This was mitigated by rescheduling the interviews and focus group discussions at the times that were more convenient for them.
- iii. That the findings of this study depended on the self-reports by the respondents. The bias of this was mitigated through the triangulation process of the research instruments.
- iv. The study sample size consisted of tutors from the selected colleges. The study therefore employed a stratified sampling to ensure adequate representation by making the population homogeneous.

1.11 Operational Definitions of Terms

Continuous Professional Development -In this study, the term refers to an ongoing

A set of programs and practices initiated at the Ministry of Education through the Teachers Service Commission that tutors engage in to improve their skills, content knowledge, pedagogical practices, classroom management and students' outcomes.

Effective teaching -In the current study, the term refers to the ability of a teacher to

display competencies in content knowledge and mastery, quality of instruction, professional behaviours, teacher beliefs, classroom management, and educational leadership, among others, leading to high student outcomes.

Social construction of knowledge through CPD – In this study, it referred to the idea that knowledge from CPD training is something that tutors actively create, shape and refine together through ongoing social interactions and collaborative learning. By engaging in reflective practice and dialogue with colleagues, tutors are positioned to re-evaluate their pedagogical approaches as well as develop their professional purpose and efficacy.

Social Structures –In this study, the term was used to imply the external forces that have an impact on tutors' construction of knowledge through aspects such as proximal process, person (tutor), social-cultural experiences of the tutor, and timing.

Tutor-In this study, it refers to a teacher who is employed by the Teachers Service Commission and posted in a Primary teacher training college to teach student teachers to become primary school teachers.

Tutors' ecological environment - In this study, it refers to the social environment /surrounding complex phenomena that influence tutors' interactions with other tutors, for instance, which later translates into the subsequent construction of knowledge. They are the larger-scale forces within societies and cultures that influence the thoughts, behaviours, as well as feelings of individual members of those societies and cultures.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter reviews relevant literature for the continuous professional development and provides a comparative analysis from across the globe, drawing similarities and differences, evaluating viable research methods in addition to techniques, outlining the gaps that eventually form the basis of this study and suggesting areas for further research. It provides a pyramidal arrangement from the global viewpoint, to the regional viewpoint in the context of education provided in Africa and narrows down to East Africa and eventually to the Kenyan context. The literature review has focused on the factors that have an impact on social construction of knowledge through Continuous Professional Development, as reflected in how tutors socially interpret knowledge, the processes employed in conducting CPD, the level and nature of involvement of tutors in CPD programmes, as well as the frequency and duration taken to conduct CPD programmes. Additionally, the chapter discusses existing structures and programmes that provide positive or negative influence in the continuous professional development process.

2.1 Global Context

CPD, as an aspect of improving education, has been practised globally. For instance, in America, a study conducted by Desimone and Laura (2015) highlighted the core features that any effective CPD training must embrace for it to translate to an effective construction of knowledge amongst teachers. The study further recommended the importance of designing as well as providing high-quality professional development that encouraged periodic monitoring and giving to teachers and trainers. Similar observations are reflected in a study conducted by Anna, Evans, Breeding and

Arancibia (2022), who reported that teacher professional development is being employed by many governments as a key strategy to upgrade teacher skills.

Similarly, in some countries in South Asia, including India, it is reported that they have emphasised the need for strong professional development programmes as a way of improving student learning. The findings in this study are well supported by a study conducted by Setiwan and Kuswandono (2020), who argued that schools in South Asia had to review their previous CPD programmes since the new teaching approaches required to develop 21st-century students' competencies.

In a different setting in Europe, a study conducted by Brandisauskiene, Cesnaviciene and Miciuliene (2020) found that CPD is deemed a prerequisite for improving education quality. Through CPD provisions, teachers are empowered to construct knowledge through team teaching, collaborative activities, long-term training, and observation/peer coaching, as well as active cooperation.

In Africa, a study conducted by Asmare (2025) noted the significance of governments embracing high-quality CPD programmes for their teachers. This study further recommended the need for teachers to have commitment and motivation for these trainings, for the policy makers to consider the key facets of CPD, in addition to the administrative bodies ensuring that relevant support for the effective teacher CPD practice.

What is evident from the above studies is that many countries globally have adopted CPD practices in a bid to improve teachers' professional competence as reflected in their improvement in students' achievements, classroom practices.

2.2 The East African Context

Concerns about the quality of teaching in schools in East Africa have seen the appointment of various commissions mandated to review and evaluate the education systems at all levels and make recommendations that inform education policies, beginning with primary education reforms that address restructuring of teacher education.

Reforms aimed at improving the quality of teachers' pedagogical skill development; improving learning materials, supervision, and assessment; improving the financing of primary education and management of resources; building the management and implementation capacity of educational institutions; and promoting universal access to education and equity. Three Eastern African countries, i.e., Kenya, Uganda, and Tanzania, have adopted Universal Primary Education (UPE) – the provision of free education for all eligible primary school children. Whilst UPE in the three countries has led to an increase in the enrolment of children in school at the primary level, this has not been accompanied by similar expansion of teacher personnel, support and services. This discrepancy has been compounded by a lack of regular in-service programmes for capacity building and enhancement of teachers' knowledge, which are necessary for teachers to cope with educational reforms. (Mitchell et. al., 2024).

2.3 The Kenyan Context

The education sector has experienced a radical paradigm shift in Kenya and the world at large. Governments, curriculum planners, parents and the students themselves are concerned with quality service delivery by teachers. Kenya's Vision 2030 envisages providing a globally competitive quality education, training and research to its citizens for development and enhanced individual well-being. This is in addition to raising the quality and relevance of education. Education has the purpose of

catalysing the transformation of society for its development. It involves the art and act in which people are prepared to create new working habits and values for their changing lives in a dynamic environment (UNESCO, 2004). Among other functions, education increases the productivity of societies and attendant political, economic, and social institutions (Digolo, 2006).

In Kenya, the Teachers Service Commission code of regulations for teachers' section 48(1) states that every teacher shall undertake the professional development programmes as prescribed or recommended by the commission from time to time, through the approved training institutions in the manner prescribed under regulation 48. This implies that teachers in Early Childhood Development and Education (ECDE), Secondary Teacher Education, Technical Teacher Education, Special Needs Teacher Education and Primary Teacher Education (PTE) in all public institutions should undergo Teacher Continuous Professional Development (TCDP) on regular basis to develop their personal and professional qualities in terms of improvement in their knowledge, skills and practice (Ministry of Education, 2018;2021).

One of the common CPD programmes carried out among trainers in Public Teacher Training Colleges (PTTCs) in Kenya is the school-based teacher development (SbTD) programme, which is implemented nationally to train teacher trainers for diverse emerging concepts in the education sector (Oondo, Afwade & Kamau, 2023). Examples of professional development include continuing education, participation in professional organisations, enrolment in training programs, research, improved job performance, and increased duties and responsibilities (Bett, 2016; Donkor & Banki, 2017; Sumaryanta et al., 2018). Kennedy provides nine models of continuous professional development of teachers that can be used depending on different circumstances. These models are training, award-bearing, deficit, cascade, standards-

based, community of practice, action research, and transformative models (Kennedy, 2005).

In respect to this, the authors suggest that a training model is effective in introducing new knowledge to teachers (Bahriad, Ahmad & Sulaiman, 2022). An award-bearing model of CPD, on the other hand, can be used to encourage quality assurance and continuity among the teachers (Mitchell et al., 2024). The author further asserts that the Deficit Model is appropriate in providing a remedy for the perceived weaknesses in individual teacher performance.

According to Saljooghi and Salehi (2016), the Cascade Model is widely used in disseminating information from a few trained Key Resource Teachers (KRTs) to other teachers. The Standards-based Model emphasises the adherence of teachers to the set standards in the education system (Ravhuhalu, Kutame & Mutshaeni, 2015). The Coaching or Mentoring Model, on the other hand, covers several CPD models but is done on a one-to-one confidential basis between two teachers, while the Community of Practice Model involves more than two teachers and is not confidential (Mwai & Muchanje, 2018). Huang (2016) asserts that the Action Research Model involves carrying out research within a community of practitioners to establish the weaknesses and strengths of teachers with respect to carrying out their professional duties. Lastly, the Transformative Model refers to the combination of several CPD models with a view to transforming a teacher into a better self (Betemariam, 2017).

In Kenya, a study conducted by Okumu and Opio (2023) reported that a report from the Ministry of Education in Kenya pointed out some of the challenges that teachers grappled with in their endeavour to attend these CPD training. For example, they cited that there has been poor coordinated strategic planning in the professional

development programmes for teachers, thereby offering programmes that are of poor standards. Similarly, a study conducted by Bulima (2017) revealed that the majority of findings indicated that their employer, the Teachers Service Commission, was not committed to ensuring that its teachers were involved in CPD. This, in return, has made the teachers believe that their employer was less concerned as far as the engagement in these activities. This also has a ripple effect of demoralising them in their social construction of knowledge.

2.4 Kenyan Government Policy and Continuous Professional Development

Policies to improve the quality of teachers have focused chiefly on raising academic requirements for entry into Primary Teacher Education. The PTE formal and co-curriculum is overloaded, leaving little time for focus on the development of the knowledge, understanding and skills that trainee teachers will need to help primary school students learn reading and basic mathematics. Further, the PTE curriculum lays heavy emphasis on subject content and acquisition of theoretical knowledge about teaching reading and mathematics rather than on understandings and skills for teaching, and there are gaps between the PTE and the primary school reading and mathematics curricula.

Teacher educators in Kenya are drawn largely from university-trained secondary school teachers, and they receive no training or induction in teaching PTE reading or mathematics. This, coupled with a lack of materials on training teachers, leads to teacher educators' inadequate knowledge, understanding, and pedagogical knowledge for teaching reading and mathematics by those who will teach these subjects to young children. In reading lessons, emphasis is on the use of the 'look and say' method with little focus on phonics. In both reading and mathematics lessons, teacher educators used a combination of methods – demonstration, whole class teaching using questions

and answers, lecture, and some simulation. In their teaching, teacher educators focus more on theoretical knowledge about teaching - how to structure reading and mathematics lessons, what is in education policy pronouncements, and there seems to be recognition of the importance of CPD (Obuya,2024). However, the recognition remains theoretical, as little has been done to institutionalise and improve the quality of CPD programmes in Kenya. Further, there has been little CPD focus on key curriculum areas such as early reading and mathematics despite the importance of these subjects (Wamalwa, 2023).

2.5 The Relevance of Continuous Professional Development

Globally, high-performing countries around the world, such as Finland, South Korea, Canada, and Cuba, have placed a high value on teacher education both at the initial stage and through the provision of school-based professional learning (Hardman, 2017; Dachi, Elliot, Hebzor, Ntekini & Buhinda, 2015). In addition to the above, they argued that in all high-performing educational systems, teachers have a key role to play in improving educational outcomes and are therefore seen at the centre of the improvement effort themselves. Accordingly, such systems are not driven by the top-down reforms but by teachers being at the forefront in embracing and leading reforms, and so they end up taking up responsibility as professionals, which in turn helps them to develop expertise in a wide range of pedagogical strategies for use in their respective classes (Hardman, 2017; Nzivu, Piliyesi & Ndau, 2020). High-quality CPD is therefore an irresistible key problem in nearly every day proposals for improving education quality accordingly.

In Indonesia, a study carried out by Ivovali (2016) revealed that the development of professional knowledge is a dynamic and progressive process. Therefore, it is important for teachers to continually improve their abilities and understanding in

pedagogy, subject content, and scientific understanding. CPD is a systematic and long-term solution to meet this need and address these challenges. To improve the professionalism of Indonesian teachers, as a strategy for improving learning outcomes and national competitiveness in the 21st Century, universities can play a role in both pre-in-service training and in-service training education. Pre-in-service teacher education and CPD must become more systematic, more practical, more collaborative, and based in the real world of schools and classrooms (Dhalwal, 2016).

In the Kenyan context, a study conducted by Wabule (2016) concludes that CPD is used as a strategy that enables teachers to keep abreast with the changes in education in the 21st century. It helps teachers acquire a set of knowledge and skills that they need to facilitate their teaching and learning process. Additionally, Kisirkoi and Kamanga (2018) observe CPD as a tool for the implementation of CBC. Similar findings are reported in a study carried out by Wambugu, Stutchburg and Dickie (2019), who acknowledged School-based professional development as a strategy to support the development of CBC in addition to supporting serving teachers in leveraging education opportunities (National Education Strategic Plan, 2018-2022).

Whilst the above finding outlines the relevance of CPD in teaching, the evolution of notions of professionalism and professional development in the teaching profession is varied and dynamic. On one hand, traditional delivery of in-service training reinforces the notion of the teacher as a technician, uncritically implementing externally imposed policies, rather than an autonomous professional. On the other hand, the development of professionalism and professional development is seen very positively, because its main purpose is to improve learning and learning outcomes. The need to improve schools, teacher quality, and learning outcomes in Kenya is urgent. The improvement of teacher professionalism is seen as a means of achieving that goal. The need to

make follow-up training for teachers to improve service delivery and quality of education is dire and therefore creates the gap that is addressed by this study.

In Pakistan, a case study investigating university teachers' engagement in CPD activities showed that pre-service training is not a prerequisite for entry to faculty positions in universities. In their argument, Saleem, Masrur and Afzal (2014) reiterate that there are no agreed-upon instructional competencies for university teachers either at the national or provincial level in Pakistan. The systematic mechanism for in-service training of university faculty is also missing. Aslam (2011) rightly points out that an effective professional development system is absent at universities because universities in Pakistan have no appropriate human resource department that may design such a policy. This study, therefore, reveals the low quality of education in Pakistan as compared to other countries, thereby necessitating a partnership with Australia to upgrade the quality of education. This particular study provides an additional basis for the focus on an in-depth understanding of the nature of CPD in Kenyan teacher training colleges and highlights the need for a policy framework that can influence Continuous Professional Development in the said institutions.

In the advent of competency-based development in Kenya, the study was to establish whether the provision of further personal and professional education would enable teachers to review and modify their teaching methods and curricula in the light of present-day changes be they technological, economic, and cultural, social or political and meeting in-service needs of a stable teaching force due to the fall in demand for new teachers in areas that require more of the psycho-motor and practical skills such as music, art, agriculture, and home economics.

Continuous professional development programmes in this context are designed to help teachers better understand the demands of newly introduced curricular reforms and enable curriculum implementation (Subitha,2019; Wamalwa,2023; Njenga,2023). In other words, the thrust of most of these programmes is to familiarise teachers with the new reforms. This viewpoint forms the basis of this research since there is no established way in which teachers of a particular subject area can be helped to improve their teaching skills to match the growing demand for curricular change, especially in the 21st century.

2.6 Tutor's View of Social Construction of Knowledge through CPD

Studies on the social construction of knowledge through Continuous Professional Development (CPD) programmes for teachers highlight that learning isn't a simple transmission of information from an expert to a teacher. Instead, it's an active, collaborative process where teachers build new knowledge and understanding by interacting with their peers, mentors, and their environment (Raanhuis, 2023; Prithiiraj, 2018). Additionally, a review of various studies has emphasised that collaborative approaches, such as peer observations, reflections, mentoring, and team teaching, are crucial processes for the social construction of knowledge through CPD programmes (Xaso, Galloway and Adu, 2017; Tadesse and Rao, 2021).

Teachers have varied understandings of their social construction of knowledge regarding CPD training. Such interpretations include an improvement in student outcomes, pedagogical skills, interpersonal skills, ICT integration, and classroom management, amongst others. Even though attending CPD is compulsory, other factors determine whether a tutor will be interested in attending CPD training or not. (Patton, Parker and Tannehill, 2015; Gyimah and Ainsley, 2022).

Teacher learning is an interplay between personal factors and professional /work contexts in which teachers work. Additionally, Subitha (2018) acknowledges the powerful role of teachers' social-cultural settings, as it has a powerful effect on their learning. CPD programmes are to be structured in such a way that they help teachers engage with structural and cultural issues of the school setup, personal beliefs & values.

Teachers bring in their personal beliefs and attitudes, which have an impact on how they perceive knowledge. The teachers' perception of knowledge points out the need to take into consideration their socio-cultural world. Vygotsky (1978) affirms that what is most important about a study on Continuous Professional Development programmes is to comprehend how teachers socially understand knowledge and, more importantly, how they can translate this knowledge into their teaching and learning process.

Social construction of CPD borders on the fact that skills and knowledge that tutors gain arise out of the many interrelationships, for instance, between teachers and their colleagues, teachers and students, teachers and other teachers in other schools, teachers and members of the school community. It also takes into consideration the role of context in teachers' learning.

In a different setting, a study conducted by Tumar et al. (2015) suggests that both the newly employed and the experienced teachers have a positive understanding of the provision of CPD programmes. However, the newly employed teachers thought that CPD trainings equipped them more with new skills and content knowledge, while the teachers who had taught for long opined that they needed CPD trainings to keep abreast with the current trends in the teaching and learning arena in terms of

pedagogical strategies. Other benefits that they mentioned of CPD programmes include being equipped with knowledge to respond to student diversity and handling large classes.

Elsewhere, a study by Avidor-Ungar (2016) contends that attendance of teachers in the Continuous Professional Development programmes helped them construct their professional identity, which later translates to feelings of confidence in their day-to-day teaching and learning process. The difference between Avidor-Ungar's study and the current one is that the former was carried out in a different setting from the latter. Additionally, the former study was conducted with 43 teachers drawn from 10 different schools. Such differences justify the need for the current study. However, the current study benefited from the previous one in terms of the research paradigm, which is interpretive.

In Ghana, a quantitative study conducted by Nyaaba, Abdul-Gafaar, Akulga and Kwaye (2023) concludes that college tutors considered CPD training important as paramount since it helped them to keep abreast with the current teaching approaches, education reform, classroom management, as well as students' outcomes. The limitation in this study is that it was a quantitative research that employed a quasi-experimental design, with a study population was 346 students, while the current study is qualitative, with a study population of 38, hence a justification to carry out the current study.

These findings are corroborated in a qualitative study that was conducted by Razak, Yusop, Halili, and Chukumarana (2015), who reported that teachers considered CPD training useful in empowering them to improve on the necessary professional skills.

From the above review, it can be deduced that teachers view CPD training as helping them develop their teaching abilities, amongst other benefits.

In Ethiopia, a qualitative study conducted by Solomon and Kassa (2019) in selected primary schools reported that teachers viewed CPD as a platform to improve quality education, students' learning and implementation of educational reforms. The limitation in this study is that while the former focused on the impact of CPD programmes on teaching effectiveness, the current study focused on how tutors socially construct knowledge. However, the current study benefited from the former through the study insights, such as the role of context in furthering teachers' construction of knowledge. The study therefore provides a framework for a socio-constructivist approach to teacher professional development that explains how teachers learn and the change processes from participating in CPD activities.

Elsewhere in Norway, a study that was conducted by Teslo, Jenssen, Thurston, Mandedid, Resaland, Chalkley and Tjomsland (2023) confirmed that teachers had positive views after participating in CPD programmes. They considered CPD programmes as beneficial to them, for it helped in diversifying their teaching practice, stimulating their professional reflectiveness, in addition to encouraging collaborative learning. The limitation in this study is that the former employed semi-structured interviews and focus group discussions with some primary and secondary school teachers, while the current one employed in-depth interviews with a group of tutors and administrators from selected colleges in Central Kenya, hence a justification for the need for the current study. The current study benefited from the former in terms of sampling strategy, as it employed purposive sampling which it employed. From the above review, it can be deduced that teachers have a positive interpretation of the

benefits of participating in CPD programmes, such as improved teacher pedagogical content knowledge, effective teacher pedagogy among the benefits.

A review of the literature indicates that Continuous Professional Development is hypothesised to influence teaching effectiveness (Mwangi & Njuguna, 2019; Sumaryanta, Mardapi, Sugiman, & Herawan, 2018; Tarhan, Cendel Karaman, Kemppinen, & Aerila, 2019; Wanjala, Osendo, & Okoth, 2019). In public schools/colleges in Kenya, continuous professional development programs are carried out regularly to assess and promote teaching effectiveness (Ministry of Education, 2018). From an educational perspective, one can deduce that CPD relates to interventions targeting pedagogical practices of teachers (Betty, 2016; Paleman et al., 2018). CPD is based on research which associates students' performance with good pedagogical practices among teachers (Araujo et al., 2016; Molina et al, 2018). Teaching effectiveness is measured through parameters such as improvement in content knowledge, quality of instruction, teaching climate, professional behaviours, intrinsic gains, adjustment to role as tutors, teacher beliefs and classroom management (Ismail, Shahrill, & Mundia, 2015; Roy & Halder, 2018; Antonio, 2019), amongst other benefits.

2.6.1 CPD and Students' Outcomes

Teachers' professional development has become a major focus within school reform and school improvement trends because of the belief that student learning and success are largely due to the effectiveness of teachers (Osendo & Okoth, 2019; Kimathi & Rusynyak, 2018; Kagema & Irungu, 2018).

A review of studies has confirmed that the quality of education is strongly dependent on the quality of teachers, a function of their knowledge and mastery of subject

content, appropriate teaching methods and professional values, all of which are improved by the provision of continuous professional development (Gacinya, 2024; Felix & Hesbon, 2024; Bahriadi, Ahmad & Sulaiman, 2022).

In Indonesia, a study conducted by Wiyadati, MacCallum and Woods-McConney (2021), whose aim was to examine vocational high school teachers' perceptions of continuous professional development, found that teachers perceived CPD as a tool that helps them to improve their competencies. In addition, the study found that through these trainings, teachers are made to feel empowered and so are in a position to respond to student needs. Teachers also felt that CPD pieces of training have a positive impact on students' outcomes as well as their career progression.

A review of the study points out that CPD has an overall impact on improving the education quality of a country. The current study benefited from the one referenced in terms of the theoretical framework, as it used Bronfenbrenner's Bio Ecological model. The study also benefited from the research methodology, which is qualitative interpretive research. However, the difference between these studies is that the referenced study used a population sample of six teachers, while the current one used thirty. Additionally, while the previous study used interview schedules only, the current one employed both interview schedules and focus group discussions, hence the need to conduct the current study.

Another wide study conducted in Iran by Mohammad and Mirada (2012) carried out a study on exploring change in English Language teacher's perceptions of Professional Development in Iran, before and after professional development workshops and found out that professional development can contribute to the effectiveness of English Language teachers by providing individual and collective improvement that is

necessary to adequately address the heightened expectations for improving student learning outcomes. However, the study was carried out in Iran, which may not be reflective of the Kenyan scenario, hence a justification to carry out the current study.

In Ghana, a study by Donkor and Banki (2017) shows that teachers in Ghana admitted that when they attended in-service training, knowledge and skills were acquired for professional development and competency, and so the authors recommended that regular in-service training should be organised for teachers to update their knowledge and skills for efficient delivery of their jobs.

In a different context, in Ethiopia, Betemariam (2017) carried out a study that focused on seeking evidence to identify key efficiency and performance indicators of the CPD program's accomplishments and to find support for whether its accomplishments produced valid and effective outcomes. This paints a different picture. This research confirmed a disconnect between the programme's assumptions and observed outcomes. For this reason, the research pointed to the lack of explicit evidence to pinpoint the cause-and-effect relationship between the CPD program and teacher performance. The study also indicated a gap in the design of the CPD framework that would impact the quality of education and student outcomes in Ethiopia.

In Kenya, a study carried out by Oguta and Getange (2019) to survey the influence of teacher professional development on promoting students' academic achievement in public secondary education claims that teachers had the understanding that CPD programmes had a positive impact in furthering students' academic outcomes. However, the referenced study and the current one differ in that the former was carried out in public secondary schools while the current one was conducted in

teachers' training colleges. However, the current study benefited from the referenced one by adopting the purposive sampling method from it.

Similarly, a study conducted by Muchanje, Njuguna, Kalai and Bilonga (2016) reports that tutors in public primary schools in colleges in Kenya viewed exposure to professional development trainings positively as it enhanced their career progression. The difference between the referenced study and the current one is that the former used a descriptive survey of 264 tutors sampled from eight public PPTCs, whereas the latter is a qualitative study with an exploratory orientation. The purpose of the current study was to explore the lived experiences as well as perceptions of all 38 tutors in public PTTCS in Kenya. Additional findings in this study revealed that when tutors attend CPD programs, they are provided with a platform to keep them abreast with new knowledge as well as their pedagogical interventions.

In a different context, a study conducted by Chepkuto and Chumba (2018) on the influence of Continuous Professional Development Programmes on curriculum implementation in selected North Rift Counties Public Secondary Schools in Kenya. These findings assert that Teachers' Professional Development is particularly important because it helps teachers improve their students' outcomes. To meet the challenging demands of their jobs occasioned by technological innovations, teachers must be capable & willing to continually upgrade their knowledge, skills & practices. Such observation promotes the idea that there is a need to have more Continuous Professional development programmes in Kenyan schools in a bid to improve student outcomes. The recommendations in this study were that for the attainment of Kenya Vision 2030, teachers should be supported at the school level so that they can maximally benefit from the study. Better still for them to meet the challenging demands of their jobs occasioned by technological innovations, teachers must be

capable & willing to continually upgrade their knowledge, skills & practices. What is evident from the above study is that there is a need of having more Continuous Professional Development Programmes in Kenyan schools in a bid to improve student outcomes.

A contrasting study conducted by Kagema & Irungu (2018) reported that there was no statistically significant relationship between the principal's role in promoting professional development and learners' performance. This study contrasts findings from the previous studies that have reported that CPD training enables teachers to improve their students' outcomes. However, the limitation of the referenced study is that it failed to investigate other ways in which teachers understood CPD trainings, which the current study endeavoured to study.

In Congo, a study that was carried out by Yangambi (2021) reported that CPD training is positively associated with student outcomes. The limitation in this study is that it was a quantitative study administered to Elementary teachers and school administrators, while the current one is a qualitative study administered to tutors and administrators of selected colleges in Kenya, hence a justification to conduct the current study. Similar views are found in studies conducted by Felix and Hesbon (2024); Gacinya (2024), who concluded that CPD activities, to a great extent, improved students' performance in Mathematics. From the above findings, it can be deduced that adequate teacher participation in CPD programmes beneficially helps them improve their student outcomes.

In a different setting in Kenya, a quantitative study that was conducted by Alela, Kennedy and Getange (2019) in some selected schools in the Nyanza region of Kenya, using a concurrent triangulation, contends that CPD had a positive impact on

learner academic achievement. The limitation in this study is that it was conducted in secondary schools, while the current study was done at selected colleges in Kenya. From the above findings, it is argued that participation in CPD programmes improves teachers' competencies and pedagogical skills translates to improved student outcomes. It is also a pointer that there is a need for the Ministry of Education, through TSC, to improve /put more emphasis on CPD training to achieve better student outcomes.

A summary of the above literature seems to indicate that professional development effects on student outcomes are mediated by teacher knowledge and practice in the classroom and that professional development takes place in the context of high standards, challenging curricula, system-wide accountability and high-stakes assessments. Additionally, studies have also pointed out that not all CPD trainings result in improved student outcomes. Beyond CPD training, a teacher's performance is a reflection, to a great extent, of the teacher's working ecological setup. It is such findings that emphasise the importance of providing an enabling environment as a way of empowering teachers to acquire the right competencies through CPD training.

2.6.2 CPD and Tutor's Masterly of the Content/Subject Matter

Studies have reported that the breadth and depth of knowledge are the most important factors in the teaching and learning process (Tavakoli et al., 2016). This conception is usually manifested in sub-themes such as being a subject expert, staying with the current research, being prepared before the class, and having up-to-date knowledge of the subject at hand. Similar studies have asserted that professional development programmes also help teachers to become more knowledgeable in the subject content taught; as a result, do promote sustainable development of teachers in line with the educational reform policies as endorsed by UNESCO, 2005).

Equally important is that the participation of teachers in continuous professional development programs is argued to have some effect on the teachers' ability to acquire and develop their knowledge, skills & emotional intelligence which are therefore essential to have good professional thinking, planning, and practice with their students as well as colleagues through their every step of their teaching lives (Besong & Holland, 2015).

Similarly, a study conducted by Darling-Hammond, Hyler and Gardner (2017) observed that teachers who have attended CPD training have better learning outcomes as compared to those who have not received any. These findings are consistent with a study that was conducted by Tang, Li and Liu (2019) who found out that when teachers attend CPD programmes they are empowered to improve their student outcome.

In a different setting, a study that was conducted in Rwanda by Mugarura, Ssempala, and Nachucha (2022) using a mixed-method approach, to a population of 238 teachers argue that Continuous Professional Development programmes enable teachers in achieving student outcomes. Similar observations are recorded in a study that was conducted by Green and Allen (2015) who found that a well-developed CPD programme helps the teachers to improve on their academic achievement.

In a different setting in Ethiopia, Alemayehu's, (2021) a mixed method study conducted shows that CPD training to some extent helps teachers improve their student performance. Similar findings are found in a study that was done by Mukan, Yaremko, Kozlovsky, Ortynskiy and Isayeva (2019) who found that CPD helps in deepening teachers' knowledge/competencies. A review of the above studies has strengthened the premise that effective participation of teachers in CPD programmes

leads to enhanced knowledge, skills and improvement in pedagogical practices, which includes a focus on content knowledge, active oriented learning, high level of coherence with other reform activities in teachers' local contexts.

In West Africa, Gymar and Aginselya (2022) conducted a study to investigate the views of basic school teachers in Ghana regarding the forms of professional learning that they engaged in together with the challenges that they encountered. Using a mixed methodology and a simple random sampling, the study findings indicated that for teachers learning to take place through CPD programmes, there is a need to structure CPD programs in a way that reflects their experiences in classrooms. Arguably, through this way, they are in a position to improve on their prior knowledge.

Other insights in the study referenced above that the current study found useful in this study included the need to actively involve teachers in the designing and planning of CPD programs as this helps them to be committed and motivated to the implementation of the newly acquired knowledge in their teaching and learning process. The difference between this study and the one referenced above is that the latter only focused on the way tutors perceived Continuous Professional Development to facilitate their improvement on masterly of the content, while the former examined other parameters of knowledge construction through CPD such as improvement in the masterly of the pedagogical skills, and learning environment amongst other benefits.

In Tanzania, Komba and Nkumba (2008) focused on and critically analysed perceptions and practices of CPD by head teachers, primary school teachers, ward education coordinators, district education officers, school inspectors, and members of the school committee in six primary schools in Tanzania. Their findings indicate that

the majority of the respondents regarded CPD as being important because it improves them professionally, academically, and in their technical aspects. The findings on practices indicate a conception of TPD that combines the rise of teacher academic qualifications, new instructional techniques, and professional growth. However, this study was conducted outside the Kenyan context, hence presenting a motivation for the present study.

In England, a study by Bartleton (2018) noted that through CPD training tutors are accorded a platform for updating their subject knowledge, as they are afforded an opportunity to collaborate with others, to reflect on their own practice in a bid to improve themselves professionally. Similar findings are found in studies conducted by Derakhshan, Coombe, Zhaleh and Tabatacian (2020); AbdulRab, (2023) who noted that through CPD training, teachers are empowered to become better as they acquire new skills for improving their competencies. This way it is believed that CPD training goes a long way in improving the education quality.

In Rwanda, a related study carried out by Ndundabakura, Nsengimana and Iyamurengye, 2024) study, using an explanatory sequential design to 290 participants shows that CPD activities were perceived to have little or no benefit for the teachers. It was reported that there is no significant relationship between teaching competencies and professional development activities. Similarly, In Kenya a study conducted by Njenga (2024) to investigate the CPD practices of Technical and Vocational Education teachers in Kenya revealed that their CPTD activities are rarely effective or have a rare or minimal effect on teachers' classroom practice. The above findings reveal that not all CPD trainings succeed in helping teachers improve on their masterly of the subject matter. This could be due to other underlying challenges that teachers endure as they undertake these trainings such as lack of institutional support,

lack of adequate time to attend these trainings, financial constraints, lack of follow up mechanisms amongst other. The study findings highlight the need to support CPD training as to adopt more effective and impactful CPD practices on teachers.

In India, a study done by Srinivachariu (2019) concludes that CPD has been employed globally as a vehicle to improve teachers' intellectual activities, skills as well as competencies. The limitation in this study is that while the former was carried out in India, the current one was conducted in Kenya hence a justification to conduct the current study. However, the current study benefited from the insights of the former such as the positive relationship between CPD training and teacher improvements of their competencies and personality which this study found useful.

More so a study conducted by Belay (2016) maintains that CPD training usually makes a tremendous contribution to the improvement in students' achievement, classroom practices and teachers' professional competence. Through the CPD training teachers are found to increase their subject matter expertise levels as a result of constant feedback. Further implication of this observation is an effective CPD helps the teacher to identify their weak areas and this propels them to work on them for future improvement of their competencies.

From the review of the above studies, this section concluded that in order for teachers to foster students' conceptual understanding, they must have rich and flexible knowledge of the subjects they teach. They must understand the central facts and concepts of the discipline, how these ideas are connected, and the processes used to establish new knowledge and determine the validity of claims. Additionally, the reviews pointed out that while Initial Teacher Education (ITE) provides basic

competencies, continuing professional development provides a means for keeping teachers' competencies up to date.

What is evident from the above findings is an implication that CPD programmes are useful in helping teacher in the identification of gaps in their teaching practices and therefore motivate them to work on them for the future improvement of their competencies. The research gap also suggests that whereas CPD trainings have been applauded for improving teachers 'mastery of the content, some studies have shown that not all in-service trainings succeed in refining their skills through CPD programmes. This could be due to factors such as financial constraints, lack of administrative support, lack of time to attend to these trainings, among other hindrances.

2.6.3 CPD and Instructional/Pedagogical Planning, Strategies and Practices

In a different setting, a study conducted by Turbat, Waheed and Mirwani (2022) investigated continuous professional development and its impact on teachers' pedagogy. The findings indicate that teachers were positive about the CPD training, for it helped them improve their pedagogical skills. These study findings are corroborated in a study by Okumu and Opio (2023), who report that the majority of the teachers perceived CPD training as a tool that is used in teachers' pedagogical strategies. From the above review, it can be summarised that teachers who are fully prepared with greater training have proved to be more effective in teaching and student handling as compared to their colleagues with less preparation and training.

A similar study conducted by Kumar (2019) suggests that teacher effectiveness plays an important role in the teaching-learning process. An effective teacher does not create an image of the students but rather helps the students to create an image of their

own by understanding their problems. They also help them by making any subject interesting, controlling the class, and being fair while dealing with them. Effective teachers are the most important factor contributing to student achievement, although there are other factors like curricula, reduced class size, district funding, and family and community involvement, all of which contribute to school improvement and student achievement. However, the most influential factor is the teacher (Kumar, 2019). Choosing effective teachers is critically important for schools trying to improve their performance. Effective teachers exhibit certain skills and qualifications. They include verbal ability, knowledge of special needs, and content knowledge of specific subjects to be taught.

The findings from this study contend that professional development that focuses on specific instructional practices increases teachers' use of those practices in the classroom. As a result, professional development was considered an essential mechanism for deepening teachers' capacity to teach high standards. Such an observation underscores the fact that teachers understand CPD training as a tool that helps them deepen and improve their pedagogical skills.

TALIS (2018) carried out a study to assess the impact of teachers' professional development on the teachers' instructional practices in lower secondary schools in Finland. The findings of this study suggest that teachers who completed teacher professional development can implement more effectively than those who did not complete the teacher induction and mentoring programmes. The mean score of teachers who completed teacher training was greater than that of teachers who did not complete it in all dimensions: structuring practices; student-oriented practices; classroom management; evaluation procedures, assignments, and overall teaching

practices, as well as developing human relationships with students, principals and society in general.

Therefore, the author recommended that teachers' professional development is a very important factor in improving their classroom practices. This argument is in line with the theory of Zoey (2021-2022) teacher development model, which indicates that there is a correlation between a teacher's professional development and classroom practices. However, the study referenced above focused on teachers in lower secondary schools in Finland, while the current study focused on tutors in PPTCs in Kenya.

In the Middle East, a related study was carried out by Al-Lamki (2009) to investigate the stated beliefs and practices related to continuous professional development (CPD) of teachers of English. The study employed a mixed methodology, with a sample of 324 teachers, using semi-structured interviews and questionnaires as research instruments. The study findings confirm a mismatch between the CPD system on the one hand and teachers' beliefs and practices on the other. Similar sentiments are held in a study conducted by Baptiste, Kampire, and Karegeya (2022) who assert that teachers were of the view that CPD programmes do not promote teachers' pedagogical teachers' improvement in pedagogical skills. Such findings explain that not all CPD trainings result into teacher's improvement in pedagogical skills. It could also be interpreted to imply the need to take into consideration the teachers held beliefs while shaping their participation and learning in CPD programmes. The main thrust of this study is that teachers' beliefs have an influential factor in determining teachers' perceptions and judgments about various situations and issues in a way that has a spiral effect on their practices. Beliefs also facilitate teachers in accepting new approaches. The current study also benefited from the above-referenced study in

terms of other research findings, which offered valuable insights, such as the role of peer observation, where teachers learn something from other experienced teachers, learning through the internet, action research, reflection, and collaboration.

In Kenya, a mixed-method study conducted by Okumu and Opio (2023) to determine whether CPD improves teachers' pedagogical skills in teaching argues that a majority of the participants agreed that CPD training improved teachers' pedagogical skills in secondary schools. Through the training, they gain new ideas, skills and build confidence and competencies in teaching. This study aligns well with other studies conducted by Alemayehu (2023); Linnemanstons and Jordan (2017); Arnel and Gideon (2025) that maintain that CPD engagements improve teachers' pedagogical competencies. The above studies point out the need for the government to provide funding for the implementation of CPD for teachers to equip them with modern teaching methods and skills. The findings also imply that teachers at college view CPD training as helping to develop their teaching abilities. Accordingly, if teachers have attended workshops/seminars/benchmarking, their professional competence is reflected in effective classroom management practices. This attendance also has a massive impact on the teachers' abilities to teach. Owing to the many benefits that teachers attach to attending CPD trainings, this study concludes that there is a need for the management to invest in their tutors' professional development to leverage it for the students' benefits.

However, the lack of an appropriate environment, in addition to sufficient resources, meant to support CPD in schools may hinder the success of teachers. In addition, the findings in this study show the need to consider the teachers' workplace or learning context to maximise the impact of CPD on teachers' professional learning, especially on pedagogical strategies.

The underlying belief is that once a teacher has a good mastery of content, they can teach effectively. While content knowledge is important, it is not the only requirement for effective teaching. Effective teachers possess the skills and attitudes that enable them to represent and reformulate content in ways that are comprehensible to learners and engage in reflective practice (Njenga, 2018). Teachers with deficient competencies adopt poor pedagogical practices, for instance, relying on lecturers and rote learning (Ngure, 2013). To address these challenges, public primary tutors must be competent in the content and knowledge of their fields, have hands-on experience in their trade, and have pedagogical competencies to present that content and its application in forms that are comprehensible and appropriate to their learners.

In Saudi Arabia, a study conducted by Mohamed, Sywelem, and Witte (2013), whose purpose was to find out the perceptions of elementary school teachers in Saudi Arabia concerning the effectiveness and facilitators/inhibitors of CPD activities, outline that CPD programmes are of benefit to teachers as it provided them with a new set of skills and knowledge for their individual professional development. From the above-referenced studies, it is evident that CPD training outcomes help teachers to shift practice from a focus on facts, procedures, and cramming to exploratory activities and understanding of concepts, which are useful skills in classroom teaching and learning activities.

Though several studies have examined the teachers' interpretation of the CPD programmes, how they impact on the teaching quality, pedagogical approaches, students' approaches, and limited studies have explained how teachers socially construct knowledge through CPD, which the current study endeavoured to achieve.

2.6.4 CPD and Learning Environment/Classroom Management

High professional development promotes effective classroom management in addition to producing effective and successful schools (Hussain, Khan, & Khan, 2024; Galache & Daisy, 2024). The importance of students feeling safe at school is linked to student learning, implying that without this feeling of safety, students will develop anxiety, become uneasy in the classroom, and the learning process will not take place (Darling et al, 2017). There is, therefore, a need to maintain a safe and orderly environment so as to protect students from physical or psychological harm for the sake of orderliness in class.

A quantitative study conducted by Hussain, Khan and Khan (2024) in Malakand division involving 266 trainees found that CPD training improved teacher trainee classroom management. Whereas the former study focused on the relationship between teachers' attendance at CPD training and improvement in classroom management, the current study focused on the teachers' social construction of knowledge through CPD training. Contextually, the former study was conducted outside Kenya, hence a justification for the current study. However, the current study benefited from the former through the research findings, such as highlighting the role of high professional development in enhancing effective classroom management strategies. This finding is in conformity with the study findings of Galache (2024), which confirmed that high professional development trainings have a positive impact on effective classroom strategies.

Some studies have explained how ineffective classroom management skills can waste instructional time, reduce time on task, and interrupt the learning environment. In addition to interrupting the classroom environment, if proper classroom management is not exercised, disruptive behaviour by a few students can have a negative effect on

teacher instruction, which can lead to other students joining in and can cause students to question the abilities of their teacher. (Boynton & Boynton, 2015)

In Pakistan, a study by Shah et al. (2015) revealed that through teachers' attendance at CPD programmes there were improvements in their classroom management skills. The study findings are in tandem with a study by Piwowar, Thiel, and Orphardt (2016), which found that through CPD programmes, teachers reported better knowledge on classroom management. Such findings point out the benefits of teachers attending CPD training, as it equips them with useful skills for the task.

The above trend depicts the benefits of CPD training on teachers as reflected in their improvement in classroom management. A summary of the above thematic discussion points out that both negative and positive social-cultural experiences influence how tutors socially construct their knowledge through CPD programmes. For instance, a study conducted in Ghana maintains that social-cultural issues cannot be ignored in studying the impact of professional development on teachers' learning (Coffee, Aboagye & Johnson, 2019). However, it is worth noting that most studies on professional development neglect the impact of teachers' social and cultural experiences on professional development. The Teacher-Centred Systemic Reform model (TCSR) in Ghana further attaches importance to the context of teaching, the characteristics of the teacher, the thinking of the teacher, and the relation among them as powerful factors affecting the implementation of reforms in classroom practices. The study additionally identified structural factors to include the characteristics of the school setting, such as the arrangement of furniture, subject area, schedules, textbooks, tests, teaching and learning materials, and students.

Generally, the nature of professional development as described here entails a different view of teaching as a professional activity. It creates opportunities for tutors to take charge of their professional learning and practice, but it also places new demands on them, on school administrators, and education policy makers. Professional development that seeks to support teaching as an ongoing inquiry into more effective classroom practice must overcome several significant barriers to change.

Whilst most literature focuses on the opportunities and the success of Professional development, the challenges it faces can be underscored regarding the structure of professional development and teachers' time, since teachers may hesitate to commit time to professional development that extends beyond the regular school day and year. A preference for one-day workshops during the school year to extended commitments during the summer is usually noted (Hadjimatheou, 2018). Secondly, professional development that focuses on subject matter content and classroom practices is reportedly met with resistance. Even in supportive environments, some individuals may be uncomfortable sharing their understandings and beliefs with colleagues and supervisors (Obiero, 2010). A third challenge of the professional development program is that it is time-consuming to design and implement professional development that incorporates multiple characteristics of high quality (Al Ofi, 2022).

What is key to deduce from these challenges is that, as instructional leaders and institutional change agents, school administrators and policy makers must address school-level obstacles to teachers' efforts to improve their practices.

2.7 Continuous Professional Development Process on Tutors Social Construction of Knowledge

The contextualising/implementing CPD knowledge is not linear, but it is considered a complex dialogical process whereby teachers may need more adequate support to enable them to integrate and implement the newly constructed knowledge into the classroom practice. CPD trainings are conducted using different processes. Each of these processes has its own merits and demerits. However, a teacher's learning has never been a single process but rather involves an interplay of different processes. Notably, studies of each of these processes, when effectively employed, will lead to teacher learning.

In most of the existing literature, globally, Africa and Kenya specifically, research has shown that if tutors have to socially construct knowledge through Continuous Professional Development, then there is a need to take into consideration the proximal process by which they grow professionally (Simiyu, Bwire & Ondigi, 2020).

There is no single agreement on the internalisation process that occurs in individuals to prompt them to adopt the new practice or process that leads directly to an individual's professional development (Evans, 2014). This implies the complexity found in the Continuous Professional Development process, and so no single answer that explains how teachers develop professionally. The uniqueness of the individual setting will always be a key aspect in determining the appropriate process for the continuous professional development that should be conducted. The teaching and learning are complex processes that are usually embedded in diverse contexts, and so any educational reform that is based on the premise of uniformity has failed and is, in most cases, bound to fail.

Most of the studies on how teachers construct knowledge through CPD view the process of learning as a part of the teacher's intellectual life that is usually achieved through interaction and dialogue with other teachers (Cletus, 2014). A study conducted by Levin and Rock (2017) describes the perspectives of five pairs of pre-service teachers and their experienced mentor teachers who engaged collaboratively in planning, implementing, and evaluating action research projects during a semester-long internship experience in their professional development school sites. The findings indicated that an effective process that can influence tutors in socially constructing knowledge is the one that promotes inquiry, reflection, collaboration and problem solving, mentoring, action research, advice from colleagues, directives from the school leadership, visits to other schools, learning from students, study groups, observation of colleague's work, learning from individual readings (Desta, Chalchisa & Lemma, 2014). These aspects result in improved pedagogical skills, student outcomes, classroom management, as well as interpersonal skills.

2.7.1 Collaboration/Communities of Practice/Study Groups

Collaborative practices are based on the school of thought of shared decision-making, teaming as a way of organising for action, and the use of a common pool mentality or notion as opposed to an individualised one (De Wever, Vanderline, Tuytens, & Aelterman, 2016). Darling Hammond et al. (2017) observe that when teachers engage in collaborative activities, they create a collective force that forms the basis of support groups for each other's work on their classroom practice. In addition, it also helps build up a trusting environment that later helps serve as a platform for inquiry and reflection in their practice.

In a different context, a study conducted by Bolisani, Fedeli, Bierema, and De Marchi (2020) study highlighted the role of collaborative practices in helping teachers learn.

Through COPs, interactions, mutual support and exchange of experience regarding teaching practices among colleagues are furthered. Additionally, they noted that collaborative activities provide teachers with opportunities to reinvent themselves as professionals. Similar findings are echoed in (Yuan and Burns, 2016) who reported that through collaboration teachers' professionalism is enhanced. Due to the powerful impact of collaboration on teachers' learning, this explains on why for instance in South Africa they have incorporated a national strategy on teacher collaboration. (Meyer, Abel & Bruckner, 2018 as quoted in Obiero, 2020).

Collaboration creates solidarity, strengthens professional learning, and creates feelings of confidence and renewed energy among teachers. In view of this reality, the study findings resonate with the tenets of constructivist and Bronfenbrenner theory of human development, which emphasis on role of social interaction, dialogue etc. in knowledge making. Through collaborations teachers share good practices as they are brought together as a community of practitioners. Teachers need to learn together and work collaboratively to effect changes in the teaching practice and learning.

Collaboration has been explained as a process where teachers work with at least one other professional on a sustained basis (Bantwini, 2019). Through collaboration, teachers are afforded a platform to think about and through their teaching and learning approaches, compare them with their fellow teachers and in most cases generate new insights on the same. Additionally, collaborative activities encourage interaction with other teachers. It is a platform for social learning. It encourages full participation in the social and cultural practices of the community (Lave & Wenger, 1991). It also facilitates the sharing of ideas, experiences, discussion, feedback, and moral support (Wever, et al., 2016; Mohan, 2017; Noor Uddin & Bhamani, 2019).

Additionally, this process creates solidarity and strengthens the professional learning of both novice as well as experienced teachers, in addition to providing a platform for them to pinpoint each other's weak areas in teaching practices with an intent to improve on the same (Hadjimatheou, 2018; Qadhi & Floyd, 2021). Through collaborative practices, teachers can share knowledge, ideas, conceptions, opinions as well as experiences. Secondly, through these collaborative practices, teachers stand in a better position to acquire the best instructional practices as they share research-based teaching practices. Additionally, through collaborative practices, teachers are enabled to come up with communities of practice that will positively change the culture & instruction of their entire grade level, respective departments, or schools. The review of the above literature underscores the significance of collaborative approaches in enhancing school changes that go beyond individual classrooms.

In a different context, a systematic literature review conducted by Holmquist and Lelinge (2021), using a qualitative approach that employed 21 articles out of 55 from the selected data, asserts that the collaborative form of CPD is an effective form that enables tutors to socially construct knowledge. This collaboration can be done at the school level, where tutors collaborate with teachers and researchers in different schools.

Similar observations are found in a study conducted by Bantwini (2019) in South Africa, whose purpose was to develop a culture of collaboration and learning amongst high school teachers. The study findings confirmed that collaboration as a part of CPD learning is only possible if teachers receive internal support from the school leadership, and secondly, if it is done frequently. Such observations point out the role of contextual support in facilitating teacher learning. While the referenced study focused on high school teachers of a large province in South Africa, the current study

was conducted among tutors in Teachers' Training Colleges in Kenya. Additionally, the current study was conducted using a qualitative approach, unlike the referenced one that used mixed methodology, hence a justification to conduct the current study.

In South Asia, Sin (2021) conducted a study whose purpose was to explore teacher learning and reflection during the process of curriculum development through collaboration and communication. The report in this study indicates that teachers' learning is made possible through learning from their counterparts in the same grade. Contextually, the study was conducted in Myanmar, South Asia, while the current one was done in Kenya.

Furthermore, a study conducted by Deluca, Bolden and Chan (2017) opined that collaborative inquiry as a form of CPD activity puts focus on employing dialogue amongst teachers to help them socially construct knowledge. Through collaboration, teachers are enabled to negotiate knowledge rather than have knowledge imposed on them. The dialogue is based on their experiences in the teaching and learning process, to identify where the gaps could be. One of the potential benefits of engaging in collaborative inquiry is that it involves the teacher as an active learner, and through this, teachers are motivated to participate in the CPD training, a reason why this approach has been lauded in many of the reviewed literature as a powerful strategy in the teachers' social construction of knowledge.

In Saudi Arabia, a study carried out by Mansour et al. (2014) investigated Science teachers' views of Continuous Professional Development and Science teachers' perspectives of contextual issues that have an impact on putting learning emerging from Continuous Professional Development programmes into practice, using a mixed method approach. The study utilised multiple data sources of questionnaires from 304

teachers and interviews with 9 teachers. The findings from this study revealed that teachers learned best when engaged in collaborative activities as an effective way of facilitating learning of the CPD programs regarding how they can effectively translate the knowledge learned from the programs into real classroom knowledge.

Additionally, the same study revealed other factors of importance to teachers' motivation to change in their teaching and learning process, teachers' amount of workload, skills and abilities, school culture, and types of CPD programmes, all of which are said to have an impact on the social construction of knowledge.

The current study benefited from the above-referenced study in that the latter indicated the different/various aspects of the Continuous Professional Development programme, such as collaborative activity, as well as including teachers' voices as key guides that must be taken into consideration to enable tutors to effectively and socially construct their professional knowledge.

In Kenya, Wambugu, Stutchbury, and Dickie (2019) carried out a study to identify how a school-based professional development program, designed by the head teacher and staff of a Kenyan primary school and delivered by a Teacher Education in Sub-Saharan Africa (TESSA) team, supported teacher learning and growth. The study employed a small-scale qualitative study of a group of 13 teachers from diverse subjects and employed an interview schedule, document analysis, and a teacher questionnaire. The findings from this study maintain that teachers are empowered to create knowledge through collaborative activities with their colleagues. Through collaborative practices, teachers' pedagogical skills are improved.

Whilst the above-reviewed literature reports on the importance of encouraging teachers to learn through collaborative activities, some studies conducted in Kenya,

however, reveal that the model is hardly practised as posited by different scholars (Kariuki, Itegi & Ogeta, 2020). The current study, therefore, sought to understand how collaborative practices, as one of the CPD training processes, further tutors' social construction of knowledge within the PPTCs context.

A review of the above studies has explained how teachers learn and the change processes from participating in CPD programmes. Participation in CPD empowers teachers to integrate their practical knowledge as well as contextualise it in practice. In addition, the studies have revealed that social construction of knowledge will be achieved if only the contents of CPD trainings are meaningful to what teachers engage in their various classrooms and by bringing experts on board to support teachers, through promoting sharing of classroom practices. The above findings indicate that there needs to be a shift in the understanding of how best to support a shared learning space where teachers can discuss and encourage each other in co-constructive ways.

Various studies have revealed that collaborative practices have gained global popularity amongst teachers. Through collaborative practices, teachers renew and reinforce themselves for the collection of benefits that accrue due to the knowledge that these communities generate. It produces changes in teacher practice, attitudes, beliefs and student achievement.

Additionally, the review has suggested that teachers develop professional communities when they are involved in concrete tasks about teaching and planning, researching and evaluating together. This is all possible through social interaction. However, while studies have reported on the benefits of CPD training, most studies have indicated that not all CPD training results in collaborative activities. Some of the

factors attributed to this are inadequate school instructional support, time and resources. Again, most of the studies have neglected investigating how teachers construct knowledge through collaborative practices.

2.7.2 Action Research

Action research is based on the philosophy that teaching is a form of professional action, an inquiry, and so it has to be built upon teachers' values, beliefs, and attitudes (Betty, 2016; Hajisoteriou, Maniatis & Angelides, 2019). On the same note, Bleach (2014) observes that action research is a powerful instrument for teacher learning as it allows them to discuss their teaching and learning practices as a group.

Various studies underscore the importance of including action research as it allows teachers to investigate their professional practice in an attempt to understand and improve the nature as well as specifics of the teaching and learning process (Bett & Makewa, 2018; Darling-Hammond, Hyler, & Gardner, 2017; Al Ghatrif, 2016; Herbert & Rainford, 2014; Dadds, 2014).

In Turkey, a study carried out by Dogan and Kirkgoz (2022) on how to promote Continuous Professional Development of English teachers through action research using a mixed method approach, nine English language instructors working in different universities used research instruments, namely semi-structured interviews, weekly evaluation forms, participants' diaries, and researchers' field notes.

The findings of the study revealed that action research is a key aspect of the process that facilitates teacher learning as it is useful in enhancing their knowledge directly about the classroom activities, helps them develop their critical thinking and teaching, and improves their pedagogical skills, amongst other benefits.

The difference between the study referenced above and the current one is that the former targeted English teachers in higher institutions in Turkey, whereas the latter targets tutors in primary teachers' training colleges in Central Kenya. Secondly, whereas the referenced study employed a mixed-method approach, the current study used a qualitative approach. However, the current study benefited from the reference in one in, getting an insight into how action research, as a process of conducting Continuous Professional Development, helps teachers to socially construct knowledge.

In a different setting in Kenya, a study carried out by Simiyu, Bwire, and Ondigi, (2021) to examine the challenges of teacher-led professional development among teachers of English in Bungoma South of Kenya, using a mixed method approach, reported that action research is an effective process of conducting Continuous Professional Development programmes for it results into improving teachers' professional practice.

This is in tandem with the study that was carried out by Farrell and Macapinlac, (2021), who found out that teachers who engage in active research do have a chance to have a look at their professional practice, develop a deeper understanding of the underlying philosophy practices as they do to their actual classroom practices and so their professional practice can be meaningful to them.

This translates into the teachers being more confident in their work. However, the limitation of this study is that it failed to examine collaborative, reflective, or networking aspects of CPD of teacher learning, which the current study endeavours to study. Nonetheless, the current study shares similar findings with the study referenced above, such as a lack of adequate time and a lack of administrative support, all of

which have, in one way or another, hindered teachers from socially constructing their professional knowledge.

A qualitative study conducted by Ginsberg (2022) revealed that when teachers engage in action research activity, they are positioned to gain personal and educational knowledge. These findings are corroborated in a study conducted by Yuan and Burns (2016), who posited that action research enhanced teaching effectiveness as well as facilitated teachers' professional learning. Additionally, the study found that through action research, teachers are positioned to change and improve different aspects of their day-to-day practices.

From the above reviewed studies, it is evident that through action research, teachers are armed with the skills and dispositions necessary to bring about change in themselves, their classrooms and their schools. It can also be deduced that action research for teachers serves as a community of inquiry whereby teachers construct their professional identities and seek their professional development through critical reflection and professional dialogues. Additionally, action research affords teachers critical opportunities for them to negotiate meaning with different stakeholders in the education sector, through which their professional identities are further enriched and expanded.

In a different setting, a study that was conducted in the Philippines by Morales (2016) found out that action research is a powerful process of teachers' construction of knowledge and use. More so, it was reported to have the benefit of helping teachers solve classroom challenges. The main thrust of the argument is that action research leads to educational reforms, knowledge construction, as well as sharing of information amongst teachers. Similar findings are noted in a study that was

conducted by Wabule (2016), who noted that through action research, teachers who are experiencing a problem situation take action to manage or improve the situation. It therefore helps teachers to discover practical solutions regarding teaching and learning activities.

In Africa, Zimbabwe, a qualitative study that was conducted by Mukabeta (2020) observes that there are benefits that tutors accrue in engaging in action research; for instance, it was reported that it improves the teachers' pedagogical approaches. The limitation is that contextually, while the former study was conducted in Zimbabwe, the current one was conducted in Kenya, hence the need to conduct the current study. However, the current one benefitted from the former through the methodological aspect, such as the use of the research instruments in in-depth interviews, focus group discussions and document analysis, which it found useful.

The main premise of action research is that teachers should identify the problems in their classrooms by themselves rather than being made to undertake CPD programmes that do not take into consideration their gaps in as far as teaching is concerned. Once they are made to identify the programme, they felt motivated to be part of the training. Therefore, through the engagement in action research, teachers are empowered to identify for themselves the changes that they do need to effect in their teaching activities, the resultant effect being effective knowledge construction.

In Kenya, a study by Okoth and Simiyu (2017) found out that through action research, teachers are empowered to undertake collaborative activities that, in turn, help them understand their classroom practice in addition to improving themselves professionally. Arguably, through action research, teachers do create their own knowledge by acting as well as reflecting on their actions. The beauty of action

research is that teachers become more confident as they continue constructing knowledge about their practice.

In Ethiopia, a study conducted by Alemayehu (2021) reported that CPD through action research provides a platform to empower teachers through individual practices in addition to helping them develop and confirm their expertise. Therefore, it can be deduced that action research is possible if tutors, together with their colleagues, engage in collaboration towards finding solutions regarding challenges that arise in their classroom activities. From the above discussion, it is evident that through action research, teachers are empowered to be solution seekers.

In conclusion, it can be observed that action research can be a suitable process for teachers who wish to understand their practice in addition to finding solutions to the challenges related to their pedagogical skills. More so, action research has been found to help teachers construct knowledge through the findings they come up with after a closer examination of their classroom practice and sharing with their colleagues. From the above findings, the discussion points out that action research is a suitable method in CPD training since it helps teachers who wish to understand their practice as well as find solutions to the unique challenges they face with pedagogy.

2.7.3 Reflection

This is a process that helps teachers assess or practice what they learned (Qadhi and Floyd, 2021). It also allows teachers to own up to the CPD programs (Hadjimatheou, 2018; Njenga, 2019). Teachers also reflect on their colleagues' practices. Sin (2021) reports that the reflection process is possible through dialogue and collaboration. The main argument is that reflection provides tutors with a greater opportunity to socially build their knowledge through CPD, as reflected in an improvement in professional

development renewal. Reflection has to do with what teachers do in a classroom and the reasons for this, as opposed to how to change what is not working in the teaching and learning activity. Arguably, through this form of evaluation, teachers are enabled to have a deeper understanding of teachers' own practices.

Globally, reflection as a learning process has been found to enable teachers to socially construct knowledge through Continuous Professional Development activities that are, in most cases, ready to support professional renewal (Darling-Hammond, Hyler and Gardner, 2017; Alvarez, Russell and Ventura, 2020; Gutierrez, 2015). Similar observations are made by constructivist theorists who found that it empowers learners to build knowledge from what they already have (Martinez, 2021).

Through reflective practices, teachers can think over the practice and make the necessary changes to their pedagogical practices in a bid to improve their classroom teaching and learning process. Through reflective practice, teachers gain more knowledge about themselves and skills that they translate into the teaching and learning process. They are positioned to bridge the gap between theory and practice.

In Finland, a study whose purpose was to find out about teachers' professionalism and how professional teachers were educated was conducted (Lavonen, 2018). The study consisted of 100 participants who were experts from universities, the Ministry of Education, the teachers' union, student unions, and municipal unions, to the Finnish Teacher Education Forum. From this report, the study deduced that reflection is considered a meaning-making process that enables teachers to construct knowledge through CPD training.

In South Korea, a study carried out by Farrell and Macapinlac (2021) on the effects of reflective practice on two novice teaching English speakers of other languages using a

qualitative research design with a case study orientation posits the significance of the reflective practice as it helps teachers to ponder about their professional practice, improve in it and become more competent in their field. The current study benefitted from the one referenced above in terms of getting insights into the benefits of employing a reflective process as a way of enhancing teacher learning.

In Pakistan, a study carried out by Dilshad, Hussaiof, and Batool (2019) to investigate university teachers' engagement in CPD activities, using a self-developed questionnaire that was administered to 700 teachers through a convenient sampling process. The study findings revealed that time and funding posed as the major barriers that affected teachers in their engagement in the CPD programmes. Secondly, the study also revealed that teachers were moderately engaged in professional development activities.

This is a clear indicator that teachers' learning was not so much a point of focus among the university staff. The finding in the study is that university teachers in Southern Punjab were moderately involved in CPD activities. Subsequently, this hurts the teachers' learning. The difference between the above-referenced study and the current one is that the former deliberately focused on university teachers, unlike the latter, which focused on tutors in public primary teachers' training colleges in Kenya.

In a related study in Kenya conducted by Mukhale (2017) to explore the professional needs of lecturers at Kenyan universities, using semi-structured interviews with a sample of 15 lecturers, suggests that there is a need for lecturers to employ a more student-centred approach in their teaching/learning process. Additionally, the study recommended the importance of creating an enabling environment for the lecturers who have attended CPD programmes so that they are in a position to implement the

newly acquired skills and knowledge. Secondly, the study recommended taking into consideration teachers' voices to facilitate the identification of their needs. This is considered critical because it will further the structuring of CPD programmes that will meet the lecturers' needs for teaching and learning. However, the limitation of this study is that it did not address the aspect of timing in the CPD training programmes, which the current study addressed. Secondly, the study was conducted in one selected public university in Kenya, while the current study was conducted in two selected public primary teachers' training colleges in Central Kenya, hence a justification to conduct the current study.

The thematic discussion about reflection summarises that it acts as a catalyst for teachers to think critically about what could be the alternative perspectives and changing teaching methods based on their new understanding. Through reflection, studies have reported that teachers engage in self-evaluation, self-reflection, as well as engaging in dialogue with their colleagues regarding what could be the most recent teaching practices to improve their teaching effectiveness. Studies have proved that reflection improves capacity building amongst teachers, as they develop self-knowledge and self-challenge in their construction of knowledge. The main argument from the reviewed literature is that for the reflective practice to be effective in enhancing knowledge construction, it has to be combined collaboratively in reflective dialogues between students and with students and even other teachers. In conclusion, in both collaboration and reflective practice, teachers work together and address common problems, share experiences and develop their individual and collective repertoires to deal with shared difficulties, providing new ways of approaching practice and fostering CPD according to their personal needs.

2.7.4 Mentoring

Mentoring is equated to personal growth (Chebolei, 2021). This process involves pairing an experienced teacher with one who is a novice, for discussions/sharing of ideas on areas such as leadership and management, current teaching and learning process, amongst other issues (Bulimo, Maiyo, & Ndiku, 2016).

In Saudi Arabia, a study carried out by Mansour, El-Deghaidy, Alshamrani, and Aldahmash (2014) to explore the science teachers' perspectives on Continuous Professional Development revealed that teachers needed mentoring as a way of enabling them to construct more meaningful knowledge and experience.

In South Africa, Ndebele and Dagogo (2022) conducted a study to examine the impact of mentoring development on pre-service teachers from a university in South Africa. The study findings reported the effectiveness of mentoring practices in facilitating teachers' social construction of knowledge through CPD programmes. The limitation of this study is that it only focused on examining mentoring as an activity that empowered teachers in their learning. However, there are other aspects of the processes that can further the same, which the current study endeavoured to study.

Secondly is that this study employed a sample population of 26 Bachelor of Education teachers, a negligible number, which implies that the findings in this study cannot be generalised to other studies. However, the researcher benefited from the referenced study in terms of the research methodology that was employed, such as the interpretive paradigm and semi-structured interviews, which the current study found suitable for use.

In the African context, a mixed study carried out by Desta, Chalchisa, and Lemma (2018) using 300 randomly selected primary school teachers in Addis Ababa, Ethiopia

revealed that the mentoring process of Continuous Professional Development programmes was reported to be a number one tool in which teachers socially construct knowledge, followed by action research and lastly was the school in -house workshops. However, the difference in this study is that the target population was primary school teachers, whereas the current study used tutors from selected public primary teachers' training colleges in central Kenya. Nevertheless, the current study benefited from the study referenced above in terms of getting insights into process aspects that facilitate the social construction of knowledge as reflected in mentoring, collaborative, and action research activities. Additionally, the referenced study did not delve further into how to go about conducting mentoring programmes when conducting CPD training, a gap that the current study endeavoured to address.

CPD through mentoring programmes is likely to have many benefits. For instance, to the novice teachers, they are allowed to refresh and update their practices, while to the experienced teachers, it equips them with feelings of confidence on how they approach knowledge and pedagogical techniques (Purnamasari, 2023). For instance, in Turkey, a study that was conducted by Vorotykova and Kovalchuck (2017) revealed that through the mentoring process, teachers can learn more from the expert colleagues, who guide them in the production, implementation and follow-up of the novice teacher progress. The study also reported that mentoring programmes have proved effective whenever there is an enriching mentoring relationship as well as a nourishing workplace environment.

In Indonesia, a qualitative study conducted by Purnamasari (2023) to examine the teachers' views towards mentoring programmes revealed that they viewed CPD through mentoring practices since it helped them refresh and update their practices. This is more so important for novice teachers. The limitation is that while this study

was conducted in Indonesia, the current one was conducted in Kenya, hence a justification for the need to conduct the current study. However, the current study benefited from the former in terms of the research paradigm that the former employed the interpretive method.

However, in a different setting of Saudi Arabia, a contrasting study conducted by El Deen (2023) reported that there were discrepancies noted amongst teachers in how they viewed mentoring practices. While some viewed it positively, others thought that it did not affect their professional interests, growth and attitudes. The above finding seems to imply that not all mentoring practices of CPD result in effective teacher social construction of knowledge.

In a different setting, in China, a study was conducted by Jin, Li, Meirink, de Want and Admiraal (2021) using four (4) novice vocational educational training teachers, through semi-structured interviews, reports that mentoring practices have proved effective in helping novice teachers with feedback and suggestions for alternative teaching methods as well as enhancing teachers' construction of knowledge.

The implication is that mentoring practices are valued in teachers' construction of knowledge by virtue of not just passing on knowledge to novice teachers, but rather by stimulating, maintaining and giving feedback to novice practices. This, to some extent, may help novice teachers survive for first years. This conclusion is consistent with the findings of previous research, which shows that mentoring of novice teachers by expert teachers lowers the dropout rate of novice teachers, since it provides them with emotional and professional personal support (Nagy, 2020). From the review of the above study, it is clear that through mentoring platforms, teachers' pedagogy and cognitive competencies are improved, in addition to blending new skills with their

mentors. It can therefore be concluded that mentoring is an effective approach in helping teachers to continually improve on how they socially construct knowledge. Through the practice, teachers are usually empowered to refine their teaching and learning process.

2.7.5 Peer-to-Peer Observations/Coaching

Peer coaching has been explained as a non-evaluative process that involves two or more professional colleagues who usually work together in various aspects of a continuous professional development program (Anuar, 2019). It is based on the observation of novice teachers by those who are more experienced (Hadjimatheou, 2018). Peer coaching has been reported to help teachers build professional reflective practice (Hope et al., 2018).

Peer coaching also helps teachers to learn from peers, and subsequently, this helps them gain more knowledge on how to approach their professional development (Alam, Aaamir, & Shahzad, 2016). Through peer observations, teachers are accorded a platform to discuss ideas, ask questions as well and share knowledge with their peers. This way, teachers are empowered to construct knowledge.

The role of peer coaching on teachers' learning has also been underscored in a study that was carried out by Kempen and Steyn (2016). The findings of the study indicated that social networking empowers teachers to become more confident in their teaching and learning capacity. Such a finding points out that there is a need for CPD programs to be conducted in such a way that they will encourage teacher interactions to share ideas and views about their pedagogical approaches.

In the USA, Trust (2017) conducted a study to investigate the teachers' knowledge-seeking and sharing actions in the Edmodo Math subject community. The main

argument in this study was that peer-to-peer observations help teachers to improve their professional knowledge and expand their practice. Additionally, this approach to learning can be done through platforms such as the internet, discussions, and social media walls like WhatsApp groups. Here, teachers are in a position to share course materials, digital resources, as well as relevant materials that are related to their teaching and learning. Nevertheless, the researcher benefited from this study in terms of the research methodology (research design –qualitative, sampling approach, and research instruments-semi-structured) that was used in this study.

In Malaysia, a study carried out by Anuar (2019) to gain a greater understanding of the peer coaching practices in professional learning communities (PLCS) amongst Arabic language secondary school teachers, using a mixed method sequential explanatory approach study, found that peer coaching only becomes an effective form of teacher learning if it is practiced in a supportive environment, for instance, leadership support in addition to according teachers enough time to afford them time to engage in the activity. The current study benefitted from the one referenced above in terms of the theoretical framework, as both used Vygotsky's theory of social constructivism,1969).

A review of the above thematic discussion implies that different processes that are employed in conducting CPD programmes have an impact on how teachers construct knowledge. It is the view of the researcher that there is a need for a deeper understanding of the relationships among these process factors, which have the potential to lead to an explanation of how tutors construct knowledge. The current study sought to examine these aspects of the different processes within the PPTC set up by showing how they interact and facilitate tutors' construction of knowledge through the acquisition of continuous professional development.

In addition, the findings from these studies imply that conducting peer observation is not the key goal of enhancing teachers' effectiveness in the classroom. What is so crucial is the extent to which the information that is generated from the process is used to support the teacher in developing their competencies and capabilities to deliver quality teaching practices.

Teachers' learning is not a single process; it involves an interplay of different processes, namely team teaching, mentoring, reflection, communities of practice, and action research, amongst others. Each of these factors has its own merits and demerits. However, studies illustrate that each of these processes, when effectively practised, will lead to teacher construction of new knowledge. The study concluded that tutors were trained through the Cascade models of CPD, which, to some extent, they found not effective in their learning.

The scenario portrayed in the above discussion on the various CPD processes clearly portrays that there is a problem that needs to be addressed in the kind of models used to provide CPD for teachers. There is no doubt that teachers are at the forefront of improving the quality of education (Richard and Nancy, 2025; Bolisani, Fedeli, Bierema and De Marchi, 2020). They need to update their knowledge, skills and values continuously, but the overriding question is on what model of CPD can have a greater chance to influence teachers' classroom practices so that they are reflective of their classroom practices? This is a key question that guided the above literature review. So, while teachers need to learn continuously, the use of CPD models, characterised by poor institutional support, time constraints, inadequate funding, and poor/low teacher involvement, hardly leads to improved teacher classroom practices. This is the scenario that the current study intended to investigate.

2.8 Nature and Level of Involvement of Tutors in CPD Programmes and Their Social Construction of Knowledge

In continuous professional development training, teachers are always expected to go back to their respective classrooms and implement the acquired knowledge and skills. It, therefore, points to why teachers need to be involved in this training, especially in decision-making concerning the structure, nature, and challenges related to the programmes. A review of related literature has reported that when tutors are involved in this training, they are in a better position to do needs analysis, which in turn proves useful in determining the content of the training.

Various studies have supported a ground-up approach in carrying out CPD programs as one of the effective strategies for ensuring that the programmes are sustained (Betemariam, 2017). For tutors to socially construct knowledge, they have to be actively involved in designing and implementing Continuous Professional Development programmes (Kisirikoi et al., 2018). This way, a teacher is placed in the role of active learners with a focus on inquiry as well as reflection, constructing their meaning as well as understanding through collaborative engagement in relevant tasks.

Social construction of knowledge is usually based on interaction, discussion, as well as knowledge sharing among individuals. It therefore underscores the fact that active interaction of the teacher through collaborative activities during training is important. Arguably, through active participation, teachers discover knowledge by constructing for themselves rather than being passive recipients of knowledge from the CPD trainers (Akpan, Igwe, Mpamah & Okoro, 2020).

In Iran, a study conducted by Derakhshan, Coombe, Zhaleh, and Tabatacian (2020) on a group of 177 Iranian EFL teachers found that when teachers are actively involved in

CPD programmes, they tend to hold more positive attitudes towards research as well as their CPD needs. Similar findings are found in a study that was conducted by Bendsen, Liselott, and Bjorklund (2021), who confirmed the need for providing CPD courses that relate to participants' own practice. Through involvement, teachers feel empowered, and this, to some extent, spurs them as active agents of education change.

A study by Mitchell (2015) argues that one of the reasons why reforms do not dramatically change is because the teachers' role as agents is ignored. It is through recognizing teachers' voices that they can identify their own needs/what works for them, making decisions about what they will learn, in addition to making decisions on how they will use effectively what they have learnt. When teachers are directly involved in their learning process, it leads to increased ownership, increased learning, and consequently an increased commitment to professional development.

The Michigan English Language Framework (MELAF, 2018) was a federally funded, statewide reform project to develop a standard-based curriculum, instruction, and assessment framework. Associated professional development activities were sustained, content-focused, and teacher-driven. Participants compared their understanding of language arts content with state standards and other models of language arts content; participated in study groups around relevant professional literature; attended workshops in which they experienced and critiqued exemplary practices; and collaboratively planned a culminating statewide conference. Teachers in this project reported changes in their literacy practices, as well as in their teaching. MELAF allowed teachers to articulate and refine their philosophies of teaching and learning and provided support to apply these philosophies in their classrooms.

In a different context, a study by conducted by Gemedà, Fiorucci and Catarci (2014) suggested that there is a need for all teachers to be actively engaged in getting clear of what is meant by the term good teaching, in their learning process; in identifying their own needs; in sharing good practice with their colleagues as well as a wide range of activities both of which are formal and informal, that will bring about improvement of their practice. Teachers are active learners who must construct knowledge as well as meaning for themselves rather than receiving information passively. The description of teachers' professional development includes a consideration of their context as well as their lived experience. (Meyer, Abel & Bruckner, 2018). Arguably, staff development is ineffective if it does not acknowledge or address the personal identities as moral purposes of teachers as well as the cultures in additional contexts in which they work.

In a study carried out by Bayar (2014), which sought to provide the meaning of effective professional development activities and to offer a list of key components in any effective professional development, using a qualitative study with a target population of 16 teachers, revealed that one of those components was the teacher's involvement in the design/planning of the CPD programmes. Such an observation points out that professional development programs cannot succeed if teachers are not actively involved in socially constructing their knowledge. Additionally, the argument would be that tutors need to be involved in the CPD programmes to be able to reflect and understand what they learn, as it helps them produce better results in their respective classes. This therefore demonstrates that there is a need to fill this gap by providing an in-depth analysis. The thrust of the above argument is that when tutors are involved in the planning, enacting, as well as revising of the curriculum, then they are more bound to be engaged more deeply with their teaching, and this way does

help them to come to understand more fully the fundamentals of effective curriculum and in the long run support them in the implementation of innovations of CPD in Kenya, especially in the primary teacher training colleges.

A qualitative case study approach was used by Klein (2019) to study eight teachers from New York City who participated in professional development on the use of expeditions in teaching. The researchers used interviews and observation in the data collection process. After the analysis of the data, reference findings indicated that even though participants agreed that the principles and practices espoused in the professional development were good, they thought it was not fit for their social and cultural environment; therefore, some of the teachers rejected its implementation. Some of the teachers cited students' skills and thinking level, and school policy, which were not appropriate for the implementation, as their reasons for the rejection. In this in-depth study, the following findings were recorded: The level of engagement and enthusiasm teachers have about professional development had a positive influence on how they implemented the professional development practice in the classroom. This observation is in agreement with the findings from a study carried out by Bartleton (2018) in the West Midlands, who reported on the need to take into consideration teachers' voices when designing and planning for Continuous Professional Development programmes.

In Indonesia, a quantitative study that was conducted by Monica and Paulus (2019) reported that teachers were impressed by the fact that they were involved in the designing and evaluation of CPD programmes that they attended. The limitation in this study is that, while contextually it was carried out in Indonesia, the current one was carried out in Kenya. Additionally, while the former study sampled 73 English

teachers, the current study sampled 38 tutors from the selected colleges hence a justification to conduct the current study. colleges.

In a different context, a study carried out by Al-Lamki (2019) to investigate the stated beliefs and practices related to the Continuous Professional Development of teachers of English in Oman, reveals that respondents (teachers) were not happy because they were not being involved in the planning, designing, and implementation of CPD programmes. Additionally, the findings indicated that teachers drew interest and participated in activities that they owned, for instance, those that required their preparation. Additionally, (Thirumalai, 2017; Tanya, et al. 2018) echo similar views on the need to actively involve teachers in their CPD training programmes. Such findings point out the need to involve teachers in the CPD programmes at all stages. It is important to engage tutors in CPD training, this is because teachers bring on board different backgrounds, confidence and motivation. Additionally, their work station has different resources, different leadership styles. Such differences point out that the Cascade model of CPD training, which assumes that teachers have similar needs, may hinder some teachers from effectively social constructing knowledge. Therefore, failure to involve teachers in CPD programmes may lose the meaning of the training. When teachers are involved, they can identify areas of intervention, improve ownership of their professional development.

In a different setting, a study conducted by Mohan et al. (2017) cautions against CPD programmes that do not take into consideration the teacher's diverse needs, as in most cases they are bound to fail. The process of involving teachers gives a platform to air out their needs, brainstorm new ideas, and share knowledge collaboratively on the best education practices, amongst other benefits. Such finding points out the need to involve tutors early enough in the planning, design, and implementation of CPD to

help them construct knowledge points out the need to involve tutors in the planning, design, and implementation of CPD to help them learn.

Similar sentiments are held in a study conducted by Mitchell, Ayinselya, Barrett, Ochoa, David, Imaniriho, Nwako, Reda and Singh (2024), who caution on the one-size-fits-all training, which not only reflects a deficit view of teachers situated knowledge, but rather weakens the situated professional knowledge and agency of teachers. This finding is well noted in a study conducted by Gathara (2019), who reported that the lack of involvement of teachers in CPD programmes, for instance, by denying them opportunities to attend the training, demoralises them. The above finding implies that teachers must be active participants in the development of their professional growth and in solving the educational and social problems that impinge on their classroom practices.

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Similar sentiments are echoed in Mitchell et al. (2024), who cautioned on the one-size-fits-all training, which not only reflects a deficit view of teachers situated knowledge but also weakens the situated professional knowledge and agency of teachers. The above finding implies that teachers must be active stakeholders in the development of their professional growth and in solving the educational and social problems that impinge on their classrooms. A one-size-fits-all approach to CPD

provision can be unfavourable for achieving maximum impact of CPD activities on teachers' professional learning.

Teachers will be sentimental about Continuous Professional Development that they were imposed on them without being consulted, where they were not involved in deciding the content of the courses and where their needs and interests were not ignored but even analysed. The thrust of the above argument is that involvement of tutors in the design and provision of CPD activities as training should be based upon regular needs analysis and address specific topics of their interest.

It is also a pointer that any meaningful educational reform depends on the extent to which those responsible for managing the change acquire an informed understanding of educational theory and knowledge guiding the change. It is also an indicator that there should be close coordination between the teacher educators and participants of CPD training to ensure that there is collaboration and active participation among tutors.

In West Africa, a study was carried out by Gymar and Aginselya (2022) to investigate the views of basic school teachers in Ghana regarding the forms of professional learning that they engaged in, together with the challenges that they encountered. Using a mixed methodology and a simple random sampling, the study findings contend that for teachers' learning to take place through CPD programmes, there is a need to structure CPD programmes in a way to reflects their experiences in classrooms. Arguably, in this way, the teachers are in a position to improve on their prior knowledge. Other findings in this study included the need to actively include teachers in the designing and planning of CPD programmes, as this helps them to be committed and motivated to the implementation of the newly acquired knowledge in

their teaching and learning process. Such a discussion pinpoints the need to have CPD programmes to be owned by teachers. The limitation of the above-referenced study is that it only focused on the role of social-cultural settings in influencing teachers' social construction of knowledge, unlike the current study, which focused on other social structures that influence the same. The above discussion implies that any meaningful educational reform depends on the extent to which those responsible for managing the change acquire an informed understanding of educational theory and knowledge guiding the change.

Similar findings are reported in Hadjimatheou (2018) whose study to explore the educational context in Cyprus and more specifically, the gaps in existing PE-CPD provision in primary schools and between theory praxis, found that teacher learning is possible if teachers' passion and interests are evident or when they feel that they are a part of the CPD training process. The findings from this study are also an indicator that there should be close coordination between the teacher educators and participants of CPD training to ensure that there is collaboration and active participation among tutors. The limitation of the study referenced above is that it employed a case study approach. However, the current study benefitted from the referenced one in terms of the research findings, such as the importance of teachers' social context in facilitating or inhibiting teachers' learning. Secondly, the current study benefitted from the purposive sampling method to select the study sites, administrators in the selected colleges, and the key informants.

A summary of the above review points out that there is no doubt that teachers' involvement in CPD programmes empowers them, in addition to motivating them. Additionally, the above review also calls for the adoption of a constructivist CPD that advocates for a bottom-up approach. Teachers should have an active and dynamic role

in CPD procedures. The main thrust evident in the above studies is that there is a need to involve teachers to actively participate in the decision-making process regarding the implementation of CPD programmes. This way, they are in a position to air their voice to match their needs regarding the classroom practices.

In addition, what is evident from the discussion is that tutors' personal characteristics proved key in how they developed. These characteristics included their attitudes, intrinsic motivation, and abilities, among other factors. Arguably, these characteristics could provide an understanding of how tutors developed and more so when combined with the CPD activities within their environment that they engaged in over a period of time.

In conclusion, there was therefore a need to re-examine the dynamics/processes of teacher learning in selected public TTCs, hence a motivation to carry out this study. The current study sought to examine how tutors' nature and level of involvement in CPD trainings as embedded within the college ecological environment and specifically using the mesosystem context of Bronfenbrenner's model of human development, and how it contributes to their social construction of knowledge.

2.9 Frequency and Duration in the CPD Training Programmes and Tutors' Social Construction of Knowledge

Teachers have a variety of schedules to attend to their day-to-day activities. They have to balance between office time and other personal activities. All this requires time. Studies have indicated that teachers' effective learning requires adequate time accompanied by follow-up. Ideally there is no set time span on the specific duration on how long training should last, however a review of related literature points out in favour of sustained contact over a significant period of time and avoidance of one-

shot workshop (Popova, Evans, Breeding, and Arancibia, 2017) but an enhanced continuous professional development programme takes into consideration both adequate time span and contact hours (Anfaki, 2014; Ventista & Brown, 2023).

Time is an essence factor for any learning to take place. It involves aspects such as the number of hours spent by tutors on CPD training, duration, as well as the frequency of the training. A study carried out by Akinyemi, Shumba, and Adewumi (2019) to find out how the time factor established by communities of practice to enhance professional development of teachers in selected high schools in Ghana influences professional learning. This study's finding indicates that when teachers are accorded limited time in the CPD training, it denies them an opportunity to learn. The above observations call for the need to accord teachers' ample time to meet and learn from their colleagues. The study also recommended a need for tutors to meet regularly in communities of practice. Contextually, this study was carried out in Ghana, which is a different context from the Kenyan one. However, the current study benefited from the research approach used that is qualitative, which the qualitative study used. Additionally, the study benefited from the research instruments used; that is, semi-structured interviews, which the study referenced above used.

Research has illustrated the need to allocate quality time when conducting CPD training. It helps teachers to engage in intensive CPD activities (Betty, 2016; Tannehill, Parker & Patton, 2015). It is believed that the continuous professional developments that run for long periods significantly further a comprehension of the learning materials presented during training. This report implies that for tutors to be able to socially construct knowledge continuously, there is a need to move away from one-shot programs, which in most cases do not emphasize either subject matter or pedagogical skills. Curricula reforms are extremely demanding on teachers, and the

nature of inquiry-oriented reforms in science is such that they require most teachers to make big changes to implement them. The main thrust of such an argument is that CPD programmes need an intense duration for the tutors to effectively construct their professional knowledge. This way, teachers will have more opportunities for active learning, more coherent professional development, and, resultantly positive teacher outcomes.

However, a study carried out by Taddese and Rao (2021) using a meta-analysis of 95 experimental and quasi-experimental studies portrayed a different picture; there is no evidence that the duration that a Continuous Professional Development program is undertaken and its effect on teachers' learning. This study finding is in tandem with Kennedy (2016), who espouses that the most important ingredient for teachers' learning through Continuous Professional Development is the valuable content in the program rather than the duration taken in conducting it.

Various studies have reported on the need to accord more training time in conducting CPD programmes. For instance, according to Hadjimatheou (2018), teachers held sentiments on the short duration of CPD sessions offered to them, for it didn't accord them enough opportunity to meet and interact with their peers, hence contributing to poor teacher learning. From the above observation, it is evident that teachers should be given enough time and that the training period should be intensive in addition to being sustained over a duration of time.

Similar findings are reported in Mukabeta (2020), who noted that CPD programmes that were being held for a short period of time led to little or no improvement in the teachers' classroom practices (Mukabeta, 2020). In line with this observation, various studies have reported on the time constraints as one of the causes of ineffective

teacher social construction of knowledge (Al-ofi, 2022; Obiero, 2020; Hadjimatheou, 2018; Dilshad, Hussain & Batool, 2019).

In Irish, Davety and Egan (2021) conducted a study to explore the perceptions of teachers and educational psychologists. Using a qualitative approach and semi-structured interviews, the study findings assert that there is a need to accord sustained CPD programmes, as they facilitate teacher construction of knowledge. The referenced study was carried out on the Irish primary school teachers, whereas the current study was carried out with tutors in teachers' training colleges in Kenya.

In Botswana, a study conducted by Macheng's (2016) article on the Continuing Professional Development of Teachers in Junior Secondary Schools in Botswana investigated the availability of structures or programs that further teacher learning, as well as those that inhibit teacher learning through CPD. The study employed a mixed methodology. The main finding in this study was that timing is an important factor in teacher learning, as when they are accorded adequate time, they become effective and efficient in implementing the skills and knowledge acquired through CPD. The limitation of this study is that it did not investigate other structural features that facilitate or inhibit teacher learning, which the current study investigated.

However, the researcher benefited from other research findings of the referenced study, including insights on the constraints to the professional development of teachers, for instance, a lack of ownership and structures by teachers that support CPD initiatives, such as coaching, mentoring, peer observations, and a lack of support by school leadership, which the researcher found useful in the current study.

In contrast, a study carried out by Al-Lamki, (2019) to investigate the stated beliefs and practices related to Continuous Professional Development of Teachers of English

in Oman, reports that there is no high frequency of CPD training that does not translates to teachers' learning. This study sharply contrasts with previous studies that have reported on the positive impact of frequency on teachers' construction of knowledge.

In a different setting in Kenya, a study carried out by Tororei (2015) on the factors affecting the Continuous Professional Development of teachers in vocational and technical institutions in Kenya found that the frequency at which CPD is being offered to these teachers is relatively low. This has a negative implication in that it denies teachers adequate time to learn and reflect on the newly acquired skills and practices.

The above trend portrays CPD training that has failed to provide the basic ingredients for tutors to socially construct knowledge. Given this evidence and in alignment with the Bio Ecological theory of human development and the social constructivism theory of human interactions in facilitating social learning, the current study examined how tutors in PPTTCs construct knowledge through engagement in various spans of the training period.

While the reviewed studies have reported that teachers appreciate the value of CPD programmes that are conducted frequently and span a long duration of time to allow them to process what they have learnt from those training, the discussion seems to point out that time constraints have been quoted as a big hindrance to teachers' learning.

From the above literature, it was clear that very little has been done in the Kenyan context about the impact of the time factor on teacher social construction of knowledge. There was therefore a need to re-examine the dynamics of teacher

learning in developing countries like Kenya, this is because most of the studies done on the phenomenon have been conducted in developed countries.

2.10 Models of Continuous Professional Development (CPD) Programmes

In providing an in-depth understanding of the nature of CPD, it is important to provide a general outline of the models of CPD that are relevant to this study. This section considers the circumstances in which the models of CPD might be adopted and explores the form(s) of knowledge that can be developed through any particular model. It also examines the power relationships inherent in the individual models and explores the extent to which CPD is perceived and promoted either as an individual endeavour related to accountability or as a collaborative endeavour that supports the transformative practice. Finally, it is argued that there is a need for greater interrogation of both the purpose and the potential outcomes of CPD structures – the framework outlined in this article is offered as one way of supporting such analysis.

2.10.1 The Training Model

The training model of continuous professional development is universally recognizable (Kennedy, 2005; Cedof, 2025) and has, in recent years, arguably been used as the dominant form of CPD for teachers. This model of CPD supports a skills-based, technocratic view of teaching whereby CPD provides teachers with the opportunity to update their skills to be able to demonstrate their competence. It is generally ‘delivered’ to the teacher by an ‘expert’, with the agenda determined by the deliverer, and the participant placed in a passive role. While the training can take place within the institution in which the participant works, it is most commonly delivered off-site and is often subject to criticism about its lack of connection to the current classroom context in which participants work.

In a related study, Darling-Hammond et al., (2017) identify one of the principal difficulties as being the failure of such training events to ‘connect with the essential moral purposes that are at the heart of their teachers’ professionalism. The training model of CPD is compatible with, although not always related to, a standards-based view of teacher development where teachers strive to demonstrate particular skills specified in a nationally agreed standard. The model supports a high degree of central control, often veiled as quality assurance, where the focus is firmly on coherence and standardization. It is powerful in maintaining a narrow view of teaching and education, whereby the standardization of training opportunities overshadows the need for teachers to be proactive in identifying and meeting their own development needs. The dominant discourse in Scotland, as in many other countries, supports this notion that the standardization of training equates to improvements in teaching, learning, and pupil attainment. Indeed, Kirk et al. (2018), in outlining the context for the development of the chartered teacher program in Scotland, link the standards-based approach with an associated training model of CPD.

2.10.2 The Change Model

Research evidence that supports the usability of this conceptualization in explaining teachers’ professional development is documented in the work of Guskey (2002). In his review of empirical findings, it was described that teacher commitment to their profession increases after they are exposed to innovative ideas and principles about teaching and their active involvement in practicing these ideas in the classroom. An exemplary work by Huberman in Guskey (2002), for example, showed that teacher anxiety and confusion gradually dropped, an understanding of the structure and rationale of the innovative instruction program grew, and mastery was achieved,

indicating the precedence of behavioural change to changes in attitude and belief systems.

However, Guskey's teacher change model seems to contradict the commonly held view that implementation of new practices in teaching is consequential of the change process in teacher attitudes and beliefs over changes in teachers' classroom behaviour. According to Guskey (2002), three basic principles stood out from the model of teacher change. The first principle that stemmed from the model recognizes change as a gradual and difficult process for teachers. This principle implies that any change in the human enterprise is likely to induce resistance and demand more expenditure of time and energy to meet the requirements of the new setting. Despite that, teachers might be resistant and show unwelcoming behaviour to the new change programme or innovation. And it is unrealistic to think human behaviour is devoid of the setting in which the behaviour is elicited. Furthermore, the same environment might not equally affect the participants. Hence, new programs and innovative practices of teacher professional development should consider situational and contextual factors. A balance has to be maintained between school-based situations at the micro level and broader socio-cultural factors prevailing at the macro level. Striking a balance between these two contexts calls for active collaboration between teachers, program developers, and policy makers at large. Top-down professional development programs that ignore the teachers' role at all phases of the program will result in reluctant behaviour or program failure.

What is more relevant to this study is the second principle. Guskey (2002) attaches due weight to the relevance of uninterrupted provision of "regular feedback" on student learning progress to teachers. He further contends that a mechanism has to be in place to ensure the continuous flow of information about the level of student

learning progress. The argument is that regular feedback obtained from students' progress reinforces the sustainability of the desired behaviour. Continuous assessment and monitoring of the effectiveness of teaching not only strengthens the behaviour but also helps to devise an early intervention mechanism to correct errors. Knowledge of students' perception of the teacher performance level of a new program enhances the formation of positive attitudes and beliefs towards these new programmes.

2.10.3 Pedagogical Versus Subject Area Model

Quality education and the critical role played by teachers in maintaining quality are outlined by many researchers. The affective aspect of teacher behaviour, demonstrated in their attitudes, beliefs, and perceptions in influencing the learning environment, is an important input toward quality education. An inter-case analysis of teacher and principal perception of quality in four regions of Ethiopia showed teachers to be critical resources in the delivery of quality education. Accordingly, both principals and teachers stressed the need for qualified teachers who have appropriate subject knowledge and pedagogical skills (Amare et al., 2006). The modalities upon which pre-service and in-service teacher development programs are organized and carried out emanate from conceptualizing teaching as a science or art. Despite the dichotomy in conceptualizing teaching as a teacher's science and teaching as an art, teacher education programs are meant to develop professional competencies through pre-service and in-service strategies and the use of short-term or on-the-job induction programs.

The hard line that separates teacher education as the acquisition of skills and knowledge through pre-service training versus a socially constructed activity as defined by Dawit and Alemayehu (2001) is getting blurred. Instead, a blend of the basic tenets of these two perspectives is gaining wider acceptance. For and against

dichotomised arguments for attributing teaching are implicated in curricula and teacher development programs. In the Ethiopian context, for example, methodology versus subject-content mastery has been a major theoretical paradigm in shaping teacher education programs. Reviewing various sources (Dawit and Alemayehu, 2001) described the contribution of professional and subject area courses to teaching effectiveness. While some research findings demonstrated the supplementary nature of the two, others found the relative increment of teaching effectiveness in subject area knowledge.

2.11 Knowledge Gap

The literature presented above highlights an in-depth understanding of the nature of continuous professional development and the factors that can either positively or negatively influence it. The findings indicated that the commitment of school leadership and the support of the professional development team helped in the implementation of the professional development ideas. The unwillingness of tutors to change, tutors' perception, lack of resources, lack of time and the long period of professional development are factors thwarting teachers' social construction of knowledge through CPD training. This implies that the tutors can construct knowledge and implement the ideas in the professional development, given the needed support, but face challenges that need to be addressed.

In summary, it is therefore noted that professional development that works well in one school may not work in another because of different social and cultural experiences. The organisational ecological environment is a key variable when it comes to teachers' construction of knowledge through CPD training, as studies have noted it as one of the key elements of a professional development system. School/college ecological environment, like existing curriculum, principals, and colleagues, can

support or limit the expected outcome of professional development. This is supported by other studies indicating that school /college policies that are at variance with professional development practices will limit implementation efforts. While there is a need for a pattern of behaviour at a general level, researchers must attend to context-specific issues of professional development systems, as there is interaction between the context of professional development and its outcome. Therefore, it may be concluded that social-cultural issues cannot be ignored in studying the impact of professional development. However, it is necessary to note that most studies on professional development neglect the impact of school context on professional development programmes for tutors.

The references above, therefore, provide a backbone for this particular study, contextualised in the Kenya Teacher Primary Training institutions. Professional development has traditionally been provided to teachers through school in-service workshops. In the classic conception of that model, the Ministry of Education organises an outside consultant or curriculum expert on a staff development day to give teachers a one-time training seminar on a variety of pedagogic or subject-area topics. Such an approach has been routinely lamented in professional literature. Experts variously say that it lacks continuity and coherence, misconceives the way adults learn best, and fails to appreciate the complexity of teachers' work and other contextual factors.

Whilst references address many factors that affect the multiple contexts in which professional development can be implemented, there is inadequate information on specific social-cultural factors that influence the teachers' continuous professional development such as the formation of learning communities, the recognition of multiple roles within the professional life of teachers, the development and impact of

leadership skills and the provision of support, the necessity to deal with uncertainties and explore authentic problems and challenges, and the importance of centering efforts on student learning and achievement. Even though most studies recognise that the process of professional development is just as important to its definition as is the content, the focus is directed toward the programs organised by the Ministry of Education to provide short-course workshops to practising teachers and ignore the provision of these programs in the teacher training centres. These factors recognise the many influences on the effectiveness of professional development experiences. Although “effectiveness” is often explored in the context of the professional development initiative itself, there is also increasing recognition that policy, school practices and culture, and the delineation of roles and responsibilities in school and district settings, can have an impact on those measures put in place to assess how effective a professional development initiative can be. In surveying the nature of CPD, this research study determined the efficacy of various types of professional development activities, including pre-service and in-service seminars, workshops, and summer institutes. Studies should include professional development activities that are extended over time and across broad teacher-learning communities to identify the processes and mechanisms that contribute to the development of teachers’ learning communities. Despite the divergent literature that focuses on social and cultural, process, timing, and tutor involvement that influence continuous professional development, the concern, however, is that there is little empirical knowledge on what constitutes effective professional development, with a key focus on social and cultural factors, where our knowledge base for professional development may be inadequate. Even though professional development activities have received increasing attention during the last decade, which has necessitated a change in curriculum in the Kenyan

context from the 8.4.4 to a competency-based model, careful empirical research on teacher professional development lags far behind, and information on the effectiveness of the programmes that have been rolled out is also scanty.

Whilst the above-reviewed studies have indicated the benefits of CPD and how CPD contributes to the theory and practice of teacher CPD, it can be argued that most of the studies do not provide enough evidence on how teachers socially construct knowledge. This points out the need to conduct a study into how teachers learn professionally. It is evident enough that if the tutors' ecological systems do not work in harmony to address the issue of tutor learning, then knowledge construction through CPD programs will remain at the theoretical level, *per se*.

2.12 Theoretical Frameworks

This study was anchored on two theories, namely the Social Constructivist Theory of Human Learning and Bronfenbrenner's theory of Bio Ecological Human Development. Each of the theories addresses a different critical aspect of the study.

2.12.1 Social Constructivist Learning Theory

This theoretical framework was advocated by (Vygotsky, 1962, 1998; Piaget, 1970; Bruner, 1962, 1966, 1979). According to this theory, the learning process is viewed as constructive, and learners are viewed as information constructors who build and construct new conceptualisations as well as understandings by using what they already know (Chalmers & Keown, 2006; Mahoney, 2003). It is a theoretical orientation that emphasises the significant role played by social interaction, discussion and knowledge sharing among learners. It also recognises the role of community in the process of making meaning (Akpan, Igwe, Mpamah & Okoro, 2020). The constructed meaning of knowledge and beliefs involves a process whereby individuals

discover new knowledge, skills, and approaches and then personally interpret their significance.

Constructivist theory focuses on individuals' active interactions with one another and the environment and how these interactions lead to an individual's search for knowledge and skills (Creswell, 2013). This discussion agrees with Wenger's (1991; 1998) theory of social learning, which emphasises the due processes by which learners build their mental structures while interacting with the environment through certain events that improve their learning is improved. It encourages the basic assumption that individuals are active learners who must discover and construct knowledge for themselves rather than the knowledge being imposed on them (Bruner, 1966). On the other hand, this theory emphasises the importance of learning by doing, and in this case, the tutor is treated as an active learner who must construct knowledge for himself/herself rather than being a passive recipient of it. This premise supports the idea that teachers learn best when they are actively involved in constructing their own understanding and applying it to their teaching practice.

The core principle of social constructivism is that students learn best when they can identify problems of understanding, set and refine goals based on progress, gather information, theorise, design experiments, and answer questions. In the context of CPD training, this theory would imply that effective CPD training should be learner-centred, to allow teachers to engage in active learning, collaborative, problem-solving, and reflective practices. It also implies that since professional development for teachers is a kind of adult education, it should emphasise meeting the teachers' needs in light of their different learning and teaching environments.

The constructivist approach considers learners as enthusiastically contributing to their own learning process. Regarding CPD training, this would imply active involvement of teachers in the design, planning and implementation of the training as opposed to them being passive recipients. This allows for more dialogic and interactive CPD sessions that focus on active learning, where a teacher is placed in the CPD learning processes and activities rather than replacing teachers' knowledge and skills. Arguably, involvement of teachers would liberate, empower them and increase ownership feelings amongst them, leading to an enhanced social construction of knowledge.

The theory also rests on the premise that effective knowledge construction is culturally specific, which is created and developed over time to solve real-life problems in their social contexts (Vygotsky, 1978). Therefore, within the CPD training context, this would imply that teachers' effective construction of knowledge can occur where teachers may appropriate new knowledge from participation in real teaching and learning activities, as reflected in the improvement in pedagogical approaches, students' outcomes, and classroom management, amongst other benefits. Therefore, knowledge construction is related to the context of practice.

The constructivists also advocate for learning as the changes that occur from participation in socially organised activities with other people, objects and events. Therefore, individuals' use of that knowledge from learning is an aspect of their participation in social practices. Regarding CPD training, this premise would imply that teachers engage in collaborative activities of CPD where they share similar teaching experiences, interact, and dialogue. In line with this argument, which advocates the importance of employing learning processes such as teacher reflection, peer networking. Concerning this study, this would include conducting CPD training

through teacher reflective practices and encouraging collaborative activities and peer-to-peer interactions among tutors. This way, as reflected in the reviewed studies, helps them to learn from each other, share their experiences, as well as offer feedback to each other. This is the aspect of social constructivism known as peer learning.

In addition, Vygotsky (1978) discusses on the notion of zone of proximal development as a dynamic region that may be thought of as a notional space in which external influences/environment such as school type, colleagues, administrative support, availability of CPD programs, mode of evaluation, all of which if correctly positioned has been proven to be effective in supporting individual progress. The Zone of Proximal Development is in part conditioned by the culture in which the person develops as they participate in problem-solving with other members of their cultural group who have greater experience than him or her (Davis et al., 2015). A breakthrough in the ZPD is only achieved when the physical, social, and cultural environment provides joint dialectical activity for the expert as well as for the learner. This is what Vygotsky terms object regulation, informing teachers' cognition of continuous professional development. Regarding social construction of knowledge through the CPD training, ZPD is thus created through the social interaction between the teacher, co-participants, CPD trainers and the available mediating tools during involvement in a shared activity.

The above discussion points out that the external influence is an aspect that is not understood as definitely given but is rather formed in a dynamic manner, which is mutually shaped by the activity that participants, in this case, the tutor, engage in through Continuous Professional Development programmes. This implies that tutors' social construction of knowledge through Continuous Professional Development programmes is made from the activities that tutors engage in, where they attend these

programmes, and the time taken while attending such programmes. This also points out that knowledge is constructed jointly as tutors undertake activities that are negotiated through interaction with others, as contrasted to when it is imposed.

According to Burr (2015), social constructivists subscribe to four shared beliefs, including maintaining a critical stance toward knowledge that is otherwise taken for granted, that knowledge exists in historical and cultural contexts, that knowledge is sustained by social processes, and that knowledge and social actions go together. Burr contends that sociologists and psychologists have the obligation to be aware of assumptions that underpin implicit knowledge. Burr points out the need not to assume that approaches to understanding in time and contexts are superior to one another. Consequently, the perception of truth should be an outcome of social processes and interactions.

Some of the strengths of this theory lie in the fact that, firstly, it emphasises the role of engaging learners in the process of meaning-making. With respect to this study, tutors learn by being actively engaged in learning contexts and thereby constructing their knowledge. The constructivist perspective suggests that there is a need to structure CPD experiences/training in such a way that it will enable tutors to be active learners in meaning-making, whereby they will also bring aspects of their earlier professional experiences into the CPD training. As a result, doing this permits them to engage in effective construction of meanings. By encouraging active involvement of tutors, it is in questioning the traditional goals of education by encouraging learners to develop their own expertise rather than merely obtaining it from a seasoned teacher, head teachers, heads of departments, Continuous Professional Development trainers and coordinators or facilitators. This line of argument is in tandem with the literature

review findings that report on the key role of involving tutors in the meaning-making process rather than making them mere consumers of knowledge.

Secondly, this theoretical framework recognises the fact that Continuous Professional Development has to be strongly linked to the actual social-cultural context as well as the situation of individual schools. This line of argument is in tandem with Paola et al. (2004) on Engestrom's model of expansive learning, which points out that human beings do not live in a vacuum but are rather ingrained in their social and cultural context. Such observation points out that human behaviour cannot be understood independently of this context. Regarding these individuals, and in this case, tutors will search for an understanding of the life world in which they live and work.

Lastly, this theoretical framework recognises that new developments in learning require adequate time to be achieved. Regarding CPD training, this would imply the importance of giving tutors enough time to attend CPD training, as reflected in frequency and duration, to facilitate their social construction of knowledge.

It is due to the above-discussed tenets and strengths that the study adapted this theory, as it is deemed relevant in helping examine and understand the process of tutors' learning as they experience it. This is because examined from a constructivist perspective, teacher construction of knowledge is treated as an active, ongoing process whereby tutors have a chance to share with their peers, engage in collaborative practices, and reflect upon their prior and current knowledge so that they are in a better position to develop new knowledge, skills, and attitudes.

2.12.2 Bronfenbrenner's Bio Ecological Theory and Applied Process-Person-Context-Time (PPCT) Model

Bronfenbrenner's Bio Ecological Theory was developed in 1998 and advanced in 2006 to apply the Process-Person-Context-Time (PPCT) Model by Bronfenbrenner & Morris, Rosa, & Tudge (2013). The theory describes the continuity and change-defining developments by simultaneously examining complex interactions, characteristics of individuals, and immediate and distal contexts, across present, future, and historical time in a Process-Person-Context-Time (PPCT) Model.

According to the Bio Ecological Model of Human Development by Bronfenbrenner and Morris (2006), the process involves active interaction with a programme, an activity, or a person. The proponents of the theory indicate that for effective interactions to occur, the interaction must occur regularly, be extended over periods, become increasingly more complex, and finally produce development (Leonard, 2011). However, Bronfenbrenner and Ceci (1994) argued that the form, power, content, and direction of the process or interaction depend on the developing individual as well as contextual factors and historical experiences in the course of the life of the individual.

The finding, in tandem with Wenham (2018) asserts that the person involved in the interaction or proximal process has certain biological, emotional, cognitive, and social characteristics that impact how proximal processes or interactions occur. Similarly, Burke (2007) in identity theory states that individuals have unique characteristics that explain the way they interact and carry out their roles. Similarly, Bronfenbrenner and Morris (1998) also argued that social and cultural factors determine how an individual develops through a proximal process. Concerning this, Vélez-Agosto and Soto-Crespo (2017), in the advancement of Bronfenbrenner's Bio Ecological theory, indicated that

four contexts affect individual development and proximal process, namely, microsystem, mesosystem, exosystem, and macrosystem. Microsystem refers to the immediate environment where the developing person is and where the interaction with the activity, program, or person takes place (Bronfenbrenner & Ceci, 1994). On the other hand, Conlin (2019) defines mesosystem as the interconnectedness and linkages of the immediate environment of the various systems. It is a system of two or more microsystems. The interrelations between different microsystems affect teachers' construction of knowledge. In relation to CPD, this subcomponent would imply that the heads of institutions work hand in hand with the HODs, together with other education leaders, to devise policies as well as systems to address CPD needs for teachers. The exosystem can be defined as the external settings /events that indirectly influence a child's development. For instance, a parent whose job is stressful may have a reduced capacity to engage in meaningful interactions with their child at work. (Bronfenbrenner, (1994) in Weisner, 2008). In relation to CPD programmes, this would imply that there should be a teacher education desk, which should be addressing the CPD issues for teachers. For instance, information on how to access scholarships, time for CPD, provision of career pathways and incentives to teachers attending these training.

A microsystem can be defined to as a pattern of activities, social roles, and interpersonal relations experienced by the developing person in a given face-to-face setting (Cunningham & Rosenbaum, 2014). It can be summarised as any immediate environment or organisations that a child interacts with, be it family, peer group or school setting. Regarding tutor construction of knowledge through CPD training, it would be used to explain the proximal process of training, the person, in this case, the tutor, undergoing the training. Regarding this, the tutors' resources in terms of

resources that can be limiting or helpful in the means-making process. It also includes a tutor's age, gender, demand characteristics, and behavioural disposition, all of which either attract or inhibit progressively more complex interaction (Brofenbrenner & Morris, 2007). The tutors' personal characteristics are important in how they develop as teachers. These characteristics can influence the level of development in conjunction with what activities they engaged in, the context in which they operated and the influence of time at any given period.

The last component is the macrosystem, defined as the overarching characteristics, beliefs and values of a given culture or community which indirectly affects a child's development (Ashiabi & Neal, 2015). It also describes the economic conditions in which the family lives, along with material resources and opportunity structures. In relation to CPD training, it can be related to the very influential positions, and can decide in consultation with others what systems and policies will need to be instituted. Conclusively, if the teachers' voices are not taken into consideration at this level, then what they propose may not work in their favour. In relation to CPD training, this subcomponent would imply that there is a need for CPD training to take into consideration the needs and interests of teachers regarding their classroom needs as a way of empowering them to construct knowledge.

The theory has been widely used in diverse contexts to explain how different ecological systems affect the way people interact in subsequent systems (Conlin, 2019; Guhn & Goelman, 2018; Paquette & Ryan, 2018; Vélez-Agosto & Soto-Crespo, 2017). Tudge et al. (2009) argue that the theory can be used in conjunction with other theories as a complementary level of explanation to supplement and support individualist accounts of psychosocial development. A microsystem is a pattern of activities, roles, and interpersonal relations experienced by the developing

per of activities, roles, and interpersonal relations experienced by the developing person in a given face-to-face setting with particular physical and material features and containing other persons with distinctive characteristics of temperament, personality, and systems belief. (Bronfenbrenner, 2005b, p.148). For instance, individual tutors, the department of teacher education, the college environment the tutor is in, home, family, church, clubs, and societies can be termed as microsystems. In this view, the theory was found relevant to guide the current study.

In the context of teachers, the process would relate to the interaction that teachers have with teacher continuous professional development, either through training workshops or evaluation by seniors. Arguably, if the working conditions are supportive, teachers will be empowered to construct knowledge and vice versa. Regarding the process in Process-Person-Context-Time (PPCT) Model, when teachers go through a program regularly and for a long period with diversity each period, the program becomes a social structure that produces more effective and satisfied teachers (Ashabi & Neal, 2015). This implies that the more the interaction regularly a teacher interacts regularly with such programs that are meant to improve their effectiveness and satisfaction, the more effective and satisfied the teacher is (Rosenshine, 2018).

The first "P" refers to Process. It is also referred to as the proximal process. It includes the forms of interactions that the individual engages in, within the immediate external environment (Bronfenbrenner 2005d, p.6). Tudge et al. (2009) characterise these processes as activities in which the individual regularly engages and which help them make sense of their world. The form, power, content, and directions of the processes vary in quality depending on the immediate and remote environment, in addition to the kind of outcomes (Bronfenbrenner & Ceci, 1994). From Bronfenbrenner's (2005d)

explanation of processes, these activities could refer to feeding or comforting a baby, solving problems, reading, and doing other complex activities. In this study, the proximal processes in which tutors engage could be likened to activities such as providing support to teacher trainees, discussions with colleagues about work, researching material to increase knowledge, reading, surfing the net, assessing students, facilitating sessions, collaborating with staff and conducting CPD activities within the community. To be effective, these processes should be conducted by the individual in interactions with objects/symbols or with others in the immediate environment on "a fairly regular basis", should be bidirectional, and become "progressively more complex" over time (Turner, 2005).

Proximal processes are the "primary engines of development" according to Bronfenbrenner (2005d, P.6). The same author further claims that the frequency and quality of these proximal processes determine how much a person grows and develops, but the interrelatedness of the other dimensions also affects the effectiveness of the proximal processes. This would imply that the effectiveness of the forms and types of CPD activities that teachers participate in within their environment is dependent on the nature of the environment in which they occur. How often the activities occur, and the quality and purpose they serve, would also be critical.

With respect to developing persons, the second "P, refers to tutors/teachers, as developing persons have their individual qualities that determine the direction of interaction. Teachers' characteristics/resources that determine how the teachers are impacted by a program or an activity include teachers' abilities, knowledge, understandings, skill set, experiences, intelligence, knowledge, and physical material endowment (Halder and Roy, 2018), which in turn play a role in their development and engagement within the proximal process. In addition, a teacher's temperament,

disposition, motivation, and persistence can influence the start, participation, and maintenance of the activity or program (Sengottuvel & Aktharsha, 2015). In respect to this, a teacher with more working experience, more knowledge in their subject areas, highly motivated and with high perseverance is more likely to take part in teacher continuous professional development. This implies that the more interaction a teacher has with such programs that are meant to improve their effectiveness, the more effective the teacher is (Rosenshine, 2018; Ismail, 2015).

Additionally, Evans (2014) reports that at the micro-level cognitive process of professional development, a researcher would be interested in what occurs inside a tutor's mind for him or her to experience the impact of a Continuous Professional Development program. Letter C stands for Context. It has been equated to the socio-cultural aspect or even the environment in which tutors are found. This element has four aspects, namely: microsystem, mesosystem, exosystem, and microsystem contexts. In the context of teachers, the microsystem in contextual factors refers to the school, students, fellow teachers, and administration where the teaching takes place and where teachers carry out several other duties as assigned (Smart, 2009). If the school provides a conducive environment for teachers to take part in teacher continuous professional development, the teachers are empowered to socially construct knowledge, and so their capabilities are enhanced and thus more effective (Drakensberg & Malmgren, 2013). In the context of a mesosystem, if there is involvement of several educational stakeholders in teacher continuous professional development, the teachers are more likely to be developed into effective teachers, and they are also likely to be more motivated to take part (Iroegbu & Etudor-Eyo, 2016). This sub-system stresses the importance of creating institutional conditions that facilitate the working environment as a learning environment for tutors.

Additionally, Bronfenbrenner's theory evolved to consider the impact of these objective physical conditions and shows how, while they are not sufficient alone, their interrelationship with experiences fosters human development. This social-cultural aspect is formed based on this interrelationship, an individual's engagement in an activity where reciprocity between the individual and tools/objects /individuals is formed (Schunk, 2008, in Kellough, 2018).

Secondly, there is the mesosystem, which comprises linkages and processes taking place between two or more settings containing the developing person (for instance, the relations between home and school, school, and the workplace environment). That is, mesosystems are a system of microsystems (Brofrenbrenner, 2005b, P.148). In this study, these linkages included tutors interacting with other tutors in the learning process (CPD training), engaging in communities of practice, engaging in reflection, as well as connecting with other tutors from other institutions of teacher training colleges.

Thirdly is the exosystem, which encompasses the linkage and processes taking place between two or more settings, at least one of which does not ordinarily contain the developing person, but in which events do occur that influence processes within the immediate setting that does contain that person (Bronfenbrenner, 2005b). In the Kenyan Education system, the Ministry of Education does not engage tutors directly in the decision-making process but does make decisions that affect them. They are integral in the course of their work through the decisions they make on behalf of the institution. Regarding exosystem factors, a teacher may be willing to attend a teacher's continuous professional development workshop on how to improve instructional strategies, but the school administration lacks the financial resources to facilitate the workshop. In respect to this, the administration is the exosystem. The more the

exosystem is supportive, the more the development of a person, and in this respect, the more effective the teacher (Ntshangase, 2017). In the context of teachers and the macrosystem, violation of teachers' beliefs, cultures, and religious orientation through either teacher continuous professional development or teacher performance appraisal and development may lead to a teacher being ineffective (Toropova et al., 2019). The macrosystem consists of the overarching pattern of micro, meso, and ecosystems characteristic of a given culture, subculture, or other broader context, with particular reference to the developmentally instigative belief systems, resources, hazards, lifestyles, opportunity structures, life course options and patterns of social interchange that are embedded in each of these systems. The macro system may be thought of as a societal blueprint for a particular culture, subculture, or other broader social context (Bronfenbrenner, 2005b, p.149).

This sub-system, in this research study, included aspects such as the broader national context, the national educational advisory boards, the Ministry of Education, and other education stakeholders such as UNICEF and the World Bank, where educators and others at the highest levels of national discourse engage in policy development with expectations of implementation by tutors or their education leaders. For example, it is in this context that decisions are taken about what courses are offered at the teacher education program and how and by whom they are assessed. Focusing on the context of teachers and in responding to the time aspect in the PPTC model, micro time may imply, for example, a change of teacher continuous professional development programs from time to time. Mesotime, on the other hand, may imply, for instance, a change in the frequency with which a teacher's continuous professional development is done, from every term to once a year. Macro time in the context of teachers may relate to changes in a teacher's job position, either from a teacher to a

school principal, or a change of profession altogether, which results to change in teacher continuous professional development programmes for such a teacher. In Summary, the Bronfenbrenner theory of human development has successfully explained the role of the ecological systems in enhancing teachers' social construction of knowledge. It follows that if the ecological systems are not interrelated to further teacher learning, the problem will continue to negatively affect the expected outcomes of CPD training.

2.13 Conceptual Framework

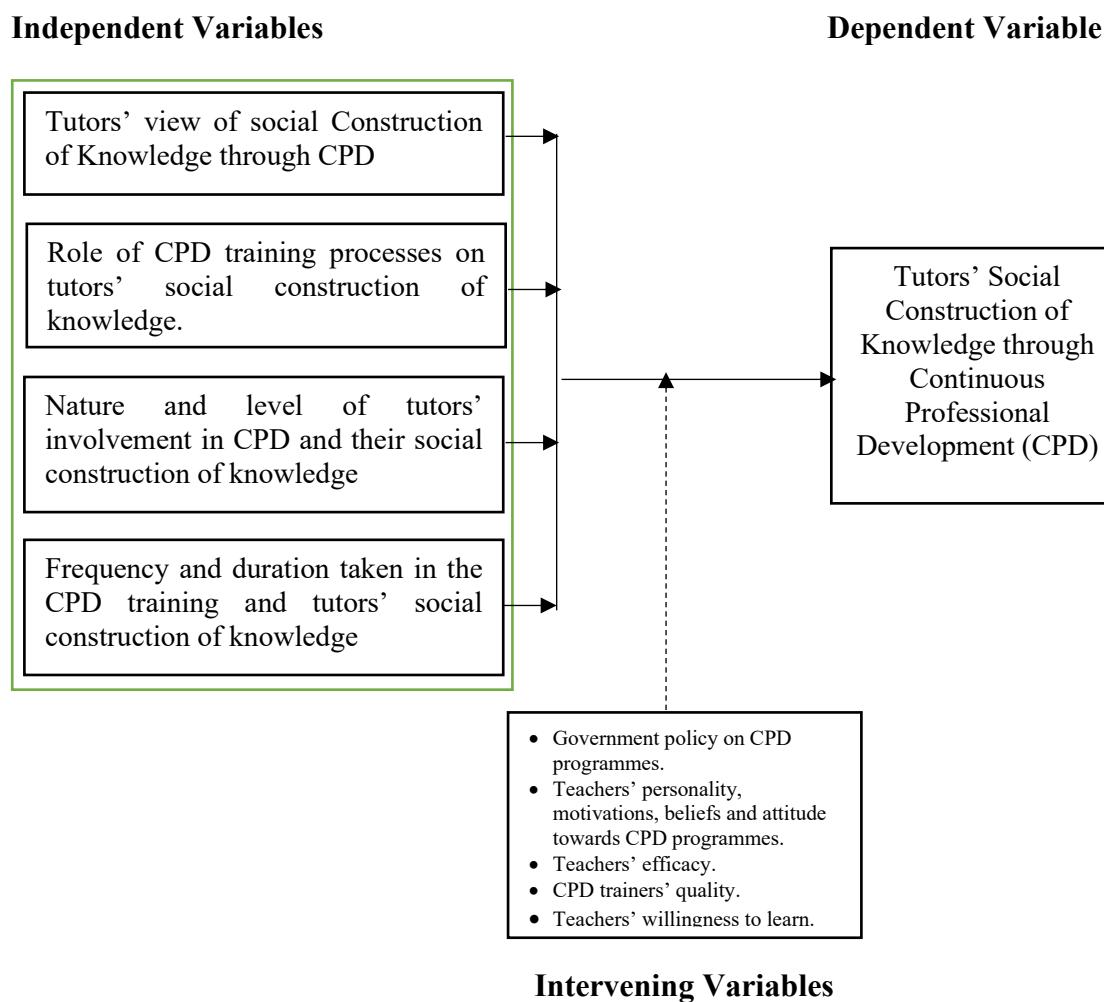


Figure 2.1: Conceptual Framework on how tutors' socially construct knowledge through the acquisition of CPD.

Source: Author 2024

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Overview

This chapter focuses on the research methodology and procedures used to support the study's objectives. It describes the qualitative research logic, the phenomenological research design, and outlines key decisions regarding the research philosophical paradigm, study site, population, sample size, and sampling techniques, instrumentation, reliability and validity, data collection and analysis, ethical considerations, and reporting procedures.

3.1 The Study Locale

The study was carried out in primary teachers' training colleges in Nyeri and Murang'a Counties of the Central part of Kenya. Central Kenya has a total of six primary teacher training colleges. The researcher focused on the two public colleges, one in Nyeri County and the other in Murang'a. Crossman (2017) recommends that a study consider factors such as accessibility, timing, expertise, typicality, or scarcity as guiding factors in the choice of a purposive sample. A purposive sampling of the two public teachers' training colleges was adopted in this case.

Nyeri County is located in the former Central Province of Kenya. It is about 153 km North of Kenya's Capital, Nairobi. Nyeri County neighbours Kirinyaga County to the East, Nyandarua to the West, Muranga to the South, Laikipia to the North, and Meru County to the North East. It lies between the eastern base of the Aberdare (Nyandarua) Range, which forms part of the Eastern end of the Great Rift Valley, and the western slopes of Mount Kenya. It has a population of 759,164 (based on the 2019 Census report) and has its headquarters in Nyeri town.

There is only one teacher training college in this County, Kamwenja, which was started in 1924 by Bishop Perlo, Vicar Apostolic of Nyeri, under the sponsorship of the Consolata Missionary Society, which managed it up to 1958. It is located 8 km northwest of Nyeri Town. Kamwenja was chosen for reasons of accessibility and timing of the study, its reputation for quality service, and because little research has addressed CPD construction in this area, making the current study a valuable contribution to the body of knowledge.

Murang'a County is one of the five counties in the Central region of the Republic of Kenya. It is bordered to the North by Nyeri, to the South by Kiambu, to the West by Nyandarua, and to the East by Kirinyaga, Embu, and Machakos Counties. It lies between latitudes 00 34 South and 107 South and Longitudes 360 East and 370 27 East. The County occupies a total area of 2, 5588km². There are two teacher training colleges in this County. There is Murang'a TTC, a public college, and Maragua TTC, which is a private one. Murang'a TTC is one of the 28 TTCs in Kenya. It was opened in 1991. It is located along the Thika-Nyeri Highway. The college has students and tutors drawn from all over the country. It was chosen on the basis that the number of tutors in this college has shown aggressiveness in going for further studies in a bid to retool themselves, as reflected in the students' outcomes.

The rationale for choosing the two study sites is that, despite much work in professional development in primary and secondary schools, as indicated in previous literature, none of the studies have investigated tutors in public primary colleges in Central Kenya. Therefore, this study addresses the gap in the social construction of knowledge through CPD programs in this specific context.

3.2 Philosophical Underpinnings

This study was guided by an interpretive paradigm. Interpretivist researchers view knowledge as socially constructed through language and interaction, and reality as connected and known through society's cultural and ideological categories (Samuel, 2016; Neuman, 2021). The goal of interpretive research is to develop an understanding of social life and discover how people construct meaning in natural settings.

Human activity is not regarded as a tangible material reality to be discovered and measured; rather, it is viewed as a "text" that can be read, interpreted, and analysed. In this way, interpretivism draws from hermeneutics, which aims at a holistic understanding of the experience, motivations, and context of the speaker/ author (Guba & Lincoln, 1989; Sarah, 2020). This study being a survey of how tutors socially construct knowledge through CPD programs, was based on the fact that CPD learning is a social interactive endeavour between tutors, peers, CPD trainers, and their immediate environment, each influencing the learning process in one way or another in an endeavour to socially construct meaning. Therefore, this paradigm was appropriate for this study since it sought to explore how tutors in PPTC in Nyeri and Murang'a Counties socially construct knowledge through acquiring Continuous Professional Development.

This paradigm is guided by four tenets. First, it adopts a subjectivist epistemology, which states that the researcher makes meaning through their own thinking and cognitive processing of data based on their interactions with participants (Kivunja, 2017; Denzin, Lincoln, Giardina & Cannella, 2024). The implication here is that tutors construct knowledge through their lived experiences and through their interactions with other members of the teaching fraternity. Knowledge is socially

constructed as a result of the researcher's personal experience with the natural settings investigated (Punch, 2005). Knowledge is socially constructed, not discovered.

Additionally, tutors' social-cultural experiences, training processes employed, and their interactions with peers have an impact on how they end up socially constructing knowledge, hence the constructivist interpretive epistemology. Therefore, interpretivism suited this study as it shaped how the researcher sought answers to the questions on the social structures that influence tutors' social construction of knowledge through CPD in primary teachers' training colleges in Muranga and Nyeri Counties of Kenya.

Secondly is the element of ontology, which is defined as the study of reality or existence. In this case, ontological assumptions do relate to the nature of what the study deals with (Sarah, 2020). Ontological considerations of what one wants to study do precede methodological and theoretical ones. In addition, (Laverty, 2013; Kivunja, 2017; Catherine, Gretchen & Gerardo, 2022) observe that the interpretive philosophical position that supports the ontological viewpoint is anchored on the assumption of relativist/nomalist ontology which states that multiple realities exist, are constructed, and can be reconstructed through human interactions between the researcher and the participants of the research through the process of communication and negotiations.

In this sense, the reality is socially constructed, which means that the findings in this research will depend on the responses from participants on how tutors socially perceive knowledge, the process employed in conducting CPD, the nature and involvement of the person (tutor), and finally, the time taken in conducting these CPD

programs. The study, therefore, interrogated CPD as a social structure for knowledge building amongst tutors in PTTCS.

Thirdly is the aspect of methodology. The interpretive paradigm is hinged on the naturalist methodology, which observes that the researcher utilises data gathered through interviews, discourses, text messages, and reflective sessions, while on the other end, the researcher acts as a participant observer (Carr & Kemmis, 1986, in Kivunja, 2017). In this study, the researcher used in-depth interviews with the principals, selected colleges as well and the key informants. For the tutors, the researcher administered a focus group discussion, where I played the role of a rapporteur.

Lastly is the axiology, which is defined as the values associated with areas of research and theorising. The interpretive paradigm is based on a balanced axiology (Creswell, 2018), which assumes that the outcome of the study is a reflection of the values that the study holds in trying to present a balanced report of the findings.

In submitting this research study to the above tenets, the researcher believed that the study was equipped to explore and understand the phenomena of how tutors socially construct their knowledge through CPD programs, in addition to looking at the different social structures that influence such constructions.

However, one of the limitations of interpretive research is that its results cannot be generalised to other situations since an interpretive research study is usually subjective (Mack, 2010). However, this limitation was mitigated by the use of verbatim narratives, which were used to back up findings from the literature review. Secondly, the study employed triangulation to mitigate the same.

3.3 Research Design

To obtain results, this study adopted a qualitative approach using a phenomenological research design (Jason & Glenwick, 2016; Creswell & Creswell, 2023). The phenomenological design involves demystifying or making clear the social reality through the eyes of different participants. (Cohen et al., 2007). Regarding this, it would imply that tutors' social construction of knowledge experiences can only be shared through an examination of reflection of their own narratives from in-depth interviews and focus group discussions, narratives about their view of CPD, various processes employed in the training, and duration of training. This research design helped the study investigate the lived experiences of tutors in regard to the social construction of knowledge through attendance at CPD training. Additionally, the design allowed the study to employ in-depth interviews to understand the experiences of CPD training as described by the participants.

3.4 Study Population

The target population for this study comprised 92 respondents distributed as follows: 2 principals, 6 key stakeholders from the Education sector, and 84 tutors in Kamwenja and Murang'a teachers' training colleges in the Central region of Kenya. These respondents were targeted because it was believed that they would provide clear and suitable information for the study since they are, in one way or another, involved in the Continuous Professional Development programmes. This is demonstrated in the table below

Table 3.1: Target Population and Sample Size

Category	Target Population	Sample Size
Principals	2	2
Key stakeholders (Education Directorate)	6	6
Tutors	84	30
Total	92	38

Source: Extract of the TSC (2023)

3.5 Sample Size and Sampling Procedure

3.5.1 Sampling of the study sites

The research employed a multistage sampling. The first stage entailed the selection of 7 clusters based on the geographical boundaries of the Coastal, Nyanza, Northern, Eastern, Western, Central, and Rift Valley regions in Kenya. The second stage entailed the selection of the institutions using a systematic random sampling technique. Finally, the two units were purposively selected for data collection. To begin was the selection of units (first stage), a list of the 28 Teacher Training colleges based on the geographical locations, to identify the primary sampling units. Each unit was stratified according to the regions. A total of 7 clusters were selected in order to enable the minimum cluster number of 7. The second stage involved the selection of units using a systematic random sampling, whereby the first unit in the identified cluster was randomly selected. The key inclusion criteria were: the TTCs with tutors above 30 and the institutions whose principals have more than 10 years' experience. Thirdly, the sampling approach was narrowed down to the use of purposive sampling. In purposive sampling, researchers intentionally select individuals and sites to learn or understand the central problem. The standard used in choosing participants is whether they are "information rich" (Yin, 2018). This sampling strategy implies that a researcher selects people or sites who can best help understand the phenomenon under study, and those who are in a position to give it.

In this study, Kamwenja and Murang'a TTCs were selected as they were among the colleges that were undertaking CPD training programmes for their tutors and, therefore, they were suitable for the study. Secondly, this approach was also adopted based on accessibility, timing (Creswell, 2014). It's due to the above reasons that the study picked Kamwenja and Murang'a PPTCs of Central Kenya. (See Appendix 7)

Table 3.2: List of Selected Colleges and Their Population

INSTITUTION	Target Population	Total No. of Females	Total Number of Males	Sample size
A (Kamwenja TTC)	48	5	11	16
B (Muranga TTC)	36	5	11	16
Total	84	10	22	32

Source: (Study Field)

3.5.2 Sampling of the Research Participants

The study adopted three more sampling procedures. First, purposive sampling was employed in choosing administrators in the selected colleges, that is, 2 principals. They were selected because they facilitate continuous professional development training by offering resources to teachers whenever the need arises. Secondly, this approach was used to select key informants in the research, such as key informants from the Ministry of Education and TSC, which included 2 Curriculum Support Officers, 2 Quality assurance officers, and 2 County Directors of Education, as they have a role in implementing CPD training. Secondly is that in sampling the tutors, the study employed stratified sampling then simple random sampling to sample tutors from the selected colleges. This ensured equal gender representation in the two colleges.

For tutors, the study employed a purposive (stratified/maximum-variation) sampling, with optional snowball sampling for replacements and quota elements to ensure equal representation. (Gentles, Charles and McKibbon, 2015; Robinson, 2014). The formula used is select N=30 from a frame of 84, stratifying tutors by college and years of experience to ensure maximum variation. The study stratified the colleges as A/B and then by gender (female /male) to meet the exact quotas. College A (N=15; 5 females, 10 males) and College B (N=15; 5 females, 10 males). Sampling frames for each college (lists of all staff) were compiled, and participants were selected purposively

within four strata (A-female, A-male-female-male) to maximise variation in location /region of college, years of experience, subject taught, gender, active participation in professional development, and duties/responsibilities held in college. Therefore, purposive stratified sampling maximises information power. (Hennink and Kaiser, 2022).

For each stratum, the study generated an ordered list of participants and invited them until quotas were filled. Within each stratum, the study selected information-rich (purposive) cases to maximise depth/variation (e.g. academic qualification, range of teaching experience, subject taught, length of stay in college, other responsibilities and duties held in college). Stratified purposive and quotas ensured that the study got the precise gender distribution needed while still targeting variation and information-rich participants. Recruitment proceeded by invitation and informed consent; refusals were replaced by the next purposively selected candidate within the same stratum or via snowball referral. Data collection and analysis proceeded iteratively, and recruitment ceased when the tutor sample produced sufficient information power for the study aims. Refusals were replaced using alternates from the same stratum or via snowball referral where necessary. Recruitment and replacement decisions were logged to ensure transparency (Mendelsohn, 2023). Data collection proceeded iteratively, and recruitment ceased when the sample provided sufficient information power for the analytic aims.

3.6 Research Instruments

The following are the research instruments that were used in the study: in-depth interview schedules and focus group discussions for collecting primary data, while document analysis was used to conduct a desktop review for secondary data.

3.6.1 Interview Schedule

This study used in-depth interviews with all the respondents. The advantage is that they allowed the researcher to do a follow-up, asking for depth and detail (Catherine, Gretchen, & Gerardo, 2022).

They were conducted in 3 sections; the first was they were conducted in 3 sections; the first was done with selected principals, the second section was presented to the key stakeholders from the Ministry of Education, who included Curriculum support officers, Quality assurance officers, and County Directors of Education, and the last section was presented to the tutors. These interviews were tape-recorded, and some were not, depending on the respondent's wish. Secondly were the key stakeholders from the Ministry of Education, who included the Curriculum Support Officer, Quality Assurance Officer and County Director of Education. They were chosen because they were responsible for the planning and implementation of CPD activities as reflected in the supervision of teachers and curriculum training in their regions. Overall, interviews with the Ministry of Education officials were used to seek information on the planning as well as delivery of the CPD trainings, in addition to teachers' feedback on the same. The in-depth interview schedule was used to solicit information on how CPD policies and plans are made, how CPD activities are decided, and how they are offered to tutors.

Additionally, the study administered this instrument to the 30 sampled tutors from the two selected colleges; that is, 15 from each. The tutors were selected because they were among the key participants in the CPD programmes. In this case, the researcher believed that they were in a position to provide information on the perceptions about CPD, the process of CPD training, frequency and duration of CPD training, the

nature, and level of tutor involvement in CPD training, in addition to other thoughts, such as challenges encountered in the training.

3.6.2 Focus Group Discussion (FDG) for Tutors

A focus group is a collective conversation or group interview (Kamberelis & Dimitriarids, 2011; Kvale & Brinkman, 2009). It is a strategy for collecting data that utilises group dynamics in identifying a range of different views, opinions, and experiences of tutors, but the aim is not to reach consensus. FGDs facilitated the democratization of the research process by allowing participants more ownership over the process.

Focus group discussions were conducted after the completion of in-depth interviews. They provided a platform for the participants to share their impressions and discussions on CPD training processes. The schedule contained open-ended questions regarding how tutors socially construct their knowledge, in addition to the various factors that influence the same. Four groups were formed from the 30 tutors selected to participate in the study. At Kamwenja TTC, one FGD had 7 members and the other had 8. The first group (FGD1) consisted of 4 males and 3 females. Two of them had a Master's while the rest had a Bachelor's degree. They all stated that they had experience in CPD training. The second group (FGD 2) was made up of 5 females and 3 males. One respondent had a PhD, while the rest had a Bachelor's degree. They all confessed to having participated in CPD training programmes.

At Murang'a TTC, two groups were formed. The first group (FGD3) consisted of 4 males and 3 females. Two of them had a Master's degree, while the rest had a Bachelor's degree. The second group (FGD4) consisted of 4 males and 4 females. They had vast years of teaching. They all confessed to having attended CPD training.

During FGDs, each respondent was allowed to respond to the research questions. At the end of all the discussions, the researcher picked the key highlights of the responses given. FGD interviews were later transcribed and analysed separately from the individual in-depth interviews. The codes were later compared, while identifying both the benefits and at the same time the challenges from the data and later were applied to the rest of the data set.

3.6.3 Document Analysis

Documentary analysis as a research instrument was used to conduct a desktop review of existing empirical data from various policies and reports but including but not limited to those of CPD attendance by tutors from the respective institutions, those from the Ministry of Education and research surveys from the Kenya Institute for Public Policy and Research Analysis (KIPPRA). The documents that were examined included CPD modules, CPD plans, minutes of meetings, written documents of colleges, files on CPD, reports from quality assurance standards officers from the MOE, and both quarterly and annual reports of CPD. A review of these documents helped in corroborating findings from primary data sources.

3.7 Validity of the Research Instruments

The study used construct and content validity. Content validity was used in this study to design in-depth interview schedules and focus group discussions (Sarah, 2020). To achieve content validity, once the research instruments were developed, the focus group discussion questions and the interview schedules were forwarded to the two supervisors for them to establish the adequacy and suitability of the questions. After the research instruments were sent to the supervisors, they were approved for the study.

Creswell (2009) reports that construct validity refers to the extent to which a measurement instrument in a study is grounded in a theory. This implies that the research instruments should have existing or both theoretical and conceptual bases in the literature review. In this study, construct validity was ascertained through the delta phi technique, where the two supervisors agreed on the definition of the concepts to be used in the study. Secondly, it was achieved through the use of the factor method, which helped to show which questions were relevant for the study.

3.8 Reliability of the Research Instruments

A pilot study was conducted at Kigari Teachers Primary Teacher Training College in Embu County, using the College principal, one deputy principal and 6 selected tutors to enhance reliability. The rationale for the choice of this pilot study site was that it had similar characteristics to those of the target study colleges in terms of tutors' and administrators' recruitment from all over the country, and also because tutors in this college equally attended Continuous Professional Development programmes.

The pilot study was conducted with the general purpose of determining the suitability and quality of the research methods and instruments for the study. This helped in refining the initial research instruments selected for this study, specifically the in-depth interview and focus group discussion guides, before the actual study to improve the success and effectiveness of the study (Leveret et al., 2014). More so, it also helped in assessing if the interview questions and focus group discussions would provide data to answer the research questions.

Furthermore, it was believed that undertaking a pilot study would help highlight the possible gaps and oversights in data collection. It was also seen as a means that would

help highlight the ethical issues that would need to be considered during the study.

After piloting, I considered the responses from the tools to ascertain their reliability.

Trustworthiness of the qualitative data was established through triangulations of participants' responses as well as member checking/reflection, use of a rich, thick description to convey the findings and development of an audit trail. (Cohen et al., 2007; Samuel, 2017; Smith & McGannon, 2017). The triangulation process uses multiple perceptions to clarify meaning, verify the repeatability of an observation and interpretation (Yin, 2018). Triangulation, therefore, strengthens and gives credibility to the study. Giving conflicting and contradicting positions and perspectives enhanced openness and reduced rigidity while looking at an issue from one side or point of argument. This also enabled the study to gain deeper insights and understanding of the research topic. Triangulation thus helped the study to explore diverse aspects of the research topic from different perspectives. The study triangulated the responses from the in-depth interviews with the principals and key resource persons from the Ministry of Education and TSC, and focus group discussions with tutors.

In addition, the study employed member checking, which included respondent validation to assess intentionality, to correct factual errors, to offer respondents the opportunity to add further information or to put further information on record, to provide summaries and to check the adequacy of the analysis (Cohen, 2013). This was also important for research ethics. Member checking was possible at two levels, namely, during and following the end of in-depth interviews with principals, tutors and key informants, as well as focus group discussions with tutors. During the interview sessions, the researcher probed all the participants to elaborate further on the sub-themes discussed for clarification. At the end of each interview, the

researcher summarised the key points covered, then held a detailed discussion with the respondents to ensure that the interpretations were a clear reflection of their perspectives. The respondents were also allowed to provide any additional data where necessary. Also, if there was something to be omitted, it was done during this particular moment (Smith & McGannon, 2017).

3.9 Data Collection Procedure

An introductory letter obtained from Moi University was used to apply for a permit from the National Council of Science and Technology (NACOSTI). This permit was presented to the County Directors of Education in Nyeri and Murang'a to help access the colleges. After this, two trips were made to the respective colleges. The first visit was for introduction and familiarisation, as well as to explain what the study was about. The researcher also used this visit to seek permission from the PPTCs principals to be allowed to undertake the research in the colleges. This required a presentation of a letter of introduction that contained detailed information about what the study intended to achieve. The second visit was to conduct in-depth interviews, first with the principals of the selected colleges and thereafter a visit to the County director of Education offices to interview the key informants. Lastly, the principals helped to facilitate focus group discussions with the sampled tutors. In respect to this, the study had to organise with the tutors on the best time that they were available for the interviews. For instance, some were available after/before working hours, others preferred to be interviewed over the weekend and others at any time of the day that proved convenient to them.

3.10 Data Analysis and Reporting

The study was purely qualitative. The data was analysed thematically to generate appropriate categories and understand various ways through which tutors socially

constructed knowledge through Continuous Professional Development. A qualitative report that was based on these themes was then generated. The data was presented in the form of continuous prose narratives as well as voices within the research report. However, some of the data were in quantitative form as reflected in the demographic information of respondents. This one was analysed through descriptive statistics and reported in the form of percentages and frequencies.

3.11 Ethical Considerations

The study took into consideration the required ethical measures that must be employed before one undertakes a research study. To begin with, the researcher applied for clearance from the Graduate School, Moi University, and then proceeded to obtain a research permit from the NACOSTI before going to the field. In addition, the study used the two clearance permits to obtain permission from the county Directors of Education in Murang'a and Nyeri Counties, respectively. It is after this that the researcher proceeded to the sampled colleges and sought permission from the respective principals to be allowed to have access to the target participants.

The researcher also sought permission from the key informants in the MOE. The researcher took enough time to explain to the respondents the purpose of the study. On the same note, before administering the focus group discussions and interviews, the researcher sought written consent from the participants.

To ensure confidentiality and privacy, the respondents were asked not to write their names or any mark that could identify them. Codes were used to identify the participants. Confidentiality of their responses was maintained by the use of anonymity and assuring them that everything was for the academic purpose of this study only.

Lastly, to ensure openness, the researcher assured the respondents that the research findings would be made available through publications, at the Moi University library, at the NACOSTI, for anyone interested in following up with the outcomes of the study. In addition, the findings of the study, and eventually copies of the thesis, will be deposited at the two college libraries for the principals and tutors to read.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION, AND DISCUSSIONS OF FINDINGS

4.0 Introduction

This chapter presents the analysis, presentation, interpretations, and discussions of the study findings as informed by the four research questions outlined in the first chapter of the study. Due to the bulky nature of the qualitative research and the homogeneity of the groups studied, representative data have been displayed in narrative form to reflect the experiences of the respondents and verbatim expressions during the interview and focus group discussions. The chapter captures data presentation of lived experiences; therefore, participant input has been considered and their descriptive phenomenological approach, while ensuring that their responses are not interfered with.

The data from the focus group discussions are presented alongside the key informants' interviews since they all had experiences with Continuous Professional Development. The presentations outline how tutors socially constructed knowledge through engagement in CPD in a bid to improve their teaching standards in the selected PPTTCs in Kenya, with a focus on Muranga and Kamwenja TTCs. It displays the various forms or models of Continuous Professional Development (CPD) and how they improved the construction of knowledge as reflected in their teaching-learning activities; with consideration of different frequencies, periods, and complexity of CPD training, different training processes employed, as well as different teachers' abilities, skills, experiences, intelligence, knowledge, and physical material endowment through diverse contexts and life experiences.

The findings are thematically discussed based on the four main areas of concern and focus on the research questions as outlined in the first chapter of this study. These include the social perception of CPD and tutors' social construction of knowledge, the process of CPD training and tutors' social construction of knowledge, the nature and level of involvement in CPD programs and tutors' social construction of knowledge, and the timing aspect regarding the frequency and duration of CPD training and tutors' social construction of knowledge. In addition, the discussion highlights some challenges of CPD and identifies mitigation strategies and solutions.

4.1 Data Presentation

4.1.1 Group Profiles

The study comprised various stakeholders of the Continuous Professional Development programs in the institutions, derived from the Ministry of Education, Teachers Training colleges and the tutors drawn from both Murang'a and Nyeri counties. The distribution of the respondents was as follows: 2 principals, 6 key stakeholders from the Education sector, and 30 tutors in Kamwenja and Murang'a teachers' training colleges in the Central region of Kenya. The respondents provided clear and substantive information for the study.

The study sampled the college principals since it was believed that they were key in providing detailed information on CPDs and how they impact quality education. The principals are responsible for CPD training and were resourceful in providing information regarding the kind of CPD models available in college, CPD opportunities for tutors, CPD trainers who are involved, the importance of CPD programs to the tutors, support that the institution accords to its tutors while on training, challenges faced by the administration college administrators in the provision of CPD needs and opportunities and how the administration could improve

on the provision of CPD. The curriculum support officers are responsible for ensuring that the CPDs are effectively executed across the institutions.

Additionally, the study involved 30 sampled tutors from the selected colleges; that is, 15 from each based on their rendition of the CPD programs in the institutions. The respondents in the focus groups were coded FGD1, FGD2, FGD3, and FGD4, respectively. Further coding was done into two categories of the respondents according to their experiences with CPDs, as R1, R2, R3, R4 up to R5 for those with first-hand experience with formal training, and another group had experience with peer teaching and benchmarking.

Information was gathered on the perceptions about CPD, the role that CPD has played in positively impacting their teaching skills, the process of CPD training, the frequency and duration of CPD training, the nature and level of tutor involvement in CPD training, in addition to other thoughts, such as challenges encountered in the process of training. The survey sought to address issues regarding how tutors socially construct their knowledge, in addition to the various factors that influence performance in education. Due to the wide variations in group characteristics, their profiles are presented in Table 4.1 below for ease of reference.

4.1.2 Demographic characteristics of respondents

This subsection discusses the details of the 38 respondents who were involved in the study. The section addressed characteristics of respondents on gender, age, educational background, and work experience. In this study, the majority of them were males 25 (65.6%), and the rest 13 (34.4%) were females. Most of the participants, 28 (70 %), could be described as middle-aged, between the ages of 31 and 50. All participants were professionally trained teachers: with a majority holding

a basic Bachelor's degree in Education, a few had a Master's degree in Education, and three of them were doctorate holders. The most experienced teachers, 18(47%) in the study, had taught for more than twenty-one (21) years, but the majority of the participants, 30(79%), had instead taught for 10-20 years. These findings are presented in Table 4.1 below.

Table 4.1: Demographic Characteristics of the Respondents

Socio-Demographics of Respondents N=38

Variable	Frequency	Percentage
Age		
31-40	2	6.2
41-50	24	56.2
50 and above	12	37.5
Gender		
Male	28	68.8
Female	10	31.2
Education		
Diploma	0	0
Bachelor's Degree	18	31.3
Masters	20	62.5
PhD	2	6.2
Experience in teaching (Years)		
10-15	2	6.5
16-20	4	12.5
21 and above	25	80

4.2 Tutor's View of Social Construction of Knowledge Acquisition through Continuous Professional Development

This section provides an overview of the findings based on tutors' perceptions of CPD and how it helps in their social construction of knowledge.

An in-depth interview was administered to tutors and administrators of the two selected colleges. Additionally, the same research instruments were administered to the key informants from the Ministry of Education in Nyeri and Murang'a counties. The findings revealed that the respondents had adequate experience in teaching and exhibited an average of 20 years of experience.

To meet this objective, questions were informed by the research process and indicators presented in chapter three were posed to respondents. Respondents were asked to state and explain their views and expectations of CPD, the nature of support they received at the beginning of their career, and its value. Additionally, the respondents were asked to describe the models of CPD and the challenges experienced while undertaking them. Further probing was done on how professional development management is done within the colleges and whether it is an appropriate balance struck between onsite and offsite provision, and the recommendations to improve the system.

Alternative opinions on professional development address many other factors that affect the multiple contexts in which professional development can be implemented, the formation of learning communities, the recognition of multiple roles within the professional life of teachers, the development and impact of leadership skills, and the provision of support, the necessity to deal with uncertainties and explore authentic problems and challenges, and the importance of centering efforts on student learning and achievement.

The findings indicated that the majority of the respondents 27 (71%) defined Continuous Professional Development as the wide range of activities teachers do individually or collectively to improve their professional practice and enhance student learning, 7 (18%) recognized CPD as an additional training a teacher undertakes when already working to gain insights in the teaching area and promotion, while 5 (13%) said that CPD is a retooling strategy by the MOE through the TSC to keep the teacher abreast with changes in the content and pedagogical knowledge. Based on the findings on the tutors' social perception of CPD, it is evident that the majority of the respondents derive meanings from the perception of CPD, such as professional

growth /practice for teachers, activities undertaken to improve teachers' careers and retooling activities for teachers, amongst other perceptions. However, what is outstanding is that out of these meanings, the study deduced that tutors perceive CPD as a professional practice that they undertake to improve their career growth.

Additionally, from the explanation given by 27(71%) of the respondents, it can be noted that the Ministry of Education (MoE) has introduced a new system of education that requires teachers to upgrade their pedagogical skills to keep up with the competency-based curriculum demands. This was done specifically to address issues around the quality of education. The MoE intends to develop a culture of life-long learning that is all-inclusive and accommodating to these tutors. CPD is a programme that is designed to help teachers understand better the demands of newly introduced curricula reforms to enable curriculum implementation. In other words, the thrust of most of these programs is to familiarise teachers with the new reform.

This finding was well documented during one of the in-depth interviews, where a respondent made this comment regarding the above.

"CPD enables teachers to upgrade their expertise (knowledge, skills, attitudes, behaviour) and qualifications and move along their preferred career path. It is also very important to strengthen education quality to align with Sustainable Development Goal 4, as well as strengthen national cohesion in Kenya." (M1, 57 years)

Additionally, the majority of the respondents noted that CPD is tailor-made for teachers, tutors, and curriculum support officers with support from national and sub-national education personnel, teacher education institutions, and development partners. Moreover, the Ministry of Education structure encourages teachers and school directors to become lifelong learners within their professional practice, to learn by doing, by testing new approaches and assessing their impact on student learning.

What is evident from the above observation is that the majority of tutors value CPD owing to the many benefits it accords them, such as improvement in professional competencies, building quality learning environments, and being responsive to students' needs, amongst other benefits.

This finding also corroborates with studies that were carried out by Kisirkoi and Kamanga (2018); Turbat, Waheed, and Mirwani (2022); Baptise, Kampire, and Karegeya (2022), who reported that teachers perceived themselves as liberated, empowered, which enabled them to be innovative and creative in their teaching practices. Additionally, a study conducted by Saljoghi and Salehi (2016) reports that CPD training enables teachers to acquire the skills that they need.

During another in-depth interview, a respondent had this to say regarding the above:

“In the 21st Century, systems change and teachers must be adaptable to the new skills to be able to adjust and fit and deliver effectively. This is an important element of improving the quality of education in our schools”. (F1, 55 years)

This finding reflected the outcome of a focus group discussion that was held, where the majority of the respondents, 30 (79%), reported that CPD was a way of improving the teacher's rendition and methodology while teaching. It is a programme that aims to develop professional teachers who are well-equipped with knowledge, skills, and the disposition to learn, and who would eventually guide their pupils to achieve the learning outcomes of the national competency-based curriculum. The intended outcome of the program is the development of classroom teachers who demonstrate interactive, student-focused instructional methods, who demonstrate gender-sensitive and pupil-centred instructional strategies, and who understand how to apply the competency-based curriculum. However, 8(21%) respondents felt that CPD trainings had negative effects on teachers as they considered the trainings to be a little bit

burdensome in terms of timing for trainings and also the fact that some teachers complain of the activity being demanding. This was captured during one of the in-depth interviews where a respondent made the following comment:

“As much as these CPD trainings are beneficial to most of us tutors, to some extent I do feel that it is a little burdensome, as sometimes one is expected to be in the office preparing for a class or even in class teaching, yet these trainings are made mandatory. Additionally, the administrator expects one to do a recovery of the lessons learnt during these trainings” (M8, 48 years)

Based on the above sentiments, it is evident that some teachers feel that attending CPD training has its own challenges, such as time wastage, a need to recover unattended lessons, among others.

This finding is in tandem with a study that was conducted by (Antonio, 2019) who found that even though teachers valued CPD training, challenges related to the heavy workload, lack of financial support from the school administration, compounded by family commitment made them shun away from engaging in formal CPD activities but embarked engaging mainly in self-directed CPD activities as well as informal collaborative dialogues amongst staff.

The above presentation is clear evidence that proper systems and policies are needed to address the issue of CPD training as a way of making sure that teachers benefit maximally from the programmes.

It is also evident that CPD training can be summarised as opportunities for teachers and other education personnel to take part in conferences, workshops, or in-services, either in short-term or ongoing, long-term contexts. These opportunities are often offered through schools, sub-county, or county levels of educational organisations and professional associations. From the discussion, it can, however, be deduced that a single view of what constitutes effective professional development may be obsolete in

today's educational system. For the Kenyan education system, CPD is perceived as a process used by the Ministry of Education to enhance the quality of the teaching and learning process and, eventually, the quality of education.

To align with the Ministry of Education policy directive, the Teachers Service Commission has introduced a retooling strategy for the teachers. According to one respondent, retooling is a structured method tailored by the Teachers Service Commission to support the teaching of the competency-based curriculum. Of teachers and it supports continuous professional development through benchmarking, workshops, and in-service courses. The respondent further uses the vehicle driving analogy, with which he observed that:

“Many people have changed from driving manual vehicles to automatic vehicles. So those who already know how to drive are then relearning how to drive the automatic vehicles”. (F2, 53 years)

From the above observation, it can be deduced that tutors recognise CPD training as a platform to update their already existing knowledge, skills and attitudes which are deemed valuable in their classroom practices. The finding emphasises the need to provide CPD opportunities, both short and long term, as a way of equipping them with the new skills of the education reform in the country.

This result is supported by the claim of Betamarian (2017), who confirmed that Continuous Professional Development training is considered a teacher's transformative tool as it equips them with the necessary 21st-century skills in a bid to remain relevant in the education sector. Similarly, (Nzivu, Piliyesi and Ndau, 2020; Muchanje, Njuguna, Kalai and Birona, 2016) documented that exposure of tutors to CPD training has positive gains to them as reflected in the career progression, amongst other benefits.

“The Government of Kenya has aimed at mitigating transitional challenges that may be brought by the change of curriculum from 8.4.4 to Competency Based Curriculum, which was piloted five years ago. The respondents submit that teaching methods or instructors' rendition of the content during the learning process can either be a hindrance or a solution to quality learning outcomes in schools. (F3, 54 years)

Another respondent in another focus group had this to say in regard to the role of CPD as a retooling approach:

Continuous Professional Development is critical for a Competency-Based Curriculum. It allows tutors to understand the basics associated with it, the interaction with the materials to use later in the classroom.” (M11, 56 years)

From the above verbatim presentations, it is evident that there is recognition of the national government's effort to transform and upgrade teacher educational programs to produce high-quality teachers for the country in a bid to meet the demands of a newly introduced education curriculum.

This finding is well corroborated in a study that was conducted by Nyaaba, Abdul-Gafaar, Akulga, and Kwaye (2023); Chikari, Rudhumbu and Svtwa (2015) who reported that CPD programmes are critical for the college tutors since they keep them abreast with the new pedagogical skills, academic achievement, classroom management and education reform.

The study also established that 34 (95%) respondents asserted that CPD training helped tutors in the mastery of the content/competencies, which, to some great extent, is reflected in their student outcomes, while 2 (5%) attributed it to a lack of connection between CPD training and teachers' mastery of the content. Based on the data, it shows that indeed the majority, 24 (65%) are positive about CPD trainings owing to the benefits that they accrue from such trainings, such as mastery of the content.

This was well recorded during in-depth interviews when a respondent observed that she had been in the profession for a considerably longer period and that frequent in-service training could be organised in the early years for teachers to continue learning more about their content rendition. The respondent observed that:

“In the early days of teaching, the teachers’ word was law in itself, and so it required that mastery of content be given priority. There was more professional commitment and competence that enabled the teachers to see the students as the centre of education. There was also a deliberate move to create a national consciousness for educational excellence in every teacher and develop in the teacher the ability to adapt to new situations; and, develop in the teacher an awareness and appreciation of innovation in the field of education and to utilise them optimally.” (F4, 46 years)

This study's findings corroborate a study that was carried out by Mugarura, Ssempala and Machucha (2022), who reported that when teachers attend Continuous Professional Development, trainings are positioned to improve their breadth and depth of knowledge. It is such empowerment in teachers' competencies that students' outcomes are achieved. Similar observations are found in a study that was carried out by Besong and Holland (2015), who reported on the nexus between teachers' continuous professional development programmes and their mastery of knowledge.

This finding was also cross-checked during a focus group discussion, where a respondent had this to say:

“In my early years of teaching, I could see many circulars and directives from the Ministry of Education, and coordination would be done with the principals of various institutions to bring a consultant or an educational expert to give a seminar on a pedagogic or subject area topic. A system which did not care to put the needs of the teacher into consideration” (M2, 52 years)

The observations of both the 46-year-old male and the 52-year-old male reveal that CPD is a platform that provides teachers opportunities to better themselves as teachers and also to improve the academic achievements of students whom they are responsible for in schools, amongst other benefits of attending the CPD.

However, a few respondents, 2 (5%), reported that CPD training was not helpful to them in the mastery of the content. The respondents attributed this to low-quality CPD training. This was well documented during one of the in-depth interviews, where a respondent commented that:

“Some of these CPD trainings do not help us improve our initial content knowledge in our respective subjects of specialisation, as some are more of a repetition of the previous trainings, while others are done hurriedly” (M15,43years).

Based on the above data, it is evident that some teachers are sentimental about attending CPD programmes. The above findings reveal that not all CPD training succeeds in helping teachers improve their professional knowledge and skills. This could be due to other underlying factors that teachers endure as they undertake these trainings, such as lack of institutional support, lack of adequate time to attend these trainings, financial constraints, lack of follow-up mechanisms, among other hindering factors (Gemedo and Tyjala, 2015; Arnel and Gideon, 2025).

This study finding resonates well with a study report found in (Padillo, Manguilimotan, Capuno and Espina, 2021; Njenga, 2024; Saleem, Masrur and Afzal, 2014; Betamariam, 2017; Kagema and Irungu, 2018), who reported that CPD training has little benefit for the teachers, as it did not have an impact on their mastery of skills, competencies and overall professional development.

Regarding the structure of CPD as organised by the Ministry of Education, the majority of the participants 30 (79%) said that CPD equips teachers with a lot of skills and if handled properly, it can enhance the quality of teaching. The CPD therefore results in quality teaching and better learning outcomes through enhanced competencies, better social interaction skills and generally a holistic person for the society. The respondents further reiterated that the external environment plays a very

important role in the social construction of knowledge. Community of practice (CoP) is the best method of continuous professional development because teachers share experiences on varied structured platforms. It is a very effective social construction of knowledge. Teachers have varied strengths and weaknesses. Some are equally technosavvy in various software fields, and they support one another in that respect.

The study revealed that the majority of the respondents 27(71%) concluded that social media platforms are very useful in supporting peer-to-peer learning in the process of constructing knowledge through CPD, while 11(29%) preferred physical CPD trainings.

From the explanation given by the 27 (71%) respondents, it is evident that the majority of the respondents preferred the social media platform owing to the various benefits associated with it, such as helping old teachers change the mode of delivery, updating teachers on the new changes in the curriculum and providing timely feedback, amongst other benefits.

This observation was well articulated during one of the focus group discussions where in respondents agreed that peer-to-peer learning, mentorship programs and community of practice play a great role in improvement of pedagogical skills, reinforcement in tutor's expertise, improvement in students' outcomes, integration in ICT, building quality learning environments syllabus coverage and enables teachers to customize their teaching methods based on the learners' diversity, among other benefits.

A similar observation was made during one of the in-depth interviews when a respondent had this to say in response to the role of mentoring:

“In my early years of teaching, I was mentored by the head teacher. He inducted me into teaching and explained all the ‘dos’ and ‘don’ts’ of teaching.

When I changed from secondary school to a college, I was received very well and mentored by the senior members of the department. We would then attend workshops and seminars to enhance our teaching skills. From the positive experience, I agree that CPD is a great programme although it has bottlenecks" (M3, 57 years).

The observation of a 57-year-old male underscores the point that mentorship plays a crucial role in internal CPD as experienced within the institutions. These findings were confirmed in studies conducted by Kombo (2008); Purnamasari (2023); Vorotykova and Kovalchuck (2017); Chebolei (2021), who found that mentoring practices, as forms of novice teacher induction to be conducted at the institutional level, have proven powerful in teacher construction of knowledge.

Similar observations were made during another focus group discussion, where a respondent had this to say:

"We understand our problems better, and we can identify the gaps and training needs. Externally, you would also get subject experts. The immediate problems are sorted out through internal training and now through the teacher professional development tool kit (TPD). (M4, 54 years)

What is evident from the above reporting is that in-house training is very effective in tutors' social construction of knowledge. Interacting with other teachers, benchmarking, and peer learning seem to be very enriching for the teachers learn a lot, as contrasted to how much they learn during their four-year degree training programme. It widens their horizon and acts as a game-changer in their teaching career.

In addition, this discussion concludes that peer-to-peer conversation platforms are made possible through diversified social media platforms. As long as a teacher has a smartphone, then he/she is good to go into the entire world and understand and learn from diversified socio-cultural orientations.

The responses from both the in-depth interviews and focus group discussions are in line with the social constructivist theorists (Vygotsky, 1962, 1998; Piaget, 1970; Bruner, 1962, 1979), as exhibited in the literature reviewed in this study. According to them, the learning process is viewed as constructive and learners are seen as information constructors who build and construct new conceptualisations as well as understandings by using what they already know. This line of argument is in tandem with the literature review findings that report on the key role of involving tutors in the meaning-making process, rather than making them mere consumers of knowledge.

The study is consistent with the above literature, and it can be deduced, therefore, that the constructed meaning of knowledge and beliefs is a process which involves interaction with the immediate environment, as individuals discover new knowledge, skills, approaches and then personally interpret their significance. Hitherto, the constructivist theory focuses on individuals' interactions with one another and the environment, and how these interactions lead an individual's search for knowledge and skills through the basic assumption that individuals are active learners and so they must construct knowledge for themselves rather than the knowledge being imposed on them.

As the majority of the respondents 36 (95%) agreed that CPD is necessary for improvement of learning outcomes. This finding is in agreement with Wenger (2004), who further explores the relationship between knowledge and individuals' experience, which corroborates Bronfenbrenner's theory of cognitive development's role in human development. The study also confirms the effectiveness of CPD as ascertained by a review of literature, indicating that continuous professional development is hypothesised to influence the teaching effectiveness and that the construction of

knowledge is done through experiences from interaction with the immediate environment.

The response from some of the key informants from the Ministry of Education reveals that the instructors pick positive ideas from the environment and transfer the same to their subjects in the classroom orientation, thereby improving the quality of rendering instruction and learning outcomes. The study established that the provision of continuous personal and professional education would enable teachers to review and modify their teaching methods and curricula in the light of present-day changes, be they technological, economic, cultural, social or political and meet the in-service needs of a stable and dynamic teaching force.

What is common in all the responses is that they had similar definitions of CPD. Although defined in many different ways, it can be summarised as the opportunities for teachers and other education personnel to take part in conferences, workshops or in-services either in short-term or ongoing, long-term contexts. These opportunities are often offered through schools, sub-county or county levels of educational organisations and professional associations. From the descriptions, it can, however, be deduced that a single view of what constitutes effective professional development may be obsolete in today's educational system and that a ray of models borrowing from the immediate environment would be more effective. For the Kenyan education system, CPD is perceived as a process used by the Ministry of Education to enhance the quality of the teaching and learning process and, eventually, the quality of education.

In a nutshell, the majority of the respondents 36(95%) have a general perception of CPD as a means to improving the quality of education. Arguably, CPD is used in this

case as a reawakening tool that helps teachers translate concepts from theory to practice. The programmes aim at getting teachers to re-conceptualise their roles as teachers and at creating an attitudinal shift among teachers. One important aspect of the programme is that it seeks to develop teachers into reflective practitioners. Thus, it is as a result of continually engaging in reflection that teachers can evaluate and re-evaluate their teaching practices, and this often results in a shift in attitude as regards teaching.

The response from both the in-depth interviews and focus group discussion are in line with the social constructivist theorist (Vygotsky, 1962), who support this ideology because according to them, the learning process is viewed to as constructive and learners as an information constructor who build and construct new conceptualizations as well as understandings by using what they already know (Chalmers & Keown, 2006). It is a theoretical orientation that puts emphasis on the significant role played by social interaction in the development of cognition and subsequently recognises the role of community in the process of making meaning. Therefore, the constructed meaning of knowledge and beliefs entails a process which involves interaction with the immediate environment, as individuals discover new knowledge, skills, approaches and then personally interpret their significance.

The study also confirms the effectiveness of CPD as ascertained by a review of literature, indicating that continuous professional development is hypothesised to influence teaching effectiveness. In this regard, references could then be made to many commissions of inquiries that were set by the government of Kenya to ensure that quality and access to education were given priority. It is opined that CPD is a platform that provides teachers opportunities to better themselves as teachers and also

to improve the academic achievements of students whom they are responsible for in schools.

The study, however, slightly contradicts the literature reviewed on the frequency of CPD as structured by the Ministry of Education and the Kenya Institute of Curriculum Development, indicating that in public schools/colleges in Kenya, continuous professional development programs are carried out regularly to assess and promote teaching effectiveness (Ministry of Education, 2018). One of the key informants from the Ministry of Education opined that CPD is made an individual responsibility and personal initiative, even though education is a public good.

The FGD responses from both colleges were similar. The survey analysed the responses from the focus group discussions to confirm the information provided by the Key Informants. In all FGDs, all the tutors were interviewed to corroborate or confirm the observations of the key informants and to confirm the literature reviews. The tutors have had considerable experience in teaching, ranging from 15 to 20 years. The discussions were carried out on issues related to the implementation of the CPD. The discussions were organised under the themes: provisions to support the CPD, participants' view on the appropriateness of the school-based CPD decisions, benefits of the CPD, motives for engaging in the CPD, considering the CPD for professional development, effectiveness, sustainability and major barriers encountered in program implementation.

Evidence to support the CPD was exhibited from the FGDs, and it was made clear that one of the provisions to support the CPD program at the college level is training. The participants were all in agreement that training was given for two days for some teachers. Teachers expressed that the training was not enough. The school supports

teachers with pens and paper. CPD does not require many resources. In addition, the school supports teachers by setting priority areas with two teacher priority areas and one school priority area to work on the CPD. The school supervisor, the head teacher and the deputy teacher work closely with the teachers in setting and implementing the CPD activities.

The study also revealed that currently, there is support for schools by providing training specifically to keep up with the new curriculum that focuses on the competencies of the learners. The tutors, however, also observe that there are no adequate training manuals and guidelines for CPD from the Kenya Institute of Curriculum Development and sometimes from the Kenya National Examinations Council, who provide training on examination practices in Kenya. These are key issues that affect the success of the CPD. In the absence of working guidelines and manuals, most teachers learn from each other. They copied the module prepared by another teacher. One respondent from FGDs observed that CPD enriches the approach to teaching as it enhances quality teaching. Learning outcomes solely depend on the quality of a teacher.

In summary, the above discussion suggests that teacher quality variables appear to be more strongly related to student achievement, and in equal strength, it is recommended that policy makers should consider teacher licensing systems and more effective professional development strategies, which in turn have shown to produce evidence of the stronger effect on teaching and learning approaches that strengthen teachers' ability to teach diverse learners. The respondent further observed that teachers do bring in their personal beliefs and attitudes, which have an impact on how they perceive knowledge.

The explanation of the respondents on the benefits of CPD is that it improves the teachers' social mobility, and it can lead to promotion to a higher job group and also boost confidence in the teacher. The respondents further attach importance to the context of teaching, the characteristics and social orientation thinking of the teacher, and the relation among them as powerful factors affecting the implementation of reforms in the classroom practices. In addition, CPD contributes to improvement in pedagogical skills, classroom management, integration of ICT in teaching, enhances syllabus coverage and quality learning environment.

From the various responses, a more in-depth comparison was drawn between CPD and Teacher Professional Development (TPD), and it was observed that TPD is closely linked to continuous professional development and is used to appraise teachers based on performance. The difference between the two is that the TPD is used for self-evaluation of the teachers to determine the gaps in teaching and suggest ways of mitigating them. However, CPD is developed by the Ministry of Education to enhance the quality of education.

Further to the above discussion, a section of the TPD tool requires teachers to undertake lesson observation and self-evaluation or peer evaluation. When teachers plan lessons or study a subject together, that is a form of staff development. A teacher who observes another teacher teach is also participating in a form of staff development. If a teacher is being coached by another teacher, that is staff development. Visiting model schools, participating in a school improvement committee, writing curriculum, keeping a journal about teaching practices – all these can be staff development activities.

Additionally, one of the key informants outlined a number of benefits generally derived from CPD and included: Improved subject-area knowledge, teaching methodologies, and understanding of learning theory. Increased opportunities for career advancement with associated benefits, opportunities for career transition to specialist teaching, educational leadership, and teacher education, opportunities for appointment as outstanding, distinguished, and lead teachers, recognition awards for service and excellence in their profession, increased opportunities for further study domestically and internationally, access to national trainer programs and improved status within their profession and community.

The majority of the respondents 34(87%) additionally opined that Teacher Professional Development (TPD) need to be done internally with specific targets to be achieved by the teacher. Teachers have fully embraced TPD because it is now used as a rider to promotion. From the self-evaluation outlined in the TPD, performance gaps are identified and can then be used to inform the design of CPD. The respondents, however, suggest that the teachers need to be supported in developing performance gaps and how to mitigate them. The CPD builds a teacher both internally and externally for the general improvement of the quality of teaching in reference to pedagogy.

During an in-depth interview, a key informant opined that CPD is an umbrella term that embraces all the activities pertaining acquisition of better skills to enhance the quality of teaching.

“We are living in a changing world, and the teaching profession is equally dynamic, so the teachers are brought up to speed about the current pedagogical trends. This is done through constant online training and benchmarking. CPD is a facilitator of learning and is in tandem with the trends and pedagogical skills” (M5, 58 years)

From the above accounts, it is evident that tutors understood CPD as an indispensable part of their professional growth, which every practising teacher has to undertake in a bid to remain relevant. They, for instance, need regular retooling so that they can get everything on the new curriculum, especially on the design.

This finding is well corroborated in a study conducted by Waweru (2018), who found that CPD is an integral part of their professional training. Through the collaborative activities and peer-to-peer observations that they engage in, they further their professional growth. CPD activities are, therefore, an avenue for teachers to be able to do what is professionally required of them.

In addition, the study reported that 27 (71%) CPD builds leadership qualities amongst them as they form communities of practice, while a few of the respondents 11 (29 %) thought that CPD trainings did not add value to their leadership skills. The above data reveal that teachers are happy about the leadership qualities that they acquire during CPD training. Leadership roles are distributed across different groups. It was observed that the leadership roles were assumed by various members of the group, depending on the type of leadership required in that specific situation. This distribution of leadership led to the empowerment of the teachers within the group, and these teachers were instrumental in taking ownership and driving the learning process. The importance of distributed leadership was summed up by one of the participants: It is also a fantastic example of a case study for collaboration and the champions that could take a level of ownership and drive the process. This process makes the tutors feel that they have added value and feel appreciated. A respondent during one of the in-depth interviews noted that:

“These tutors become owners and ‘Landlords’ in the school, rather than tenants or riders, they become professionals in the manner of

conducting their activities once they undergo training and continue through communities of practice". (F9, 56 years)

From the above accounts, it can be deduced that most participants understood the training as positive and valuable in bringing about change, which not only referred to personal and professional gain but also organisational growth. Although all the respondents indicated that they learnt much during the training, there were differences between the levels of practice and collaboration that took place. The findings show a close relationship between the success of professional learning and management and organisational context, climate and culture. Therefore, alluding to the many factors aforementioned that can make or break the implementation of the CPD programme.

To conclude, the findings on the social perception of tutors on CPD, it is evident that the respondents have a general perception of CPD as a means to improve the quality of education. Arguably, CPD is used in this case as a reawakening tool that helps teachers transfer concepts from theory to practice. The programs aim at getting teachers to re-conceptualise their roles as teachers and at creating an attitudinal shift among teachers. One important aspect of the program is that it seeks to develop teachers into reflective practitioners. Thus, it is as a result of continually engaging in reflection that teachers can evaluate and re-evaluate their teaching practices, and this often results in a shift in attitude as regards teaching.

From an educational perspective, one can deduce that CPD relates to interventions targeting the pedagogical practices of teachers as indicated in the literature reviewed herein. CPD is associated with students' performance with good pedagogical practices among teachers. Teaching effectiveness is measured through parameters such as improvement in content knowledge, quality of instruction, teaching climate,

professional behaviours, intrinsic gains, adjustment to role as tutors, teacher beliefs, and classroom management, amongst other benefits.

4.2.1 Forms of Continuous Professional Development and Social View of CPD in the Construction of Knowledge

This section sought to understand the forms of CPD in both colleges. The researcher asked questions about how CPD is conducted to tutors in both institutions and how the various forms of CPD support the construction of knowledge. The general information derived from the in-depth interviews and focus group discussions is that there are various forms of CPD, including in-service training such as Centre for Mathematics, Science and Technology in Africa (CEMASTEA), workshops, conferences, and training conducted by KNEC based on testing, moderating, and marking. Lesson observations are conducted as a requirement of TPAD, and team teaching is conducted. Specialised learning areas are identified and enhanced, and engaging in independent research happens at a personal level for personal knowledge acquisition to enhance productivity. The study established that the most preferred method of conducting CPD is through workshops and in-service forums. The respondents were also aware of the other forms of CPD activities, community of practice, with interactions enhanced through the various social media handles.

Further probing was done to gather ideas on the experiences in CPD through the different forms such as lesson study (micro-teaching for teacher trainees), team teaching, peer learning/observation, study networks among tutors (for instance via WhatsApp), Mentorship and coaching, independent reading/learning of professional literature, for instance, journals/books or even reports, engaging in informal dialogue with colleagues on how to improve teaching and learning, team teaching and self-directed CPD activities.

The majority of the respondents 32 (84%) were in agreement that CPD is very important and that the responsibility to undertake it lies with both the state/organisational and the individual teachers. However, a few respondents 4 (11%) reported that the responsibility to undertake CPD is supposed to be an individual teacher's responsibility, while the remaining number of respondents 2 (5%) felt that it should lie with the organisation.

From these findings, it is evident that majority of the respondents 32 (84%) felt that it is both individual and organizational responsibility since the institution benefits by having tutors who are abreast with the current knowledge and have the skills for the sake of the students and individual since tutors also get a chance to update their mastery of knowledge and pedagogical skills amongst other benefits. A few respondents 4 (11%) reported that it is an individual responsibility since tutors are expected to take the initiative to attend these trainings and make maximum benefits from them. As a teacher, one has to grow professionally; perhaps this explains why teachers are going for TPD trainings over the school holidays. However, 2 (5%) of the respondents felt that it is an organisation/institutional responsibility since the administration is expected to facilitate tutors with resources such as permission to attend training, funding in terms of transport, meals, accommodation charges reimbursement, as well as time to attend and implement the newly acquired knowledge and skills. Secondly, the benefits from the CPD trainings benefit students most who are part of the institution rather than the individual teacher. Thirdly, the institution can also organise internal workshops for tutors. However, it was evident in all these responses that there should be a well-coordinated strategy by the stakeholders, which includes the Teachers Service Commission, the Kenya

Curriculum Development, and the school administration, to ensure that the training is done seamlessly.

The respondents from both colleges were probed on the most preferred form of CPD. The majority of the respondents 25 (66 %) identified three forms of CPD: in-service training, team teaching, and benchmarking as the most preferable forms of CPD because they enhance positive internal competition. In response to the effect of CPD and whether the teachers should take the challenge and the initiative to improve themselves, one of the respondents from the focus group discussion had this to say:

“In-service training is the game changer as it is done collaboratively with all the key stakeholders, the national government, the Ministry of Education, KNEC, and KICD. It’s worth the effort as it helps build the teacher’s capacity and enhances the teacher’s visibility. The process should have been done way before changing the teaching curriculum. Individual tutors should take responsibility in improving themselves to enhance career development, the initiative to be undertaken by the key stakeholders”. (M6, 42 years)

From the above presentation, it is clear that tutors view CPD training as a critical aspect of their professional growth as it enables them to build their capacity in their classroom delivery, especially with the onset of CBC, where they are required to acquire new skills, knowledge to implement the programme, etc.

It was also presented that CPD can be carried out in various forms, such as workshops and team teaching through webinars. A respondent from one of the focus group discussions who was in support of team teaching as the best form of promoting CPD had this to say:

“Team teaching promotes our knowledge and our performance and makes work easier. It equips us with more knowledge so that we can deliver the content better. Waiting for the government to organise and execute the programs takes a lot of time and is slow. ‘The government’s intention on CPD is good about the idea and the time allocated for this. However, there are no strategies or structures for monitoring and evaluation to ensure that the intended outcome is achieved.’ (F5, 43 years)

What is evident from the above observation is that team teaching is a powerful learning site as it helps teachers diversify their teaching practice, together with stimulating their professional reflectiveness, as well as encouraging collaborative learning.

This line of argument is in tandem with Anfaki (2015), who reported that team teaching enhances a person's competencies in a specific skill area by providing a process of observation, reflection and action. It helps the teacher in a range of areas through the art of watching as well as thinking before rushing to do it.

Opinions of the respondents were sought on how the process taken in conducting CPD training impacts tutors' construction of knowledge, and their perceptions and opinions about the process are described verbatim from the key informants. These opinions corroborate the general information gathered from the FGDs. The information presented below reports on the data that was gathered from tutors in the two selected primary teacher training colleges.

Respondent 1 on Reflective Practice argued that reflection helps teachers to synthesise and process what they learned and later on practice. It is described as a learning process that has been found to enable tutors to socially construct knowledge through Continuous Professional Development activities, and the beauty part of it is that if a tutor has any challenge related to teaching and learning, they can always go back to their peers for professional discovery and self-assessment.

Respondent 2 on Action Research defines it as a form of professional action, an inquiry, and so it has to be built upon teachers' values, beliefs, and attitudes. On the same note, the respondent observes that action research is a powerful instrument for

teacher learning as it allows them to discuss their teaching and learning practices as a team.

Respondent 3 on team teaching said that it promotes staff development and improves learning outcomes since teachers organise what is similar learning communities of practice. It also encourages subject specialisation and helps teachers perfect their competencies in these areas.

Respondent 4 on peer observation/coaching had this to say:

“This is a recommendation from the Teachers Service Commission and is clearly outlined in the teacher professional development tool kit under lesson observation. It is a process that encourages positive feedback from teachers, especially regarding content delivery and classroom control”. (M7, 51 years)

Respondent 5 on mentoring said that:

“This mostly happens when a tutor is newly posted in a station. She receives guidance from more experienced members of the department. Mentoring has been related to personal growth. This process has been described as involving a pairing of an experienced teacher with one who is a novice, for discussions/sharing of ideas on areas such as leadership and management, current teaching and learning process, amongst other issues”. (F6, 39 years)

Another respondent, who was a key informant, agreed that CPDs are carried out through workshops, training, conferences, benchmarking, study networks, or collaborative works, but it's loosely done.

“Most teachers work in silos. We currently have a TSC Policy that requires Teacher Induction Mentoring and Coaching (TIMEC). Team teaching happens in an unstructured format, study networks and collaboration happen, but not very deeply rooted. (F7, 38 years)

From the above observations, it is true that team teaching and mentoring are among the most CPD activities encouraged by TSC, though in some instances, it is not well-rooted, perhaps owing to factors related to the institution's culture, time constraints, among others.

This similar finding was also cross-checked during focus group discussions, where a respondent from one of the four focus group discussions reported that collaboration is very important in CPD as it provides a platform for comparative analysis of the teaching methods and their effectiveness. The respondent further reiterates that teachers are afforded a platform to think about and through their teaching and learning approaches, compare them with their fellow teachers, and, in most cases, generate new insights on the same. It also facilitates the sharing of ideas, experiences, discussion, feedback, and moral support. He quotes that:

“Collaboration, in my opinion, is the same as forming a community of practice or peer conversation platforms where teachers share experiences and best practices. This process builds and strengthens solidarity and professional learning in addition to providing a platform for teachers to strengthen their abilities and identify opportunities for further enhancement of the learning outcomes in teaching practices”. (M8, 47 years)

Respondent 4 on peer coaching observed that:

“Coaching is mostly done through peer teaching. Most of the respondents opined that teachers construct knowledge through CPD through interaction and dialogue with other teachers. Knowledge is evolving, and teachers need to adjust accordingly to the changing times. From the onset of the Competency-Based Curriculum, there have been different platforms created for sharing knowledge and experience referred to as a community of practice (CoP). Agriculture forums come together to learn from one another. (M7, 51 years)

Respondent 5 on Benchmarking observed that:

“Benchmarking is another method of enhancing peer learning, as comparison is drawn from one institution to another. In this regard, the best practices from an institution are identified and replicated in the other institutions”. (F6, 39 years)

From the above verbatim presentations, it can be deduced that many approaches to continuous professional development determine the form and effectiveness of the process. Although many of these approaches are described as forms of continuous professional development, they are essentially processes of continuous professional

development. They represent different approaches to structuring, designing, and organising a continuous professional development experience for all educators. In this regard, training is described as the most effective traditional and dominant form of continuous professional development and comprises workshops, presentations, and other types of in-service activities. Training typically includes a direct instruction/lecture component, skill demonstration, and modelling and may also include simulated skill practice and even workplace coaching and consultation. All the same, these different approaches are critical forms of CPD training as they serve specific purposes of retooling the tutor with the required skills, knowledge, and attitudes related to the teaching and learning activities.

Collaborative forms of continuous professional development include processes such as inquiry, discussion, evaluation, consultation, collaboration, and problem-solving. It may focus on teacher roles (leader, peer coach, researcher) and include new structures (problem-solving or decision-making groups, teams) or tasks (journal or curriculum writing, case study). A community of practice (CoP) is a group of educators from different schools who interact regularly to discuss and share their work. This process is enhanced by social media platforms that are technology-based communication methods, such as WhatsApp, Twitter, and Telegram. The educators can interact through virtual meetings or physical classroom visitation.

Teacher training colleges, such as Kamwenja and Muranga, and universities are also platforms for continuous professional development. In these spaces, the tutors who undergo continuous professional development work collaboratively to enhance the student teaching experience and improve professional development. These goals are met through active involvement of the college administration, various departments, where formal professional development experiences (teacher study groups,

curriculum writing, peer observation, case conferences, workshops), and school-based seminars are provided. It is indicated that several higher learning institutions and academic institutions also offer Continuous Professional Development as per the curriculum developed by the KICD.

The study revealed that there is a need, therefore, to develop a more inclusive and tutor-friendly CPD model based on the needs analysis, which is carried out from time to time using a teachers' professional development toolkit in line with this ideology. A 4-point scale from "low-level need" to "high-level need" was used to rate the extent of teachers' professional development/learning needs. The highest-rated needs were "ICT skills for teaching, followed by "research and dissemination in teaching" and "teaching students with special learning needs". In contrast, "understanding teaching strategies" and "knowledge of content in my main subject area" were reported as low-level needs.

Table 4.2: Extent of Professional/Learning Perceived Needs

Rating of perceived needs N=32				
Tutors' Perceived Needs	None	Low	Moderate	High
Masterly of subject content				✓
Performance standards				✓
Teaching strategies			✓	
Lesson preparation		✓		
Assessment practices			✓	
Classroom management			✓	✓
Special learning needs	✓	✓	✓	

Regarding tutors' views on the usefulness of CPD participation in the social construction of knowledge. Teachers understood CPD to shape their professional lives significantly. The results on the perceived usefulness of participation in these activities to teachers' professional practice suggest that informal activities have a

more positive impact on the tutor's construction of knowledge. About half of the tutors indicated that the "informal dialogue with colleagues on how to improve teaching" had a more positive impact on their overall professional development than organised activities, such as in-service training and workshops.

Table 4.3: Teachers' Views on the Impact of the Usefulness of CPD Activities on Their Development

CPD Form/Activity	No Impact	Small	Moderate	Large
In-service Training	0	0	12	20
Workshops	0	0	16	16
Continuing Education	2	6	20	4
Education conference	0	6	4	20
Bench Marking	0	2	17	13
Community of Practice	0	2	6	24
Team teaching	0	3	12	17
Peer class observation	0	3	11	18
Mentoring	0	3	16	14
Action Research	0	0	0	0

From the above verbatim presentations, it can be deduced that many approaches to continuous professional development determine the form and effectiveness of the process. Although many of these approaches are described as forms of CPD, they are essentially processes of continuous professional development. They represent different approaches to structuring, designing, and organising a continuous professional development experience for all educators. What most of the tutors considered as effective teacher professional development was Module 2 or extramural studies organised by the higher institutions of learning across the country. These programs are conducted when schools are in recess to avoid interference with the regular teaching and learning process. The reference materials are issued for continuity when the normal school calendar resumes, and the assessment is done at a specified time.

The general information derived from the in-depth interviews and focus group discussions is that there are various forms or approaches of CPD, including In-service training such as SEMASE, workshops, conferences, and training conducted by KNEC based on testing, moderating, and marking. Lesson observations are conducted as a requirement of TPAD, and team teaching is also conducted. Specialised learning areas are identified and enhanced, and engaging in independent research happens at a personal level for personal knowledge acquisition to enhance productivity. Another comment made was that the most preferred methods of conducting CPD workshops and in-service forums were. The study revealed that the most effective form of CPD is in-service training. It, however, highlighted the limitations of the model in the sense that it would require time, discipline, consistency, and commitment.

From the literature reviewed in Chapter 2, the Kenya Teachers Service Commission Code of Regulations for Teachers section 48(1) states that every teacher shall undertake the professional development programs as prescribed or recommended by the commission from time to time, through the approved training institutions and that every teacher who completes a professional teacher development program shall be issued with a teaching certificate by the commission in the manner prescribed under the regulation 48. This implies that teachers in Early Childhood Development and Education (ECDE), Secondary Teacher Education, Technical Teacher Education, Special needs education, and Primary Teacher Education (PTE) in all public institutions should undergo Continuous Professional Development (CPD) regularly to develop their personal and professional qualities in terms of improvement in their knowledge, skills, and practice (Ministry of Education, 2018).

One of the common CPD programmes carried out among trainers in Primary Teacher Training Colleges (PTTCs) in Kenya is the school-based teacher development

programme, which is implemented nationally to train teacher trainers for diverse emerging concepts in the sector (Wamalwa, 2023). Examples of professional development include items such as continuing education, participation in professional organisations, enrolment in training programs, research, improved job performance, and increased duties and responsibilities (Bett, 2016; Donkor & Banki, 2017; Sumaryanta et al., 2018). Aileen Kennedy provides nine models of continuous professional development of teachers that can be used depending on different circumstances. These models are training, award-bearing, deficit, cascade, standards-based, community of practice, action research, and transformative models (Kennedy, 2005).

Concerning this, the authors suggest that the training model is effective in introducing new knowledge to teachers (Darling-Hammond, 2017; Kennedy, 2005). An award-bearing model of CPD, on the other hand, can be used to encourage quality assurance and continuity among the teachers (CEDOF, 2025). The same authors further assert that the Deficit model is appropriate in providing a remedy for the perceived weaknesses in individual teacher performance. The study revealed that there is a need, therefore, to develop a more inclusive and tutor-friendly CPD model based on the needs analysis, which is carried out from time to time using a teacher professional development toolkit. In line with this ideology, Saljooghi and Salehi (2016) argue that the Cascade model is widely used in disseminating information from a few trained Key Resource Teachers (KRTs) to other teachers. The model emphasises the adherence of teachers to the set standards in the education system.

The key informants from the Ministry of Education further confirm the policy status and regulatory framework of Continuous Professional Development. Policies to improve the quality of teachers have focused chiefly on raising academic

requirements for entry into Primary Teacher Education. It is, however, observed that one of the challenges that affects the quality of training in the TPE is that the curriculum is a nexus between quality and quantity, overloaded and leaving little time to focus on the development of the knowledge, understandings, and skills that trainee teachers will need to help primary school students learn reading and basic mathematics. Further, the PTE curriculum places heavy emphasis on subject content and the acquisition of theoretical knowledge.

It is observed that teacher educators in Kenya are drawn largely from university-trained secondary school teachers, and they receive no training or induction on teaching PTE. This, coupled with a lack of materials on training teachers, leads to teacher educators' inadequate knowledge, understanding, and pedagogical knowledge for teaching reading and mathematics to those who will teach these subjects to young learners.

4.3 Continuous Professional Development Training Process on Tutors' Social Construction of Knowledge

This section of the study sought to find out how CPD training processes impacted tutors' social construction of knowledge. To achieve this objective, there were questions about how CPD programmes are organised to improve learning outcomes both at the personal and college levels. The respondents were asked about the mode of CPD regarding capturing data pertinent to the input, process, and outcome situation of the CPD program. The respondents were asked about their perception of Continuing Professional Development in terms of the way it affects the teaching practices regarding the teaching and learning process. The respondents were also asked to elaborate on the benefits and general impacts of CPD programmes regarding whether they shaped improvement in pedagogical skills, reinforcement in tutors'

expertise, improvement in students' outcomes, integration in ICT, building quality learning environments, syllabus coverage and benefits such as understanding learners' diversity. In addition, the respondents were to explain further how CPD affected tutors' career progression and other CPD experiences that contributed to their career development. From the roles presented, the respondents also reported on the challenges experienced in the process of CPD.

The findings of the study pointed out that the majority of the respondents 34(89%) asserted that collaborative practices are amongst the effective ways of ensuring effective construction of knowledge, while 4(11%) preferred to learn through other processes. This finding shows that, indeed, collaborative practices are one of the main processes through which tutors construct knowledge. This was well noted during an in-depth interview when a respondent who was a key informant had this to say:

“There has been a growing concern to improve teacher quality in Kenya. However, the majority of teachers in Kenya are not suitably qualified. The majority who join institutions for training leave or graduate with scant and sometimes inappropriate teaching skills. This calls for a need to reskill the teachers continuously” (M5, 58 years).

What is evident from the above observation is that changes in the teaching profession can only happen through CPD training. This is so useful in helping the tutors keep abreast with the needs and the dynamics of the profession. Through collaborative activities, teachers are given a chance to discuss with colleagues and share ideas. This is key, especially in the case of new teachers who need collegial support in areas such as effective teaching methods, classroom management, as well as exam preparation.

This study finding is well corroborated in socioconstructivist theory that advocates learning through active participation with peers. In relation to CPD training, it would imply that teachers learn actively through the co-construction of professional

knowledge with peers and experts as they interact and engage in professional dialogues, which, in the long run, improves their practice.

However, this finding was cross-checked during a focus group discussion where a respondent agreed that when CPDs are carried out, study networks or collaboration work are done, but it's loosely done.

He commented that:

Most teachers work in silos. We currently have a TSC Policy that requires Teacher Induction Mentoring and Coaching (TIMEC). Team teaching happens in an unstructured format, study networks and collaboration happen, but are not very rooted. (M11, 56 years)

The above are sentiments from a 56-year-old male respondent. This simply outlines more evidence inclined to develop innovative methods of Community Practice. The above findings are a pointer that through collaborative practices, teachers can share knowledge, ideas, conceptions, opinions, as well as experiences. Secondly, through these collaborative practices, teachers stand a better chance of acquiring the best instructional practices as they share research-based teaching practices. Additionally, through collaborative practices, teachers are enabled to come up with communities of practice that will positively change the culture & instruction of their entire grade level, respective departments, or schools. It provides a common learning area, and so teachers consult each other on how to handle different concepts. Tutors can share diverse knowledge and experiences with other members in the group, which results in the expansion of knowledge. In summary, collaborative activities take full account of the individual development newsfeeds and members learn from each other, seeking external support as well as help.

This finding is inconsistent with studies conducted by Baptise, Kampire, and Karegeya (2022); Bantwini (2019); Sin (2016), who documented that study networks

and collaboration among teachers learn from each other as they share ideas, experiences, discussions, as well as give feedback on the learning process. The review of the above literature underscores the significance of collaborative approaches in enhancing school changes that go beyond individual classrooms. Through collaborative practices, tutors acquire new knowledge, a strategy in the improvisation of teaching skills, and a means to bring change in the belief system of teachers.

This finding is also consistent with the Constructivist and Bio Ecological theory of Human Development, which emphasises learning through social interactions with peers in the immediate environment. Through this, teachers increase knowledge and skills when teachers share “success stories” with their colleagues, as well as experimenting with the newly acquired practices to see the changes as reflected in their students' outcomes.

However, a small percentage of respondents 4 (11%) preferred to learn through peer-to-peer teaching /observation. This was captured during one of the in-depth interviews where a respondent commented that peer teaching is a preferred form of effective CPD training process.

He commented that:

“Peer -peer teaching is common in college. It has proven useful in terms of impacting content, and especially on the onset of CPD. It is achieved through the use of e-portfolios and e-assessment. Indeed, it has proved useful in learning new assessment methods.” (F2, 52 years)

A similar observation was captured during one of the focus group discussions, where a respondent noted that:

Peer-to-peer teaching/observation is a useful way of helping teachers construct knowledge. At the department level, it is done frequently.

It helps teachers to support each other in concepts/strands in which they have weaknesses. They guide each other. It helps in the sharing of knowledge. It is more of peer counselling “(M6, 42 years)

From the above data, it can be deduced that tutors are positive about constructing knowledge through peer-to-peer observations. This is because they can understand their peers better, and they can ask questions freely, as compared to other processes. They also consider it to be more collegial support. This discussion, therefore, concludes that peer-to-peer observations are made possible through diversified social media platforms. As long as a teacher has a smartphone, then he/she is good to go into the entire world and understand and learn from diversified socio-cultural orientations.

The above study findings concur with studies conducted by Alam, Aaamir and Shahzad (2016), who reported that it helps teachers to learn from their peers, and subsequently, this helps them to gain more knowledge on how to approach their professional development, building professional reflective practice (Hope et al., 2018). Lastly, peer-to-peer observations/coaching empowers teachers to become more confident in their teaching and learning capacity. In conclusion, most of the respondents 34 (89%) in this study preferred collaborative activities as opposed to a peer-to-peer form of CPD training, which recorded 4 (11%).

Regarding the various forms of CPDs, it was evident that they can be carried out in various forms such as in-service trainings, workshops, conferences, mentorship, and informal dialogues with colleagues, observation visits to other colleges and team teaching through webinars. In regard to this, the study established that the majority of respondents 25(66%) preferred team teaching as the best form of promoting CPD. However, 15 (44%) of the respondents preferred mentorship programmes over team teaching. From the explanation given by the 25(66%) of the respondents, it is evident

that team teaching is an effective way of the CPD process. This was well noted during an in-depth interview where a key informant had this to say:

"Team teaching promotes our knowledge and our performance and makes work easier. It equips us with more knowledge so that we can deliver the content better. Waiting for the government to organise and execute the programs takes a lot of time and is slow.

The government's intention for CPD is good, about the idea and the time allocated for this. However, there are no strategies or structures for monitoring and evaluation to ensure that the intended outcome is achieved.' (F12, 52 years)

What is evident from the observation made by the 52-year-old female is that team teaching as a CPD training practice is highly valued by tutors since it provides a platform for sharing and professional networking. The findings corroborate a study carried out by Hadimatheuo (2018); Widayati, MacCallum and McConney (2021), who found that through team teaching, teachers are empowered to discuss ideas and ask questions on certain concepts that may be posing difficulties to them, in addition to sharing knowledge with their peers. Additionally, a study carried out by Anuar (2019) confirms that through team teaching, teachers can learn more from each other, encourage professional collaboration and sharing.

However, some respondents 17(45%) reported that they preferred mentorship practices as an effective CPD process. A respondent during one of the in-depth interviews had this to say:

"I am usually positive about mentorship programmes. This is especially true if one gets the right mentor. It helps one gain confidence as he/she does new areas, one learns a lot from his or her colleagues, and however, for novice teachers, they may have to identify for themselves a mentor. This is especially so if they are coming from high schools, but sometimes the administration places them under the guidance and counselling department, where they are further placed under a mentor, that is a tutor-tutee relationship.' (M3, 53 years).

The observation of a 44-year-old male tutor underscores the point that tutors consider mentorship programmes beneficial in advising and guidance. This could explain why

the TSC has introduced a structured formal programme known as the mentor-mentee programme in all education institutions in a bid to achieve the mentorship activities amongst teachers as a way of capacity building skills. Additionally, the above data also explains the role of mentoring practice on an individual's awareness of their own professional development by providing and recommending the structured opportunities for reflection and observation. In this way, the teacher can self-assess their own abilities through reflection and so build more knowledge.

This finding corroborates with studies that were conducted by Mansour et al. (2014); Ndebele and Dagogo (2022), who affirmed the effectiveness of the mentoring practices in facilitating teacher construction of knowledge through CPD programmes. In conclusion, it is evident that the majority of the respondents 25(66%) preferred the team-teaching approach as compared to mentorship, owing to the many benefits associated with it.

Regarding how tutors perceived CPD processes that they practised, the majority of them, 30 (79%) respondents construed CPD as externally provided workshops and courses, or ongoing support of colleagues as part of a CoP. To them, CPD is considered to be an external activity, rather than an ongoing part of professional life. The main issues addressed during these meetings included: syllabus coverage, assessment, and teaching strategies. However, a few respondents 8 (21%) of them agreed that CPD is very important and that the responsibility to undertake it lies with both the state and the individual teachers. There should, however, be a well-coordinated strategy by the stakeholders, which includes the Teachers Service Commission, the Kenya Curriculum Development, and the school administration, to ensure that the training is done seamlessly. Based on the above response, it can be

deduced that CPD is a process that requires the engagement of all stakeholders at every level.

Even though it was made clear what was to be explored under the umbrella of CPD, the teachers' responses also revealed that they perceived CPD as an externally organised programme. For instance, some respondents reported not having engaged in formal structured in-service CPD activities organised by KICD and TSC, pointing out that there are tutors who have a limited understanding of the concept of CPD due to such factors.

From more probing made, and in response to more questioning, the tutors reported that they were continuously learning from colleagues' new pedagogical approaches to teaching. They admitted that there was a need for ongoing learning in their subjects within the college, and they argued that the structure and norms of the schools created situations in which community learning is made possible because of the cordial relationship among tutors. During an FGD meeting, a respondent had this to say regarding the above:

“Since we try to work as a team, sometimes when you try to bring in a new idea, people don't take it positively. They take it as though you are trying to impose your knowledge on them... So, the best thing is to cool down as you wait for an opportunity to arise from elsewhere or look for self-defined strategies of CPDs” (F13, 39 years)

The sentiments from a 39-year-old respondent highlight the teething problem that tutors encounter in their endeavour to practice team teaching. It is also an indicator of the need for the college administration to provide a supportive environment to facilitate tutors in practising team teaching. This observation is consistent with Bronfenbrenner theory of Bio Bioecological theory of human development (2005), which emphasises the role of a supportive environment in facilitating the development of an individual. In the case of this study, it can be equated to tutors' construction of

knowledge through working cordially with other tutors. Additionally, Subitha (2018) acknowledges the powerful role of teachers' social-cultural settings, as it has a powerful effect on their learning.

Additionally, the study established that the majority of the respondents 27(71 %) also preferred benchmarking with tutors from other colleges as a process of CPD training, while 11 (29%) felt that they preferred collaborating with their colleagues at the department or college level.

Generally, the responses and findings from the tutors here underscore the fact that tutors appreciated benchmarking as an important CPD process that helps them to grow professionally. Additionally, it also encourages positive internal competition.

In response to the effect of CPD and whether the teachers should take the challenge and the initiative to improve themselves, during an in-depth interview, a respondent noted that:

“In-service training is the game changer as it is done collaboratively with all the key stakeholders, the national government, the Ministry of Education, KNEC, and KICD. It’s worth the effort as it helps build the teacher’s capacity and enhances the teacher’s visibility. The process should have been done way before changing the teaching curriculum. Individual tutors should take responsibility for improving themselves to enhance career development, and take the initiative to be undertaken by the key stakeholders. “Sometimes, the platforms are also used to channel teachers’ welfare issues regarding better remuneration” (M12, 45years)

The findings reflected the outcome of a focus group discussion where the majority of the respondents 20 (53%) reported that benchmarking through observation visits to other teacher training colleges that are doing well is a game changer in tutor learning. Regarding the above, a respondent from one of the focus group discussions noted that:

“When we began implementing competency-based curriculum at this college, we did not have an idea of how to go about it. We were made to benchmark with other colleges such as Egoji and Thogoto,

as they had started offering Diploma courses one term earlier than us. We also make observation visits to KICD to evaluate books, especially with the introduction of CBC.” (F11, 41 years)

From the presentation of the above data, it is evident that the majority of the respondents 27(71%) referred benchmarking with other tutors from other colleges since it offers them a platform to get the best practices in whatever subjects they teach, as well as sharing experiences, which is key.

This finding concurs with studies conducted by Ellen et al. (2015); Asfahani, Samar and Khurshed (2024), who found that benchmarking is an effective CPD process that is being recognised globally, for it helps teachers gain more ability and confidence to teach subject-specific content in addition to providing overall teacher satisfaction.

In conclusion, it is evident that to improve tutors' social construction of knowledge through CPD training, it is imperative to adopt a collaborative approach. Accordingly, it would also involve a multi-agency approach where the existing government structures are utilised in coordination or association with other entities or non-state actors that support intervention for quality education as outlined in the Sustainable Development Goals (SDG4).

Additionally, it was observed that CPD design serves three main purposes; provision of further personal and professional education; and enabling teachers to review and modify teaching methods and curricula in the light of present-day changes be they technological, economic, cultural, social, or political; and meeting in-service needs of a stable teaching force due to the fall in demand for new or refreshed skills to match the new competency-based curriculum (CBC).

The above findings support a study carried out by Akala (2019), who documented that in the wake of education reforms in the country, teachers have to undergo continuous

professional development training as a way of empowering them to meet the demands of the new educational system. Additionally, a study carried out by (Darling-Hammond, Hyler, & Gardner (2017) found that CPD is a suitable strategy for teacher retooling.

The majority of the respondents 37 (97 %) insisted that there are direct benefits to the learning outcomes for teachers who are conscious about their CPD and those who take it as their responsibility. They observed that education is the backbone of any economy and teachers are the sap that runs through this backbone. There is a need, therefore, to bring about change in teachers' practice and knowledge by designing more innovative ways of effectively raising teachers' competencies. Continuous professional development would also emphasise offering appropriate professional support to teachers, who are essential in promoting the quality of learning in schools. This effort and change are usually evident in learning outcomes. In one of the in-depth interviews, a respondent noted that:

"The difference is clear and easily observable in students' academic performance. The teachers who are conscious about self-improvement and professional development usually post better results in national exams, which is the only measure for effective and positive learning outcomes in Kenya". (M2, 52 years)

The observation from the above respondent indicates that CPDs are programs that are designed to help teachers understand better the demands of newly introduced curricular reforms, which focus on respective learner competencies, to enable curriculum implementation. These findings reflected the outcome of a focus group discussion where a respondent had this to say:

The thrust of most of these programmes is to familiarise teachers with the new changes in the curriculum. CPD thus helps teachers to socially construct knowledge based on their immediate environment to improve pedagogical skills of rendition of subject content to the

learners to enhance learning outcomes and generally to improve the quality of education. '' (M9, 53years)

What is evident from the above verbatim presentations is that CPD is a capacity-building process to acquire new knowledge, a strategy in the improvement of teaching skills, and a means to bring change in the belief system of teachers. This finding is in agreement with studies carried out by Shenigher (2014); Darling-Hammond, Hyler & Gardner (2017); Chengi and Li (2020), who report that continuous professional development programs are strategies to equip teachers with the teaching and learning demands of 21st-century skills. This is critical, especially in the digital era, where the integration of social networks into pedagogical practice presents an opportunity to transform traditional educational models.

The study also established that CPD is a policy structure created by the government of Kenya to address the emerging issues and changing trends in education to improve access and quality of education in general. Equally important is that it also aligns with the idea that education plays the role of enhancing the capacity of citizens and informing important choices for their welfare, and as such, it has to meet minimum quality standards. Among other conditions, it is strongly argued that universal goals set for education in terms of access need to be accompanied by quality instruction. This, in turn, requires teachers to be qualified to do their job effectively. In one of the in-depth interviews, a respondent commented that:

Teachers in Kenya and around the world are expected to be reflective and change-oriented, thereby meeting the government and public demand for quality education. From the recommendations outlined in the CBC circulars, the instructors are expected to consider the dynamic nature of the learners and the society at large''. (F8, 54 years)

The above narration signifies the importance of continuous professional development (CPD), which aims at improving the quality of the teaching-learning process in

particular and improving the quality of education in general. To achieve this expectation, the teachers are expected to employ interactive methods of teaching to help every student learn to their maximum potential, an outcome that can only be realised through the various forms of CPD. Regarding the above deduction, another respondent from an in-depth interview had this to say:

“CPD enables teachers to upgrade their expertise (knowledge, skills, attitudes, behaviour) and qualifications and move along their preferred career path. It is also very important to strengthen education quality to align with the Sustainable Development Goal 4, as well as strengthen national cohesion and integration” (M10, 57 years)

This similar finding was documented during a focus group discussion by a respondent who said that:

“Teacher quality variables appear to be more strongly related to student achievement. She equally recommended that policymakers should consider teacher licensing systems and more effective professional development strategies, which in turn have shown to produce evidence of the stronger effect on teaching and learning approaches that strengthen teachers’ ability to teach diverse learners” (F9,56 years)

Discussions and experiences from the above FGD response revealed that CPD enriches the approach to teaching as it enhances quality teaching. Learning outcomes solely depend on the quality of a teacher. The findings also indicate that teachers bring in their personal beliefs and attitudes, which have an impact on how they perceive knowledge. This was well articulated by a FGD participant who said that:

“Teacher quality variables appear to be more strongly related to student achievement. She equally recommended that policymakers should consider teacher licensing systems and more effective professional development strategies, which in turn have shown to produce evidence of the stronger effect on teaching and learning approaches that strengthen teachers’ ability to teach diverse learners” (F10,43 years)

This finding is well articulated in sessional paper No.1 of 2019 (Republic of Kenya, 2019), Teachers Service Commission Code of Regulations for Teachers’ (2015)

section 48(1), and the United Nations Educational and Cultural Organization's (UNESCO) Education 2030 Incheon Declaration that emphasizes on the need for teachers to be given quality CPD programs in a bid to improve the quality of education in the country.

What is also outstanding is that due to the dynamic nature of the teaching and learning process and due to the rapid technological change and growth, models for implementing initiatives become increasingly complex and address the relationships between professional development and teacher and student learning, school improvement, leadership and change.

However, the study established that some respondents 10 (26 %) lack awareness about what professional development models exist and what purposes they best serve. The appropriate model might be a change process model or a skill-training model. It could involve action research, clinical supervision, reflective practitioners, distance education, learning networks, and study groups or expert presenters, to name a few of the research-based models summarised in the professional literature. During an in-depth interview, a key informant had this to say:

"The in-service training is driven both by institutions and individually guided staff development initiatives where individuals identify, plan and pursue activities they believe will support their learning and improve their own professional or career growth."

"From the TPD requirements, lesson observation, assessment, and self-evaluation are carried out at the school level, and needs are determined to design continuous professional development models. For its effectiveness, the tutors are observed directly and given objective data and feedback about their classroom performance".
(F11, 41 years)

Based on the sentiments of a 48-year-old female respondent, it is evident that there is a need to create awareness of the role of CPD on teacher learning, improve schools, teacher quality, and learning outcomes in Kenya is urgent. The improvement of

teacher professionalism is seen as a means of achieving that goal. The need to make follow-up training for teachers to improve service delivery and quality of education is dire, and therefore, this study addresses the issue.

The findings of the study indicated that the tutors who have positive attitudes towards CPD related better with students regarding academic work, classroom management, evaluation procedures, assignments, and developing human relationships with students, principals, and society in general. These responses then lead to a deduction that teacher training is positively related to effective teaching.

The results of the study also indicated that there is a significant correlation between teacher training and student test results. In one of the in-depth interviews, a key informant reported that:

“There is a difference observable amongst the tutors before and after professional development workshops or seminars because it provides individual and collective improvement that is necessary to adequately address the heightened expectations for improving student learning outcomes”. (M3, 57 years).

The observation of a 57-year-old male respondent underscores the point that there is a relationship between continuous professional development training of teachers and teaching effectiveness as reflected in parameters such as mastery of the content, pedagogical skills, classroom management, and interpersonal/social skills, amongst other skills.

What is evident from the above verbatim presentations is that tutors' participation in continuous professional development programs has some impact on their ability to acquire & critically develop their knowledge, skills, and emotional intelligence essential to have good professional thinking, planning, and practice with their students & colleagues through every phase of their teaching lives.

In one of the in-depth interviews, a respondent had this to say:

“Continuous Professional Development is at the centre of the practice of improvement. It is the process by which we organise the development and use of new knowledge in the service of improvement. My view of professional development is that it should be carried out to meet the goals of the system for the improvement of learning outcomes, rather than being driven by the preferences of individuals who work in schools. (M13, 58years)

What is evident from the above accounts is that CPD training can be considered as an intervention that has been put into place to help tutors get acquainted with the demands of the new curriculum.

The findings from focus group discussions echoed similar observations as reflected in a response from a participant who reported that:

“When people come together to deal with practical problems, it’s important for them to consider what they want to create, not just what they want to fix. This approach fosters shared aspirations. Most people in most organisations, and teachers are no exception, are obsessed with solving problems without reinventing the wheel. They spend their lives trying to fix things that are broken. This obsession with problem-solving diverts our attention from a far more important activity, which is creating the new.” (F9, 56 years)

From the above verbatim presentations, it can be deduced that CPD is a self-enhancement strategy triggered intrinsically to bring enduring change in the career lives of teachers and ensure the quality of education at the national level. At school, the process is structured at the individual, department, and college levels in such a way that every teacher takes part in the implementation of identified priority intervention areas in the school. The self-enhancement strategy has different packages, such as developing modules in at least one of the priority areas, improvisation of one’s teaching methodology, classroom observations, and cluster school visits. These study findings are confirmed in studies conducted by Tumar et al. (2015); Avidor-Ungar (2016); Mwangi and Njuguna (2019); Wiyadati, MacCallum and Mconney (2021) who reported that CPD programmes improve teaching

effectiveness as reflected in mastery of content, pedagogical skills classroom management, amongst other benefits.

The study findings reported how CPD has positively impacted teachers' skills in teaching. Firstly, CPD contributed to the social and emotional development of the teachers as they engaged in professional dialogue, thereby setting up intellectual challenges and opening up communication. It also contributed to the intellectual development of both the teacher and the student. It promotes lateral thinking skills in problem-solving, creativity, critical thinking skills, self-reflection, and intellectual stimulation. Additionally, it contributes to institutional development as it brings about organisational change. The program is an incentive to the teachers in a way that motivates them. The ripple effect of these manifests through valuing individual and collective contributions, fostering and nurturing skills and knowledge, and enhancing positive attitudes towards education.

Although the CPD is mainly aimed at enhancing teachers' professional capacity, the study found that some respondents who were key informants reported significant improvement in their leadership skills as they endeavoured to implement CPD requirements. Some of the areas of leadership development that they highlighted include planning and coordination of the program, which, in the long run, enhances and widens networks. Coordination is done at different levels of operation: the learning circle, school, and larger network with officers from the Ministry of Education, the higher learning and training institutions, and the Kenya Curriculum Development officers. The coordinators ensure that all members participating in formal structured CPDs adhere to the timeframes and activities as set out in all the management plans. Moreover, the principals are charged with the responsibility of providing direction and establishing clear communication structures. Clear direction

was also identified as an important factor in leading and managing people during professional development activities.

The programme encourages the identification and adoption of the best practices emanating from the wider interaction with other models as practised by other institutions. This is then used to model organisational goals. During an in-depth interview, one of the respondents observed that modelling good practices is important in shaping organisational direction and setting a vision with clear organisational goals.

He commented that:

“As an administrator, I have to inspire the tutors and encourage them for both inter-school and intra-school engagement. The main focus is to get them interested in CPD practice, the same as they come back to the schools with enthusiasm” (M7, 51 years)

Through team teaching and as a TPAD requirement in the new curriculum, lesson observation is done to ensure the tutors align with the requirements. This process enhances the monitoring and evaluation of processes in the implementation of CPD. The management at the institutional level develops programs that ensure monitoring and evaluation processes are done effectively. The majority of the respondents ascertain this by acknowledging that class visits are periodically conducted for accountability and the successful implementation of the CPD programmes.

4.3.1 Provision of Further Personal and Professional Education

The study findings indicated that there are direct benefits to the learning outcomes for teachers who are conscious of their CPD and those who take it as their responsibility. The difference is clear and easily observable in students' performance. The teachers who are conscious about self-improvement and professional development usually post better results in national exams, which is the only measure for effective and positive learning outcomes in Kenya.

These findings indicate that the majority of the respondents 36 (95%) regarded CPD as being important because it improves the teacher professionally, academically, and technically. The findings on practices indicate a conception of TPD that combines the rise of teacher academic qualifications, new instructional techniques, and professional growth.

Additionally, the perception of the respondents from both FGDs and in-depth Interviews on the benefits of CPD reveals improved teachers' social mobility and which can lead to promotion to a higher job group and also boost confidence in the teacher. The respondents further attach importance to the context of teaching, the characteristics of teachers and the social orientation thinking of the teacher, and the relation among them as powerful factors affecting the implementation of reforms in the classroom practices.

The majority of the respondents 20 (53%) reported that CPD builds leadership qualities amongst teachers as they form communities of practice. Leadership roles are distributed across different groups. They also confirmed that the leadership roles were assumed by various members of the group, depending on the type of leadership required in that specific situation. This distribution of leadership led to the empowerment of the teachers within the group, and these teachers were instrumental in taking ownership and driving the learning process. The importance of distributed leadership was summed up by one of the participants: It is also a fantastic example of a case study for collaboration and the champions that could take a level of ownership and drive the process. This process makes the tutors feel that they have added value and feel appreciated. This study finding concurs with a study conducted by Wambugu, Stutchury and Dickie (2019) who reported on the significant role of collaboration in supporting teacher construction of knowledge.

4.3.2 CPD and In-Service Training for the Competency-Based Curriculum (CBC)

The study findings revealed that CPDs are programmes that are designed to help teachers understand better the demands of newly introduced curricular reforms, which focus on respective learner competencies, to enable curriculum implementation. In other words, the thrust of most of these programs is to familiarise teachers with the new reform. CPD thus helps teachers to socially construct knowledge based on their immediate environment to improve pedagogical skills of rendition of subject content to the learners to enhance learning outcomes and generally to improve the quality of education.

The key informants from the Ministry of Education observed that CPD is a policy structure created by the government of Kenya to address the emerging issues and changing trends in education to improve access and quality of education in general. They agreed that it also aligns with the idea that education plays the role of enhancing the capacity of citizens and informing important choices for their welfare; therefore, it has to meet minimum quality standards. Among other conditions, the respondents strongly argued that universal goals set for education in terms of access need to be accompanied by quality instruction. This, in turn, requires teachers to be qualified to do their job effectively. Additionally, CPD helps in the construction of teachers' professional identity; in turn, the construction of a professional identity helps determine the type of professional path they follow, whether as educators or as administrators in a functional capacity.

As the study findings revealed, teachers in Kenya and around the world are expected to be reflective and change-oriented, thereby meeting the government and public demand for quality education. From the recommendations outlined in the CBC

circulars, the instructors are expected to consider the dynamic nature of the learners and the society at large. This situation signifies the importance of continuous professional development (CPD), which aims at improving the quality of the teaching-learning process in particular and improving the quality of education in general. To achieve this expectation, the teachers are expected to employ interactive methods of teaching to help every student learn to their maximum potential, an outcome that can only be realised through the various forms of CPD.

The observations made align with the literature on quality education, indicating a strong link between teacher professional development and quality in education, especially in the areas of teachers' beliefs and practices, students' learning and the implementation of educational reforms (UNESCO, 2006). CPD is rooted in the constructivist philosophy, which claims that a person's constructions and views of the world are not stable, but are in continuous change. Accordingly, it is presumed that teachers have to engage themselves in planning and executing their professional development on a continuous basis to cope with the rapidly changing world. In this regard, it is generally agreed that teacher development is an essential element to bring meaningful changes in addressing equity, quality, relevance, and efficiency in the education realm.

Through both in-depth interviews and FGD discussions, it was noted that TPAD is closely linked to continuous professional development and is used to appraise teachers based on performance. The difference between the two is that the TPD is used for self-evaluation of the teachers to determine the gaps in teaching and suggest ways of mitigating them. However, CPD is developed by the Ministry of Education to enhance the quality of education. In addition, CPD for teachers is about teachers learning; it is transformative in its intent and outcomes. Its remit is not just about a

teacher's classroom as reflected in improvement in pedagogical skills, classroom management, integration of ICTs in teaching, enhanced syllabus coverage, and quality learning environment, but rather about social change, where education is a driving force.

More emphasis is laid on the above observations in that in all high-performing educational systems, teachers have a key role to play in improving educational outcomes and are therefore seen at the centre of the improvement effort themselves. Accordingly, such systems are not driven by top-down reforms but by teachers being at the forefront in embracing and leading reforms, and so they end up taking up responsibility as professionals, which in turn helps them to develop expertise in a wide range of pedagogical strategies for use in their respective classes.

Therefore, it is important for teachers to continually improve their abilities and understanding in pedagogy, subject content, and scientific understanding. CPD is a systematic and long-term solution to meet this need and address these challenges.

Additionally, the majority of the respondents 27 (71%) further reiterate that pre-service teacher education and CPD must become more systematic, more practical, more collaborative, and based in the real world of schools and classrooms. On one hand, traditional delivery of in-service training reinforces the notion of the teacher as a technician, uncritically implementing externally imposed policies, rather than an autonomous professional. On the other hand, the development of professionalism and professional development is seen very positively, because its main purpose is to improve learning and learning outcomes.

From the literature reviewed in Chapter 2, Abreh (2018) support this argument by further reiterating that teachers who receive substantial professional development post

better results regarding the students' achievements. This report assumes that professional development effects on student achievement are mediated by teacher knowledge and practice in the classroom and that professional development takes place in the context of high standards, challenging curricula, systems-wide accountability, and high-stakes assessments. Even though the setting and background of the studies are different, they were replicated in this particular study.

From the discussions, it can be concluded that those programmes that focus on subject matter knowledge and on student learning of a particular subject are likely to have larger positive effects on student learning than programmes that focus on teaching behaviours. The implicit logic of focusing on professional development as a means of improving student achievement is that superior teaching in classrooms, which will, in turn, translate into higher levels of student achievement, schools/college environments, as well as district and state policies, as powerful mediators of this sequence.

The above responses equally align with Rahman, Fambi and Anny (2020), who reported that continuous professional development has proven to be evidence in improving student achievement and that many reforms rely on teacher learning and improved instruction to increase student learning.

Several studies support the findings of this survey on the effectiveness of CPD on learning outcomes and the student's positive achievement, Phelta and Newman, 2020; Tuli, (2017) in their studies reported that the implicit logic of focusing on professional development as a means of improving student achievement is that high-quality professional development will produce superior teaching in classrooms, which will in turn translate into higher levels of student achievement.

The key informants' responses on the role of CPD as achieved through mentoring agree with Purnamasari's (2023) study on the role of mentoring in improving teacher development as a tool of CPD. The study findings indicated that mentoring programmes provide a powerful platform for the construction of knowledge, social capital and the psychosocial support perceived by the recipient as relevant to career or professional development. The study also shed light on the important role of teacher improvement geared towards their classroom practices. The recommendations in this study were that for the attainment of Kenya Vision 2030, teachers should be supported at the school level so that they can participate in CPD training, in addition to completing the programmes of mentoring that have proved useful in teacher construction of knowledge.

4.3.3 CPD Outcomes on Tutors' Review of the Curriculum

All variables in the understanding and construction of knowledge given continuous professional development are interconnected with overlapping roles regarding content characteristics, process variables, and context characteristics that affect the quality of staff development. The quality of staff development affects administrator knowledge and practices (school culture, clinical supervision, coaching, evaluation), teacher knowledge and practices (parent conferences, student-led conferences, and guided homework), and parent knowledge and practices. The parents' level of education affects parent knowledge and practices. Administrative knowledge and practices affect policies on curriculum, organisation, textbooks, discipline, attendance, and grading. Teacher knowledge and practices, and parent knowledge and practices, affect policies on curriculum, organisation, textbooks, discipline, attendance, and grading. Teacher knowledge and practices, parent knowledge and practices, and policies affect improved student learning outcomes.

The findings established that teaching and learning is not a simple cause-and-effect relationship, but rather a complex process in which learning is co-constructed by teachers and students in a specific classroom context with instruction at any point in time reflecting the teacher's analysis of the various elements in play at that moment. The complexity of teaching and learning is incompatible with the narrow, short-term, episodic, special-project focus of much of traditional staff development.

The majority of the respondents 30 (79%) confirm that the complexity of current reforms, for instance, authentic instruction and assessment, curricular integration, and achieving equity, often do not lend themselves to simple skill training, but rather require professional growth cultures in schools that permit teachers to function as intellectuals rather than technicians.

Even though the ultimate objective of professional development is improving student achievement as a result of increased teacher learning, testing the relationship between professional development and student achievement is problematic. Due to a variety of confounding variables, there is great difficulty in establishing a direct relationship between professional development activities, improvements in teaching, and increases in student achievement. This is particularly problematic when there are a variety of other new programs, materials, or interventions occurring simultaneously with professional development activities which is essentially all the time in most schools.

A similar study that corroborates these findings was carried out in Ghana, by Donkor and Banki, 2017) who reported that when teachers attended the training improved their knowledge and skills for professional development and competency. In regard to this, the authors recommended that regular INSETS should be organized for teachers to update their knowledge, and skills for efficient delivery on their jobs

because they eventually translate to better learning outcomes and that students yield positive results in the summative evaluation.

However, a study conducted by Betemariam (2017) refutes the above claim by reporting that CPD training did not produce valid and effective outcomes in terms of improving the quality of education, improving teacher performance and higher student scores at a school in Addis Ababa, which paints a different picture. The study confirmed a disconnect between the program's assumptions and observed outcomes. For this reason, the research pointed to the lack of explicit evidence to pinpoint the cause-and-effect relationship between the CPD program and teacher performance. The study also indicated a gap in Ethiopia's assertion that the design of the CPD framework would impact the quality of education and student outcomes.

In the Kenyan context, Anyanga and Kwaba (2024); Okumu and Opio (2023) supports the status of this study since the study findings postulated that through CPD training teachers are equipped with the effective teaching methods, influence the teaching effectiveness, improvement in the masterly of the subject matter, and thus subsequent higher academic outcomes.

Similar studies aligned to the findings of this particular study have indicated that Professional development programs also help teachers to become more knowledgeable in the subject content taught; as a result, promote sustainable development of teachers in line with the educational reform policies as endorsed by (UNESCO, 2005). Said in different terms, the participation of teachers in continuous professional development programs is argued to have some effect on the teacher's ability to acquire and develop their knowledge, skills and emotional intelligence which are therefore essential to have good professional thinking, planning and

practice with their students as well as colleagues through their every step of their teaching lives.

In response to the relationship between training of teachers and teaching effectiveness, majority of the respondents 27 (71%) were in agreement that the tutors who have positive attitudes towards CPD related better with students in regard to academic work, classroom management, evaluation procedures, assignments and developing human relationships with students, principals and society in general. These responses then lead to a deduction that teacher training is positively related to effective teaching.

This study provides evidence that intensive professional development programs can help teachers to increase their knowledge and change their instructional practices. The findings indicated that teachers who participated in these programs developed a deeper understanding of the mathematical &scientific content they explored. To foster student's conceptual understanding, teachers must have rich and flexible knowledge of the subjects they teach. They must understand the central facts and concepts of the discipline, how these ideas are connected, and the processes used to establish new knowledge, and determine the validity of claims.

A respondent who was a key informant from TSC, like in Galache (2024), observes that what makes professional development effective is participation in these programmes. This includes focus on content knowledge, active or having inquiry-oriented learning approaches and a high level of coherence with other reform activities and standards in the teacher's local contexts. More evidence of the effectiveness of CPD is derived from the respondents from both FGD and in-depth interviews. In concurrence, a study carried out in West Africa by Gymar and

Aginselya (2022) investigating the views of basic school teachers in Ghana regarding the forms of professional learning that they engaged in, together with the challenges that they encountered, agrees with the findings discussed above.

There is a need to structure CPD programmes in a way that reflects their experiences in classrooms because of the link; they are in a position to improve on the prior knowledge. The in-depth interviews on other parameters of knowledge construction through CPD revealed that it improves the mastery of the pedagogical skills and learning environment, amongst other benefits. The findings discussed above can be aligned to a study carried out in Tanzania by Komba and Nkumba (2008), whose findings indicated that the majority of the respondents regarded CPD as being important because it improves the teacher professionally, academically and technically. The findings on practices indicated a conception of TPD which combines the rising of teacher academic qualifications, new instructional techniques and professional growth. Although this study was conducted outside the Kenyan context, it presented a motivation for the current study.

The above findings equally resonate well with Chepkuto and Chumba's (2018) study on the influence of continuous professional development programmes on curriculum implementation in selected North Rift County Public Secondary Schools in Kenya. The findings revealed that teachers' professional development is particularly important because it helps teachers to improve the academic outcomes of students. To meet the challenging demands of their jobs occasioned by technological innovations, teachers must be capable & willing to continually upgrade their knowledge, skills & practices. This therefore points out the need to have more continuous professional development programmes in Kenyan schools in a bid to improve student outcomes.

The observations made align with the literature on quality education, indicating a strong link between teacher professional development and quality in education, especially in the areas of teachers' beliefs and practices, students' learning, and the implementation of educational reforms (UNESCO, 2006). CPD is rooted in the constructivist philosophy, which claims that a person's constructions and views of the world are not stable, but are in continuous change. Accordingly, it is presumed that teachers have to engage themselves in planning and executing their professional development continuously to cope with the rapidly changing world. In this regard, it is generally observed that teacher development is an essential element in bringing meaningful changes in addressing equity, quality, relevance, and efficiency.

From this study's findings, it can be deduced that the correlation between continuous professional development and student achievement is determined by other time and frequency variables. Further increasing the difficulty of testing the professional development-student achievement relationship are forms of professional development that go beyond the traditional training workshop format and are embedded in the daily life of the school. The professional development-student achievement relationship, the content, process, and context of professional development need to be considered in the study.

Whilst the above finding outlines the relevance of CPD in teaching, the evolution of notions of professionalism and professional development in the teaching profession is varied and dynamic. The overall analysis of the effectiveness of CPD would be that, except in a few cases, teachers hold favourable views on the need for a school-based continuous teacher professional development program. In the view of the teachers, school-based continuous professional development introduces a structured framework at different levels (school, CPD committee, department, and individual teacher). The

study results show that the program sets a direction and regulatory mechanism to ensure teacher engagement in an on-the-job learning task continually. It opens a window of opportunity for addressing problems and challenges that affect the quality of education. Teachers covered in the study reflected a positive and supportive view of school-based continuous teacher professional development.

Therefore, it can be summarised that CPD contributes to the social and emotional development of the teacher as they engage in professional dialogue, thereby setting up intellectual challenges and opening up communication. Moreover, it enhances the intellectual development of both the teacher and the student and promotes lateral thinking skills in problem-solving, creativity, critical thinking skills, self-reflection, and intellectual stimulation. At the institutional level, CPD contributes to institutional development as it brings about organisational change. The program is an incentive to the teachers in a way that motivates them. The ripple effect of these manifests through valuing individual and collective contributions, fostering and nurturing skills and knowledge, and enhancing positive attitudes toward education.

Although the CPD is mainly aimed at enhancing teachers' professional capacity, the key informants from TSC reported significant improvement in their leadership skills as they endeavoured to implement CPD requirements. Some of the areas of leadership development that they highlighted include: Planning and coordination of the program, which, in the long run, enhances and widens networks. Coordination is done at different levels of operation: the learning circle, school, and larger network with officers from the Ministry of Education, the higher learning and training institutions and the Kenya Institute of Curriculum Development officers. The coordinators ensure that all members participating in formal structured CPDs adhere to the timeframes and activities as set out in all the management plans. Moreover, the principals are charged

with the responsibility of providing direction and establishing clear communication structures. Clear direction was also identified as an important factor in leading and managing people during professional development activities. The program encourages the identification and adoption of the best practices emanating from the wider interaction with other models as practised by other institutions. This is then used to model organisational goals. The majority of the respondents reported that modelling good practices is important in shaping organisational direction and setting a vision with clear organisational goals.

The research findings revealed that through collaborative practices, teachers can share knowledge, ideas, conceptions, opinions, as well as experiences. Secondly, through these collaborative practices, teachers stand a better chance of acquiring the best instructional practices as they share research-based teaching practices. Additionally, through collaborative practices, teachers are enabled to come up with communities of practice that will positively change the culture & instruction of their entire grade level, respective departments, or schools. The review of the above literature underscores the significance of collaborative approaches in enhancing school changes that go beyond individual classrooms. The main line of argument emerging from the study is that the CPD training of teachers helps them to keep learning from practice and become experienced in every passing year of their careers. CPD therefore involves a wide range of activities and training programmes or methods used to help teachers develop professionally throughout their career.

Additionally, the study results indicate that there has been a growing concern to improve teacher quality in Kenya. However, the majority of teachers in Kenya are not suitably qualified. The majority who join institutions for training leave with scant and sometimes inappropriate teaching skills. This calls for the need to reskill the teachers

continuously. The needs identified on the ground should inform the structure and program of any effective CPD. Effective CPD should fill the gaps created by the inadequate pre-service training that teachers receive. In Kenya, pre-service courses for teachers offered by Teacher Training Colleges (TTCs) and Universities' Schools of Education have been challenged by the consumers of their products for producing graduates whose skills are incongruent with the expectations in the field.

The study findings further acknowledge the effort by the government of Kenya in creating interventions to ensure the quality of Education aligns with the Sustainable Development Goals. Additionally, the findings reveal that while the Kenyan government has done much to ensure that the number of untrained teachers has decreased, the weak links between bodies responsible for teacher training and the Ministry of Education, Science and Technology (MOEST) in the nation have often led to trainee teachers who are handicapped in one area or another. For example, while ICT is now the norm rather than the exception globally, the teacher training bodies in Kenya are yet to either fully incorporate technology in their training or even produce tech-savvy graduates.

In addition, the study findings, as indicated by one of the key informants, revealed that CPD is on his docket. He observed that CPD for teachers in Kenya is often achieved through courses, workshops, and seminars organised locally or at the regional level, depending on what the Director for Quality Assurance considers to be the requirements of the post holders. The control, organisation, and management of CPD, often referred to as in-service teacher education, is primarily the responsibility of Quality Assurance, a department of the Ministry of Education headed by the Director of Quality Assurance.

The directorate is responsible for initiating appropriate in-service programs to make up for the shortcomings detected in education. Other organisations involved in in-service training of teachers in liaison with the Inspectorate include the Kenya Education Staff Institute (KESI) and the Kenya Institute of Education (KIE). The CPD is conducted through in-service education in Kenya and consists of a specialised, tailored course of study or a selected learning agenda to achieve a specific goal. In contrast, some respondents held some reservations regarding how CPD programs are organized, complaining of having ill-defined objectives, inappropriate practices, inadequate evaluation, and follow-up, and lack of support for educators. The training activities are said to be far removed from the institutional needs for the program designers don't carry out a need analysis, that fully addresses the needs of the majority of Kenyan teachers who have very little input into the selection and design of the course content organized by the various external agents involved in in-service training.

The general information derived from the responses is that CPD is a process that requires the engagement of all stakeholders at every level. This is often done through the various forms of CPD, including in-service training, SEMASE, workshops, conferences, and training conducted by KNEC based on testing, moderating, and marking. Lesson observations are conducted as a requirement of TPAD, and team teaching is conducted. Specialised learning areas are identified and enhanced, and engaging in independent research happens at a personal level for personal knowledge acquisition to enhance productivity.

Additionally, what is evident from the respondents' line of argument is that several activities need to be taken into consideration for the effective process of CPD, including programs conducted in school settings and linked to school-wide efforts.

Teachers participate as helpers to each other through CoPs and as planners with administrators of in-service activities. Emphasis on self-instruction with differentiated training opportunities, teachers in active roles, choosing goals and activities for themselves, emphasis on demonstration, supervised trials and feedback, training that is concrete and ongoing, ongoing assistance and support available on request.

Further, the study findings revealed that collaboration as a part of CPD learning is only possible if teachers receive internal support from the administrative leadership of the institutions and secondly, if it is done frequently. Such observations point out the role of contextual support in facilitating teacher learning. To support the ideology of collaboration as a process that is considered effective, the findings in this study indicate that teachers' learning is done from their counterparts at the same level.

From the responses discussed above, it can be deduced that there are various forms of conducting and ascertaining continuous professional development as a social construct. Several strategies can be grouped under collaboration as a method of CPD. This is due to the nature and means by which the CPDs are conducted. These include team, teaching, benchmarking, and community of practice. These methods are further enhanced by embracing social media such as WhatsApp, Telegram, and other phone applications that enable grouping.

Collaboration in this context is a process where teachers work with at least one other professional on a sustained basis. The teachers create platforms to think about and through their teaching and learning approaches, compare them with their fellow teachers, and in most cases generate new insights on the same. Additionally, collaborative activities encourage interaction with other teachers. It is a platform for social learning. It encourages full participation in the social-cultural practices of the

communities. It also facilitates the sharing of ideas, experiences, discussions, feedback, and moral support. This process creates solidarity and strengthens their professional learning in addition to providing a platform for teachers to pinpoint each other's weak areas in teaching practices, and so an improvement in the same.

Whilst the above-reviewed literature reports on the importance of encouraging teachers to learn through collaborative activities, some studies conducted in Kenya, however, reveal that the model is practised more effectively through a community of practice in the TTCs in Kenya. Collaboration would also involve a multi-agency approach where the existing government structures are utilised in coordination or association with other entities or non-state actors that support intervention for quality education as outlined in the Sustainable Development Goals (SDG4).

In conclusion, CPD, according to most of the tutors, facilitates the easy flow of information and feedback among teachers, cluster schools, and management. Teachers believe that CPD facilitates documentation of better practices and success stories in the form of portfolios and anecdotal records. The results further show that teachers develop individual plans for CPD activities and keep records of their work in the form of notes, sample work, and action research reports that go into their portfolios. In a nutshell, CPD generally improves the quality of education in Kenya.

4.3.4 CPD as a Community of Practice (CoP)

Communities of practice (CoP) are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly. It is a mechanism through which beliefs, attitudes, and practices can be reformed. In education, CoP involves the collaborative sharing of ideas and finding solutions to problems and the willingness of its members to assume responsibility for colleagues'

growth and development. The CoP has since been made more effective by leveraging the technological revolution and utilization of various social media platforms such as WhatsApp, Telegram, Facebook, TikTok, and Instagram.

For successful CPD, a democratic approach is required where teachers are allowed to take ownership of change as part of a CoP in a similar vein observes that a school-based professional community can offer support and motivation to teachers as they work to overcome the tight resources, isolation, time constraints, and other obstacles they commonly encounter. He further argues that for change to be meaningful, and sustainable, CoP must extend beyond the school to the wider community such as other schools at local and national levels while it is evident that the role of parents and children as essential partners in reform at school level should not be overlooked. Guided by these principles, this study therefore explored the teachers' views and practices regarding their CPD, what they considered as their CPD needs, challenges, and suggestions for improvement. From the tutors' perspective, the establishment of the school-based CPD was simply a response to yet another demand imposed upon them by the policymakers. This draws us to the attention of the existing literature on the effectiveness of school-based CPD. It is argued that school-based CPD is effective in terms of cost and relevance but much has not been given about implementation in economically disadvantaged contexts.

The study findings also revealed that without wide teacher 'buy-in' CPD initiatives are bound to fail. Trainers need the necessary knowledge and skills to be able to address the relevant issues. The teachers, on the other hand, need to be sensitized to the reasons and benefits of school-based CPD. This would create readiness which would later lead to CPD programs that are geared towards altering their thinking, attitude, and behaviour about their pedagogic teaching skills, a process that would not

only require a reasonable amount of time but also adequate planning, resources and significant preparation. Only in this way, can school-based CPD be an effective tool in teachers' professional development.

4.3.5 CPD Support from the Ministry of Education and Teachers' Service Commission (TSC)

The study established that several government-led initiatives are geared towards ensuring quality education for all. Currently in Kenya, MOE faces various challenges concerning human resource development and management. Kenya Education Staff Institute (KESI) is charged with the responsibility of training and in-servicing teachers but unfortunately, it does not have adequate human and financial resources to undertake this task. The lack of a coordinated approach to teacher development at the MOE level is also another challenge. Therefore, unless Kenya finds solutions to the above challenges, the vision to produce professionally well-informed and motivated teachers capable of transforming the quality of educational delivery will not be fulfilled (Republic of Kenya, 2005).

The country's Vision 2030 aim of providing globally competitive and quality education, training, and research, and also turning Kenya into a regional centre of research and development in new technologies is dependent on quality teachers. Many times, the Government of Kenya, through the Ministry of Education, pronounces policies and documents that have continued to underline the importance of CPD for trained teachers. For example, Sessional Paper No. 1 of 2005 has emphasized the need for a dynamic, responsive, and well-coordinated system of in-service training as a pre-requisite for the success of the free primary education (FPE) initiative and the achievement of Education for all goals. However, key players in education in Kenya agree that little has been achieved in this area. The Ministry of Education

acknowledges the fact that there has been little in-service training with the result that few teachers have opportunities to participate in INSET activities.

Helping teachers to become effective in their jobs is one of the fundamental tasks in people management that any organization has to undertake. The respondents in one of the FGDs were asked questions on whether the TSC is supportive of this process. It was indicated that the Teachers Service Commission was not committed to ensuring teachers involved themselves in CPD activities. This research finding clearly showed that the teachers felt that their employer was not committed to ensuring that teachers participated in CPD activities.

Career development is a formal approach used by the organization to help people acquire the skills and experiences needed to perform current and future jobs. Career development is important to maintain a motivated and committed workforce (Armstrong, 2011). It was for this reason the researcher sought to establish whether the teachers had an opportunity for career development. This is because the presence or absence of career development opportunities can influence active participation in CPD.

Moreso, respondents from the two TTCs were probed further into how the process of conducting CPD using the different models affected the tutors' construction of knowledge. The respondents were asked to provide details of how these practices are conducted. The responses were summarized and tabulated below into the strengths and weaknesses of the forms of CPD in three specific areas that the respondents observed as key.

Table 4.4: An analysis of various processes used in conducting CPD

CPD Form	Foci	Strength	Weaknesses
Collaboration	<p>Learning is seen as a result of interaction with people.</p> <p>The collective skills & knowledge of expert staff members is used to shape that of other staff members.</p> <p>Through social interaction between staff members, new knowledge is constructed.</p>	<p>It increases the pool of resources (skills, knowledge, and expertise).</p> <p>It focuses on the holistic development of teachers.</p> <p>It provides support and guidance.</p>	<p>Learning may be passive depending on the leadership of the groups.</p>
Action Research	<p>Reform-based learning aimed at improving teachers' performance.</p> <p>Involves active learning based on reflection, planning and taking action.</p> <p>Learning takes place through collaboration.</p>	<p>It integrates theory and practice.</p> <p>Devolution of leadership leads to commitment.</p> <p>Action learning has a multiplying effect throughout the group.</p>	<p>It is difficult to maintain commitment; to develop effective leadership; and to extend participation from small teams of key staff members to whole-school engagement.</p> <p>It is a challenge to build the capacity of the school.</p>
Mentorship	Involves disseminating information to colleagues	<p>It reaches out to a large group of teachers (training big numbers of teachers).</p>	<p>It is a top-down approach.</p> <p>It leaves room for misinterpretation of critical information.</p> <p>Facilitators lack knowledge and understanding to manage the training process.</p> <p>Varied levels of the facilitators impact on the quality of the training.</p> <p>Facilitators lack understanding of various teaching contexts.</p> <p>Facilitators' understanding of the training material and training may be limited.</p> <p>It is time consuming.</p>

4.4 Nature and Level of Involvement of Tutors in Continuous Professional Development

This section of the study sought to examine the relationship between the nature and level of tutors' involvement in Continuous Professional Development and their social construction of knowledge. The questions asked to investigate this objective were based on the opinion on how the nature and level of tutor involvement relate to social construction of knowledge and whether the programs designed involve the tutors in determining the topics and content of the CPD trainings especially based on their needs, considering their knowledge and experiences. In addition, the probing sought answers on tutor's platforms of providing feedback on the professional development activities undertaken.

The study established that the majority of the respondents 35(92 %) held the view that there are benefits accrued in involving teachers in their continuous professional development. However, a few of the respondents (3(8 %) expressed their sentiments for having CPD programmes that are being imposed to them without being consulted on their needs in relation to teaching.

Based on this data, it is evident that there are direct benefits of involving tutors in their CPD programmes as it was observed by the majority of the respondents. During an in-depth interview, a respondent noted that:

“When teachers are directly involved in their learning process, it leads to an increased ownership; increased learning and consequently an increased commitment to professional development’s success. This is especially so if we are involved early enough to avoid sounding bully on the part of the tutor. We are however not happy because we are not involved in the planning, designing and implementation of CPD programmes” (M14, 51 years)

From the above accounts, it is true that involvement of tutors in the design and provision of CPD activities as training should be based upon regular needs, analysis and address specific topics of interest. This will go a long way in motivate them to attend to the programmes as a way of constructing more knowledge. This study observation resonates with the constructivist theory that advocates the learners to be the co-custodian of knowledge as they share and build on their previous experiences to create knowledge.

This finding is similar to studies conducted by Bayar (2014); Gemedà, Fiorucci and Catarci (2014); Gymar and Aginselya (2022) who found that involvement of teachers in CPD programmes has benefits such as they are made to feel part of the programme and so they construct their meanings. It is also a platform to identify what works for them, do reflection, share elements of good practice with their colleagues and do a reflection of their practices.

From the data presented above it can be concluded that teachers will draw interest and participate in CPD activities that they feel are part of, for instance those that require preparation. When tutors are involved, it makes them participate more. They will be willing to open up to new information. It helps them to improve and take up the new knowledge and competencies better. When teachers are actively involved in the training sessions, they take the centre stage in the construction of knowledge. This line of argument concurs with the social constructivist theory that advocates for the active role of individuals in a bid to construct knowledge rather than the knowledge being imposed on them through methods such as lectures.

However, a smaller number of respondents 3(8 %) expressed their disappointment regarding how the current CPD programmes are being conducted.

“There is a need to consult teachers on the problems of the structure, nature of the problem, curriculum, methods and their input may be required in decision making. An example of a program that was initiated in Kenya as an intervention for improving the quality of science and Mathematics in schools (SMASSE) failed because the teachers were not involved in the designing of the program”. (M13, 37 years)

The sentiments of a 37-year-old male pinpoints the disappointment that most teachers encounter since they are left out in the CPD training processes. Teachers do not appreciate the lack engagement by the CPD provides in the training design. Though they appreciated their need for professional development, they are sentimental about CPD programmes that lack interactive engagement to prior to imposing the training on them.

This finding is similar to another that came up during a focus group discussion where one of the participants had this to say:

“In most cases CPD trainers do not involve teachers whenever they are rolling out these programmes. They simply lump all the teachers together without taking into consideration the teachers’ needs or even interests. Trainings do not consider what the tutors know before they implement these trainings. Some documents used in trainings are considered as a waste of time, as teachers feel that they have the monopoly of knowledge.” (M16, 40 years)

Following the above accounts, it can be deduced that it is paramount to ground CPD training in teachers’ own practice. It also offers insights into the significance of collaboration amongst them for sustainable professional development. Consequently, through involvement, teachers feel empowered to be part of the change process in the education realm.

These findings corroborate to a study that was carried out by Mitchell, Ayinselya, Barrett, Ochoa, David, Imaniraho, Nwako, Reda & Singh, 2024) who cautions on the on-size-fits-all training which not only reflects a deficit view of teachers situated knowledge, but rather than weaken, the situated professional knowledge and agency

of teachers. Additionally, similar studies that were conducted by Qadhi and Floyd (2021); Mohan et al., (2017) documented that teacher were unhappy with the CPD programmes being offered since there was minimal or no involvement as it provided less or no interactive sessions, hence hindering their learning. Based on the above verbatim presentations, it is evident that CPD activities that do not engage active participation of teachers have little or no impact on their social construction of knowledge. Failure to involve teachers in CPD Programmes will translate to the misalignment of teachers' needs with the actual goals of CPD training. The findings above suggest on the need for CPD programmes to align both the needs of the educator, the goals and the objectives of the institution.

The study also established that the CPD programmes organized by the Kenya Institute for Curriculum Development target primary school teachers and dwell on a specialist focus (English, Mathematics, Science, Social Studies and Primary Education). During an in-depth interview, a respondent noted that:

“The programs are tailored to the needs of the teachers and attempt to enhance teachers’ pedagogical skills, particularly exposing teachers to non-traditional teaching methodologies, and developing their understanding of students’ learning processes, curriculum development and enrichment, and subject content knowledge”. (F14, 48years)

The observation of this 48-year-old female respondent underscores the fact that when teachers are involved, they tend to hold more positive attitudes towards the training. The accounts also implies that it is important for CPD sessions to attend to teachers' needs, since novice teachers will have different CPD priorities compared to the experienced teachers. It also highlights the fact that the level of involvement of the tutors during the design and implementation of CPD determine teacher quality and is strongly related to student achievement. As such a clarion call to policymakers to consider teacher licensing systems and more effective professional development

strategies, which in turn have been shown to produce evidence of the stronger effect on teaching and learning approaches that strengthen teachers' ability to teach diverse learners.

What is also evident from the above discussion is that teacher effectiveness is largely influenced by the nature of support tutors receive. Thus, the government has attempted to put in place programmes that would help provide continuing professional development to both tutors and institutional administrators. This responsibility has been mandated to a number of institutions, departments and organizations, which work either as part of directorates of education or in partnership with the respective Ministry of Education, sponsored by donors aligned to interventions that ensure quality education as per the SDG 4. Institutes have been established with specific objectives to strengthen the management and planning capacity of various cadres of education as well as provide support to practicing teachers. The above findings are in tandem with some study findings that was reported in Wamalwa (2023) who found that CPD programmes are implemented nationally in order to train tutors for the diverse emerging concepts in the education sector.

Additionally, the study findings also report that teachers' professional development has become a major focus within school improvement trends because of the belief that student learning & success are largely due to the effectiveness of teachers. A review of studies determine that the quality of education is strongly dependent on the quality of teachers, a function of their knowledge and mastery of subject content, appropriate teaching methods and professional values, all of which have been shown to be improved by the provision of continuous professional development.

During a focus group discussion, a respondent noted that:

"It is important for educators to understand that professional development cannot be pre-specified in a standard format; the environment in which a program is implemented is critical. Designers need to consider contextual factors as they plan programs. Factors such as students, teachers, the physical environment, policies, resources, organizational culture, organizational structures and the local history of professional development, along with parents and the community, must be considered when developing new programmes." (M17, 40 years)

The response from the 40-year-old male reveals that continuous professional development should be aligned to teacher professional development assessment and evaluation which is carried out at the end of every term. The CPD design should be built from the TPD. This they explain, is a new way of analysing the effectiveness and quality of teaching and was designed in response to the challenges that were realized in implementation of the various CPD models across institutions. MoE adopted a new approach in which every school became responsible for carrying out a CPD program as per the prevailing conditions in the respective schools. The new CPD comes in the wake of alignment to the Competency-Based Curriculum model and is conceived as a life-long process in which a teacher is expected to be actively involved in a continuous professional development program until the end of their career.

These statements underline the importance of an awareness-based common understanding of all stakeholders on the essence of CPD, active involvement of the tutors in planning and implementing the CPD program, and relentless effort to bring change in students learning through the continual improvement of one's teaching methodology. The responses to the research questions raised point to the fact that there are various models designed by the authorities concerned with providing quality education. The designs or models take into consideration the contextual, environmental, and career needs of teachers.

In addition, the study findings reveal that the training model as organized from KICD content focuses on standardization and quality assurance. The programme is designed to support the development and introduction of new knowledge. It denies teachers the opportunity to play a proactive role. The design is limited because it places teachers in a passive role. Newly acquired knowledge and skills are not practically applied. It does not address the needs of teachers. Teachers lack motivation to attend workshops. Sharing of information is de-contextualized. He further adds that an introduction of TPAD is based on performance management in an attempt to raise standards. The main centre of focus is on efficiency, effectiveness, and accountability.

There are modules prepared by KICD for school managers who expect on-site training that takes place within the context of the school. The modules focused on addressing practical problems. They include: classroom assistance; off-site designs; off-site training and aim at upgrading teachers' classroom skills and teaching strategies. They provide teachers with subject knowledge, theory, and methodology.

In addition, the majority of the respondents 30 (79%) further reiterated that teacher level of involvement is of paramount importance so as to ensure educational quality. As a result of this, these countries are forced to carry out continuous school-based in-service training programs as a major means of teachers' professional development. The in-service training programs have been implemented in schools to update teachers with new knowledge and skills by performing different activities in groups and individually. Moreover, the school-based in-service training program is cost-effective, practical, and easier to address teachers' immediate concerns. This was well articulated during one of the in-depth interviews where a respondent commented that;

“Schools are placed where the actual teaching-learning process would be practical. Therefore, in addition to designing, implementing, and training at the school level, the focus of training

is usually on the school principals and supervisors to promote an experience-sharing culture among teachers and thereby co-create solutions at the school level as professional growth is by and large a social product". (M18, 51 years)

The observation presented above from a 51-year-old male reveals that teachers need a supportive environment, from the heads of institutions for them to be able to construct knowledge. This observation is in tandem with the socio constructivist theory Vygotsky, Bruner and Piaget (1978) that posits that knowledge creation must be connected to the social, cultural and historical context. This is equivalent to the school culture, community and society in which the school is situated. The implication of this is that school administrators should provide teachers with CPD goal –oriented activities, appropriate mediating tools in form of resources for them to benefit from the CPD trainings.

This study's findings concur with a study that was conducted by Bartleton (2018) who found out that teachers must be accorded a supportive environment in their respective schools or colleges, by their supervisors for them to be able to engage in meaning making process and reflection from these CPD training.

From the above responses, it can be deduced that teachers are an important resource in the teaching and learning process and their training and utilization therefore require critical consideration. This is due to changing demands on the new roles of teachers in the 21st Century. The same opinion is equally echoed by Darling-Hammond et al., (2017); Mitchell et al., (2024) who support those traditional approaches to CPD such as formal courses or one-off seminars are criticized for their shortcomings of being unable to get teachers prepared for the new role of knowledge facilitator rather than knowledge transmitter.

The study also established that the Ministry of Education office has implemented the CPD program as a primary means of improving teachers' professional performance. In this regard, the focus of CPD as a program is not only on teachers' simple involvement in training but also includes the empowerment of teachers to take responsibility for continuous improvement and effectiveness as real professionals.

During an in-depth interview, another respondent made a reflection of his experience from the days that he had been employed as a teacher in one of the Kenyan schools. She observed that:

'Every Kenyan would strive to have his/her child admitted to a top 'performing' school. Every year, at the announcement of examination results, schools are ranked according to academic performance. Cases of poor performance are associated with the failure of the head teachers and teachers of the schools concerned. Little regard is paid to the unequal distribution of resources which tends to disadvantage some schools; a factor that leaves the affected teachers a discouraged lot'. (F2, 53 years)

What is evidenced from the above accounts is that there is need to continually involve and provide regular professional development to tutors as a way of refreshing their skills, knowledge and attitudes in preparation for effective classroom delivery.

Similar responses were recorded in FGDs in both counties. The study outlines effective professional development characteristics based on compilations of professional expertise and opinions, research studies, and field consultations. Organizations, such as professional associations, consortia, ministries of education, and school districts often develop their lists.

The above findings indicated that the general perspective of the education system in Kenya today seeks to have an academically excellent student. The quality of teaching tends to be evaluated in terms of how many students pass the national examinations, thereby putting pressure on the tutors to rush through programs that would ensure

rendition is done in a specific way to make students pass exams. He opines that there is a need to improve the assessment tools for teachers regarding appraisal and make them more institution-specific to help identify specific needs to be intervened.

From the above finding, it can be deduced that teachers are an important resource in the teaching and learning process and their training and utilization therefore requires critical consideration. This is due to changing demands on the new roles of teachers in the 21st Century. The same opinion is equally echoed by (Darling-Hammond ,2017), as he supports those traditional approaches to CPD such as formal courses or one-off seminars are criticized for their shortcomings of being unable to get teachers prepared for the new role of knowledge facilitator rather than knowledge transmitter.

An awareness of less formal and traditional forms of CPD is slowly growing, with calls for teachers to become more creative in their approaches to their professional development, and move away from more traditional transmission-based methods (Muijs et al., 2004). Understanding how teachers perceive CPD and what factors affect their participation in CPD is an extremely important segment for it provides schools with accurate information to use in making effective decisions regarding CPD programmes.

4.4.1 TSC Commitment in Ensuring Teachers Participate in CPD

The majority of the respondents observed that helping employees to become effective in their jobs is one of the fundamental tasks in people management that any organization has to undertake. They additionally pointed out an analysis involving TSC's commitments to ensuring teachers participate in CPD.

From the responses, it can be concluded that 19 (50%) confirmed that the Teachers Service Commission was not committed to ensuring teachers involved themselves in

CPD activities. The findings clearly showed that the teachers felt that their employer was not committed to ensuring that teachers participate in CPD activities.

4.4.2 School Support

The study established that the majority of the respondents 27 (71 %) felt that to them, continuous professional development has many benefits to the individual employee and the organization. However, for the benefits to be realized, the organizational environment must be supportive of the employee professional development efforts.

This observation was evident during one of the focus group discussions when a respondent mentioned that:

“For teachers to be able to fully participate in CPD programmes, they need support from the college administration in terms of resources such as time, facilities such as textbooks, laptops, writing pads, transport reimbursement, support to implement the newly acquired ideas.” (M19, 45 years)

What can be deduced from the above presentation is that there is a need for the school/college administrators to go beyond their role as policy implementers by identifying, initiating and supporting specific CPD needs at all departmental levels. More so it is evident that teachers will develop and learn more effectively when they are working in a supportive environment, where both personal and professional goals are valued.

Regarding the institutional support to CPD, the minority of the respondents 10 (26%) felt that the schools were not supportive enough to the teachers who were or wanted to participate in CPD activities. It was also revealed that teachers meet the CPD expenses on their own. This is because several teachers seek more knowledge to remain relevant and to get upgraded in their line of work.

“At times the administration does not accord teachers adequate support to attend these trainings, as a result it lies on the individual

teacher responsibility to support himself or herself for the same since they feel that they gain more as compared to the organization". (M20, 49 years)

From the above presentation it is evident that some teachers felt that attending to CPD trainings is supposed to be an individual responsibility since the individual tutor benefits in terms of knowledge gain. As such they should take initiative in attending to the training.

4.4.3 Government Opportunities for CPD

The key informants 6 (16%) from the MoE agreed that the government needs to invest in the learning and development of its citizens by providing appropriate learning opportunities and facilities, but the prime responsibility for learning rests with the individual (teachers), who should be given the guidance and support by both the TSC and the school management. In analysing government-created opportunities for continuous professional development, 19(50 %) of the respondents felt that the government was not offering opportunities for teachers to participate in CPD. Most tutors seek information from peer learning platforms. It was evident that the TSC or the Ministry of Education have periodicals or newsletters posted on the websites that are rarely visited by the teachers. It was opined that there should be hard-copy newsletters or circulars posted to schools. This observation revealed that the teachers felt that the government had not created enough opportunities for Kenyan teachers to be actively involved in continuous professional development.

4.4.4 Opportunity for Career Development with Teachers Service Commission

As observed in the earlier discussion, most teachers use CPD for social mobility to be upgraded from one job group to another. Career development is a formal approach used by the organization to help people acquire the skills and experiences needed to perform current and future jobs. Career development is important to maintain a

motivated and committed workforce. It was for this reason the researcher sought to establish whether the teachers had an opportunity for career development. This is because the presence or absence of career development opportunities can influence active participation in CPD. This shows that the majority 32(92%) felt that the opportunities for career development were limited.

This sub-section can be concluded by observing that few teachers were involved in continuous professional development. Outstandingly, the work environment seemed to play an influential and determinant factor affecting tutors' professional development. Most individuals are driven by the need for personal growth and development as long as their environment is both supportive and challenging. This calls for support from the school management, the government, and the Teachers Service Commission.

4.5 Frequency and Duration in the Continuous Professional Development Training on Tutors' Social Construction of Knowledge

This section of the study sought to assess the association between the frequency and duration taken in the CPD training and tutors' social construction of knowledge. The respondents were asked questions about the time factor as a necessity in tutors' social construction of knowledge about the duration and the frequency of training.

What is evident from the responses gathered during the focus group discussions and in-depth interviews from both Murang'a and Kamwenja TTCs, the discussions took a gender lens with males and females being affected differently based on the frequency and the duration of the CPD and the implementation of the same. Considering that CPD requires adequate time and amid so many other societal competing tasks, another lens on how gender roles play was observed. In this regard, the extent

teachers engage in self-reflection exercises for monitoring and evaluating their work beyond compiling portfolios was assessed.

The majority of the respondents 36(95%) reported that the structural nature of both males and females plays out differently in the process of CPD and its implementation.

As one of the respondents noted during an in-depth interview:

“From observation through interaction with the tutors, the male teachers tend to monitor and evaluate their performance more than female teachers using various strategies such as peer discussions and assembling good practices. This difference could be explained about the contextual factor. Female teachers carry an equal load with their male counterparts. Although they are expected to engage in CPD programs on an equal basis. Nevertheless, they shoulder more social and family responsibilities. They have more stress due to time constraints which could limit the extent of their engagement in self-reflection and peer discussion practices”. (M8, 47 years)

The observations of a 47-year-old male respondent highlight the need to accord adequate time to enable exhaustive coverage of the content and also to ensure that both male and female teachers attend these trainings. It can also be deduced that time constraints contribute towards teachers' negative perceptions of CPD. The study also observes that teachers' learning is not something can be done during teachers' free time but rather their professional development is an ongoing, iterative, process that should happen every day. The study findings imply that it is crucial to offer CPD activities that are spread over extended time durations.

This finding is well corroborated in studies conducted by Davety and Egan (2021); Popova, et al, (2017) who confirmed that it is imperative to accord quality time when conducting CPD programmes for teachers so as to give them an opportunity to learn and reflect on the newly acquired ideas in addition to implementing them.

A tabulated presentation was made on the frequency of participation in the various forms of CPD. The predominant CPD activities identified by the teachers were in-

service training, continuing education and workshops. There were also peer class observations and collaborative teaching. However, as the findings further revealed, these opportunities were occasionally provided. Teachers were again requested to indicate the extent to which existing CPD activities addressed their learning needs for development. Majority of them 31(82%) answered "sometimes" whereas, a few 7 (18 %) indicated "never".

Table 4.5: CPD Form/Activity

CPD Form/Activity	Yes			Never
	Often	Sometimes	Rarely	Total
The proportion of respondents N= 32				
In-service training	2	6	10	32
Workshops	20	10	2	32
Continuing Education	2	14	16	32
Education conference	4	12	8	32
Benchmarking	16	10	3	32
Community of Practice	22	6	2	32
Team teaching	20	10	2	32
Peer class observation	18	10	4	32
Mentoring	12	12	8	32
Action research	1	1	10	32
				20

The majority of the respondents 34(89%) reported that the process of construction of knowledge requires proper planning with adequate time to execute the plan and allow the program to undergo its life cycle, while four (11%) respondents felt that the content of the training should dictate the amount of time to be accorded for each training.

From the explanation given by the respondents, it is evident that majority of them 25(66%) preferred CPD programmes that require enough time so as to plan and implement. This observation was well documented during an in-depth interview where a respondent commented that:

“Adequate time is of essence in these CPD trainings; this is especially because teachers need to prepare enough, to travel for these training, to attend to their classes, to reflect and implement the newly acquired knowledge, skills. To me I would recommend that the best time to schedule for these trainings is during school holidays so as to avoid losing learners’ time” (M21,47 years)

From the above accounts it can be deduced that majority of the tutors appreciated CPD trainings that were conducted for a considerable duration of time and frequently. This is so significance as it helped them meet the expectations of the training.

These findings concur with studies conducted by Anfaki (2014); Akinyemi, Shumba and Adewumi (2019) who found that it is imperative to accord a sustained contact over a significant period of time to allow teachers to acquire knowledge and skills.

However, a few respondents 4(11%) felt that time factor has no great impact on training. During an in-depth interview, a respondent noted that:

“Time factor has no effect on teachers’ construction of knowledge. Time varies. You find that the same content is taught depending on who is offering the programme and which group is being trained. There is therefore a need to balance between teaching and learning and CPD trainings.” (M17, 40 years)

What is evident from the above presentation is that time factor is of no essence in CPD training. That time should vary depending on the content being delivered, the group being taught and on who is offering the programme. Therefore, CPD training with less content to be covered for a short duration of time and vice versa.

This finding concurs with a study conducted by Al-Lamki (2009) who found that there is no connection between the timing factor and teachers’ construction of knowledge through CPD programmes.

However, the majority of the tutors regarded time as an important factor for any learning to take place. It involves aspects such as the number of hours spent by tutors on CPD training and duration as well as the frequency of the training. Time is a

factor that determines the effectiveness of CPD models. However, it needs to be structured according to the need and programme levels.

The study findings indicated that when teachers are accorded limited time in the CPD training, it denies them an opportunity to learn. This report is in tandem with a study conducted by Akinyemi, Shumba, and Adewumi (2019) who confirmed that little time has negative implications on these trainings as it denies them an opportunity to learn. The above observations call on the need to accord teacher's ample time for them to meet and learn from their colleagues. It also hints at the need for tutors to meet regularly in communities of practice.

This report implies that for tutors to be able to socially construct knowledge, there is a need to run away from one-shot programs which in most cases do not emphasize either subject matter or pedagogical skills (Anfaki, 2014; Popova et al., 2017). Curricular reforms are extremely demanding on teachers, and the nature of inquiry-oriented reforms in science is such that they require most teachers to make big changes to implement them.

The study findings also observed that the majority of the respondents 25(66%) preferred professional development that is of longer duration, while 13(34%) felt that longer duration are of no essence and that they consider such sessions as boring.

According to the presentations made above, it is clear that majority of the tutors 25(66%) preferred CPD trainings that extended over a long duration of time. This observation was well captured during one of the in-depth interviews where one of the respondents commented that:

“Long duration will range between one week to a month, I consider long durations to be effective, they help us cover a wide scope of

learning area, teachers are able to interrogate more from the trainers and even amongst themselves'' (F6,39 years)

However, a small no of respondents 17(45%) reported that they preferred CPD trainings that did not take much of their time. In one of the in-depth interviews, a respondent had this to say regarding duration of training:

"I think long durations of CPD trainings are not effective. I find them boring. This is especially to some of us who are exiting the service. For the sake of concentration, perhaps 5 days can do. Moreso teachers tend to lose contact with their students and also interferes with their family time, especially when the trainings are offered during school holidays. (F3, 54 years)

Therefore, what is evident from the above accounts is that a smaller percentage of tutors considered longer CPD trainings as rather boring and waste of their time. They would prefer CPD training that are not too long or short.

Similar observations were made during a focus group discussion where a respondent who was a key informant and was against CPD programmes that run for extended periods of time stated that:

"CPD trainings should not take more time, they should not interfere with the personal time., Short durations are good as teachers focus on more tangible discussion as compared to long duration which makes them lose meaning, however the frequency of how they are conducted should be improved so as to cater for the changes in the education reforms such as CBC". (M9, 53 years)

What is evident from the above presentation is that Professional development that is sustained, offering multiple opportunities for teachers to engage in learning around a single set of concepts or practices, has a great chance of transforming teaching practices a student learning.

The above findings are in agreement with studies conducted by Teddies and Rao, (2021); Kennedy (2021) who found out that longer durations of time are of no essence in teacher construction of knowledge and skills. The above two studies recommended

for short and effective training sessions so as to identify the gaps and address them within the shortest time possible. According to the findings in these studies, the content of the training should rather dictate the amount of time to be accorded for each training.

In conclusion it can be argued out that CPD trainings that extend for a long period are more likely to contain the kinds of learning opportunities that are said to be necessary for teachers to integrate new knowledge into practice to support action research, and create what may be called investigative cultures in science classrooms. Arguably, continuous professional development that is stretched for a longer period therefore requires close coordination with classroom teachers at the site as well as a need for more reform-oriented professional development programmes. This line of argument is in tandem with study findings by Betty (2016); Tannehill, Parker and Patton (2015) who reported that quality time is of essence to encourage participatory activities among teachers.

It is therefore no doubt that CPD programmes need intense duration for the tutors to effectively construct their professional knowledge. This way teachers will have more opportunities for active learning, more coherent professional development, and resultantly positive teacher outcomes (Adewumi, 2019). This finding therefore imply that inadequate time denies teachers an opportunity to learn. Additionally, these two studies recommended that there is a need to come up with an appropriate policy to sustain and intensify professional development.

Further findings indicate that longer duration sessions of training allow teachers to work together, collaboratively plan lessons, and share information. This argument underscores the need to have a whole day as well as multiple session meetings over

the entire year. However, the short sessions can provide information on smaller topics, but a longer experience with a cohort group can have a greater impact on learning as well as the development of a professional network. The explanation is that “higher dosage” programs provide teachers with more opportunities for continuous feedback after they have had a chance to practice what they are learning in the classroom. Similar findings are found in studies carried out by Gafara, Eliseo, Carrillo and Barrientos (2025) who held similar views that teachers should be given enough time and the training period should be intensive in addition to being sustained over a duration of time.

However, even though various studies have echoed the need to accord ample time for tutors to attend CPD training, this study found out that the majority 30(79%) of the respondents complained of attending CPD programs, that are characterized by one day, week, or few hours of training. In one of the in-depth interviews, the respondent stated that the process of CPD especially on the duration taken jeopardizes the quality of the intervention. She commented that:

“During the process of conducting CPD, most activities in the program are done in a rush and not very effective. It is like the organizers want to accomplish their outlined objectives and beat deadlines without taking into consideration the deliverables. We are doing online exams in a hurry and the marking is done online. The process is not given adequate time. The timing is very weak. KNEC’s Process of conducting the training process is very poor. It is also faced with many technological challenges, of poor networks, and poor-quality gadgets used. The students who were assessed online performed poorly because of the limitations of the tools used”. (F5, 43 years)

The observations of a 43-year-old respondent presented above reveal that tutors have considered the time allocated to them as inadequate for learning. There is therefore a need to accord them enough time to enable them to construct knowledge. This is

especially of essence for the novice teachers so as to combine the training skills and application of the newly acquired knowledge and skills.

This finding supports a study report documented in Hadjimatheou (2018), where teachers held sentiments on the short duration of CPD sessions offered to them for it didn't accord them enough opportunity to meet and interact with their peers hence contributing to poor teacher learning.

The study findings additionally indicated that continuous professional development has not been well coordinated by many Ministries of Education. The program lacked the teacher's input and systematic consideration of the needs of the educators. A respondent during the focus group discussion commented that the duration is often very short and the training sessions are supported by a variety of hand-outs that are not followed up. She stated that:

“Participants are given materials to read for the sake of preparing for examinations about the course. When these teachers have been ‘trained’ there is little or no follow-up when they return to their respective classrooms. Thus, the graduates of such programs end up not improving their teaching practices; instead, they use the qualification acquired to enhance their career opportunities in terms of promotion and salary increment.” (F3, 49 years)

From the above narration of a 49-year-old female respondent, it is clear that tutors are not happy about the short duration offered to them during CPD trainings for it denies them an opportunity for learning in addition to reflecting on the newly acquired skills and practices. As such they don't see the need to continue attending such programmes.

This finding is in tandem with a study conducted by Akinyemi et al., (2019) who claim that the short duration of CPD training denies teachers an opportunity to learn. He therefore recommended the need for regular meetings to do follow-up sessions. Similar findings are found in a study conducted by Davety and Egan (2021) who

argue that sustained CPD programmes are good as they enable teachers to construct knowledge.

To cross-check the information from the respondents that a certain amount of duration and frequency of CPD is necessary for teacher construction of knowledge, this finding was evident during focus group discussion, where one of the respondents and a key informant observed that programmes run for six months to one year depending on the course being undertaken. A programme is divided into three modules. Modules 1 and 3 is a school-based programme where teachers converge at a central venue as organized by facilitators from higher learning institutions for three weeks, usually during school vacation. This has helped to resolve problems of releasing teachers during the school term. Participants meet face-to-face with each other and with the course facilitators. They are introduced to the content of the course, to ways of working and thinking as part of the course, and to approaches to reflecting on and evaluating their teaching. In the second module, participants return to their schools for one school term. He observed that:

“During this period, they are provided with support by the course facilitators as they try to implement in their classrooms whatever they had learned in the first module. Saturday seminars are held during this time to bring participants together to discuss their challenges and successes during this module, as well as to provide an opportunity for the facilitators to address issues emanating from their observations of classroom practice and discussions about it with the participants”. (M10, 57 years)

This finding clearly shows that owing to the busy schedule that tutors have, balancing teaching and learning and other daily activities and getting enough time to attend CPD training has proven a bottleneck to them. This is a pointer that some intervention measures should be put into place to accord tutors more time for them to learn.

More responses from both in-depth interviews and FGDs revealed that timing is an important factor in teacher learning, as when they are accorded adequate time, they become effective and efficient in implementing the skills and knowledge acquired through CPD. This view corroborates with findings of a study conducted by Macheng (2016) who espoused that according to teachers, adequate time helps them to become more effective and efficient in implementing the newly acquired skills and knowledge.

However, in a different setting a study conducted by Al-Lamki,2009; Tadesse and Rao,2021; Kennedy,2016) contend that there is no high frequency of CPD training that does not translate to teachers learning. This study sharply contrasts with the previous studies that have reported a positive impact of frequency on teachers learning.

From the various responses, it is evident that the frequency at which CPD is being offered to teachers in Kenya is relatively low. Several teachers struggle to make ends meet with limited resources and pay for the formal programs organized by the higher learning institutions and recommended by the TSC and the KICD. This in turn denies teachers adequate time for them to learn and reflect on the newly acquired skills and practices. This includes time to attend trainings as well as well as to implement the newly acquired knowledge. Time is a critical factor. It should be availed to allow teachers participate in CPD. Teachers will spend more time polishing their craft with their colleagues. The implication of availing time is that teachers become more effective and as a result more student.

4.5.1 Challenges of CPD Process

The respondents were asked to outline some of the bottlenecks that hinder the successful implementation of CPD in teacher training colleges and to provide possible ideas that can be used as a solution to the challenge. The study findings indicated that the majority of teachers do not take CPD as their responsibility, since education is a public good. There is need to attend to local barriers from the school environment that teachers perceive to be against continuous professional development and implementation. This is because “there has always been low turn up for in-service training unless it is fully sponsored by the government. Then the teachers who have undergone the in-service courses, do not achieve the highest learning outcomes.

“Even the highest quality professional development programs are limited in the likelihood of changing classroom practice when there are major disincentives for teachers to implement what they are learning”. (M4, 54 years)

From the above data, the study deduced that tutors need to be fully supported so as to attend and implement CPD knowledge, skills and attitudes. The support can be in form of time, funding, certification and promotion from the employer.

Additionally, the majority of the respondents 36 (95%) agree that whilst CPD targets teachers as the primary beneficiaries, more attention should be given to the professional development of staff in classroom management and facilitation to enable the effectiveness of the process as organized by the Ministry of Education through the Kenya Institute for Curriculum Development. This implies on the need to empower and support teachers on how to effectively handle CPD opportunities. The respondents however acknowledge the challenges that CPD faces especially in the manner in which they are structured by the national government in coordination with the Kenya National Examination Council and the Kenya Institute for Curriculum Development, (Republic of Kenya, 2018; Ngure, 2013).

All the respondents were in agreement that CPD should be better structured to benefit all teachers. Education is a public good and therefore the government should initiate and have a budget for continuous professional development. The principals can source opportunities for training based on the institution's need analysis. The process has currently been left for the teachers to shoulder the costs and therefore they do it as a formal requirement and directive from the government. There is a need therefore to conduct a comprehensive analysis and baseline analysis in Kenya before rolling out such an important course (Kariuki, Itegi and Ogeta, 2020).

The challenges to the process of CPD were thematically analysed based on the process and nature of the involvement of the beneficiaries of the program. With stakeholder or beneficiary involvement, it was revealed that there is donor dependency in catalysing some of the processes and this affects the sustainability of CPD programs across the country. For donor-dependent programmes, the withdrawal of donors has often led to the collapse of the programmes due to a lack of sustainability. Even in instances when the withdrawal has not been total, lack of efficient provision of services has always been the case.

Another bottleneck pointed that was out during the study is the financial constraints that limit some programs. Funding for courses, like many other public service activities, is done by the Treasury and apportioned to the Ministry of Education which is guided by priorities. Unfortunately, teachers 'in-service training may not be a prioritized list for public spending, especially with the advent of CBC training. Recognition of the need to provide continuing education support to teachers has not been matched by the development of a strong cadre of teacher educators. More systematic development of teacher educators and strategies are to retain those competent in a particular field are needed. In addition, another challenge expressed is

how frequent deployment of staff affects teacher services. The Teachers Service Commission in recent days focused on promoting national cohesion through a program known as “delocalization” often teachers and head teachers are deployed elsewhere before they can implement what they have learned in an in-service (Ministry of Education, 2018).

Although current trends globally are for teachers to take more responsibility in identifying their own development needs in the recent instance, the teachers are made to fund their training, making it more difficult. Most tutors are ill-prepared both financially and psychologically to take the training. This translates negatively to the process of skill transfer as well. The challenge of TPD that needs to be addressed is sensitization. A focus should be made outlining the benefits of TPD. Although TPD has been structured by the government, the cost of training should be on the government. The government should carry out periodic reviews for CPD to determine whether it is on track and whether there is a need to change strategies.

Confirming the challenges raised above, Oundo, Afwade and Kamau (2023); Njenga, (2023) state that a report from the Ministry of Education in Kenya indicated that there has been poor coordinated strategic planning in the professional development programs for teachers and so the quality of the programmes offered is below standards. Similarly, Bulima's (2017) study findings revealed that the majority of the respondents affirmed that their employer, the Teachers Service Commission, was not committed to ensuring that its teachers were involved in CPD. This in return has made the teachers believe that their employer was less concerned as far as the engagement in these activities was concerned.

The limitations observed in the connection between knowledge and understanding could be explained by particular drawbacks related to the initial training. First, the training material (the CPD toolkit was lengthy and not reader-friendly) erodes motivation and instils frustration among teachers. Second, as reported by the tutors, the duration of the training was very short, hence, the training given was inadequate. Third, the knowledge and experience of trainers at the central level were questionable. Fourth, further professional support at the school level has been missing. Fifth, those who were trained as trainers faced budget limitations to organize training at their respective colleges. In brief, sufficient opportunities were not created for teachers to develop knowledge and understanding of the objectives, contents, and methods of the CPD program. Hence, it would be difficult to assume that the training met the objective of enabling tutors to understand and implement the CPD program.

Teacher attitudes emerged as another important factor in influencing the quality of implementation of school-based teacher professional development. The results of this study show that tutors were not enthusiastic about the CPD programme. Lack of interest and commitment, a lack of supportive attitudes toward the CPD programme, and a low level of collaborative learning were observed among teachers. In the view of the tutors, the new CPD is coined and implemented about peripheral topics (for instance, student discipline, and parental involvement) that are indirectly related to student learning. Low public respect for the teaching profession, limited involvement of communities in the education of their children, and lack of student interest in learning affected teachers' overall attitudes toward teaching and the quality of their work about the CPD programme.

Review of teachers' views indicates leadership and policy-related issues as other areas of focus for institutions. Similar to the situation with teachers, officers involved in the

coordination of the program lack a clear understanding of CPD and its implementation strategy.

Lack of commitment as well as timely and regular follow-up on the part of the coordinating body was also reported as visible challenges. It appears the promises made by the Ministry of Education about certifying teachers through the CPD program have been abandoned. Moreover, lack of incentives particularly for teachers that have achieved the highest possible rank in teacher career structure, frequent change in the school leadership, and failure to mobilize resources to support CPD programs at the school level appear to contribute to confusion and a lack of direction among teachers. Teacher interest in teaching, among other conditions, is influenced by prospects for advancement in the profession.

4.5.2 Factors influencing teachers' involvement in CPD

Several factors are unique to Kenya that either hinder or facilitate teachers' participation in CPD activities. The following are some of the factors that one of the respondents during the focus group discussion pointed out:

"The factors which I have observed in this program that are influencing the teachers' active participation in my opinion are; the young schools employ untrained teachers who do not like to attend training. The unwillingness of teachers to complete cycles of training in training which involves several training cycles, feelings of superiority among teachers in well-performing schools, and uncooperative head teachers. Some teachers also do not like using their money to pay for any training. The teachers are ever complaining that they do not have money to pay for seminars and workshops." (F12, 52 years)

Several factors are unique to Kenya that either hinder or facilitate teachers' participation in CPD activities. The following are some of the factors the majority of the respondents observed as active due to the demand for excellent performance; most schools employ young school leavers who are untrained teachers and unlikely to

attend training. Other factors pointed out include, the unwillingness of teachers to complete cycles of training in training which involve several training cycles, non-committal tendencies, feelings of superiority among teachers in well-performing schools, uncooperative head teachers, and economic constraints and limited financial resources to afford the training. Some of the factors that were raised during this interview also appeared earlier in the literature either as a factor influencing active involvement in CPD or as a challenge raised by respondents.

4.5.3 Challenges of Actively Participating in CPD

It is important to more thoroughly understand the factors affecting teachers' active participation in continuous professional development. It is the responsibility of the employer to establish the challenges its employee faces in the course of their professional development. The interviewees were fully aware of the challenges facing the teachers in the two selected primary teacher training colleges. One of the respondents during an in-depth interview pointed out:

“Many teachers are ever complaining about registration fees or tuition required for attending professional development events, some head teachers are not supportive they even hide invitation letters for seminars and workshops because they fear the teachers will demand the school to pay the fee. Due to the high workload of the teachers, time is also a challenge.” (M18, 51 years)

The challenge was also cross-checked during focus group discussions where respondents reported the same challenges.

“Sometimes teachers are asked to spend from their pockets to cater for these training yet the office takes long to refund. Also, the notification to attend these training comes to a close. This disadvantages teachers in terms of preparation. The situation is worse if the trainings stretch over the weekends, teachers do not take it kindly, especially those that run from 8-6 pm”. (F12, 52 years)

The sentiments made by the two respondents underscore that the majority of respondents 36(95%) still encounter challenges related to but not limited to

insufficient time, funding, and duplication of the training, all these challenges may in one way or another demotivate a teacher from attending CPD training.

The tutors were fully aware of the challenges facing them in both TTCs. The respondents pointed out that many tutors find it a challenge to raise the fees required for attending professional development events. In summary, the study concludes that the bottlenecks to teachers' involvement in CPD in both institutions were: lack of finances i.e. the fee required to pay for CPD activities, lack of quality CPD activities from the employer, TSC, the teachers' employer was not committed to ensuring that teachers were involved in CPD, lack of enough government created opportunities for teachers CPD, lack of career development opportunity with the TSC for the teacher, lack of CPD activities which are organized by both the government and TSC, lack of support from the school and the irrelevance of CPD.

4.5.4 Summary

Chapter 4 has been instrumental in presenting the research findings as per each research question as indicated in its introduction. The chapter presents the experiences of college tutors in continuous professional development trajectories over the years regarding how they perceive CPD construction of knowledge with individual narratives from the key informants. The college administrators exhibited a vast level of experience both as consumers of CPD and as implementers of the same. The responses that they gave were later corroborated by responses from the focus group discussions. Additionally, the curriculum support officer gave an account of the forms of CPD and their effectiveness. The study revealed that with the advent of CBC, teachers should appraise themselves with the current trends in the 21st century.

The focus group discussions from both Murang'a and Kamwenja teacher training colleges gave detailed encounters of their lived experiences, their world as they construct it and as they see themselves in the social context. The tutors in these colleges provided the social eye through which we saw the world of other tutors at other teacher training colleges. The experiences of tutors in their endeavour to construct knowledge blend with what is globally portrayed in available literature or locally discerned in public teacher training colleges.

Table 4.6: Evaluation of how the beneficiaries learned about CPD

Institution	Group	Mode of information
Kamwenja TTC	FGD1	Community of practice
	FGD2	WhatsApp group
Murang'a TTC	FGD3	Through colleagues at work
	FDG4	There was a circular from the TSC.

4.5.5 Document Analysis and Evaluation of CPD

Each of the two groups participating in the study was evaluated against the indicators that were presented in Chapter Three of this study. To determine change, the groups were assessed according to specific indicators of social structures and specific indicators of the continuous professional development process as illustrated in the tables 4.7 - 4.11 that follow. The symbol “√” denotes affirmative and the symbol “×” denotes negative, about the specific indicator being assessed. The study determined that the levels of education varied from a basic Bachelor's degree to a Doctor of Philosophy degree.

Table 4.7: Evaluation of the Effectiveness of the Tutor's Social Perception of CPD

Institution's Name	Specific Indicators on the effect of the social construction of knowledge				
	Improved interpersonal skills	Improved learning outcome	Enabling syllabus coverage	Enhanced teacher professional growth	Positive change in students' attitude toward learning
Murang'a	√	√	√	√	√
Kamwenja	√	√	√	√	√

Table 4.8: The Process of CPD

Institution's Name	Specific Indicators on the CPD Process				
	Mentoring	Peer coaching	Reflection	Collaboration	Evaluation and Appraisal
Murang'a	√	√	√	√	√
Kamwenja	√	√	√	√	√

Table 4.9: Level and Nature of CPD Involvement

Name	Specific Indicators on the nature of the CPD process				
	CPD Training Plans and Budget	Reports from the Ministry of Education	Minutes on CPD Planning and Budgeting	Reports from CPD Workshops	Government Policy
Murang'a	√	√	√	√	√
Kamwenja	√	√	√	√	√

Table 4.10: Timing of CPD Programs and Duration

Name	Specific Indicators on the Frequency of CPD				
	Short courses in two weeks	Courses above two weeks	Long term courses	Plans for short-term courses	Plans for the long courses
Murang'a	√	√	√	√	√
Kamwenja	√	√	√	√	√

Table 4.11: Evaluation of the forms of CPD from the Key Informants

Forms of CPD	K1	K2	K3	K4
In-service training	√	√	√	√
Study network platforms (WhatsApp, Group emails)	√	✗	✗	√
Mentoring	√	√	√	√
Independent research	✗	✗	✗	✗
Informal dialogues	√	√	√	√
Collaboration	√	√	√	√
Action Research	✗	√	√	✗
Workshops	√	√	√	√
Conferences	√	√	√	√
On line platforms (Elimika)	√	✗	✗	√
Teaching Modules (KICD)	√	√	√	√
Projects	√	√	√	✗

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The chapter summarizes and concludes the study findings on the role of Continuous Professional Development training process on tutors' social construction of knowledge. In addition, it provides clarity on the relationship between the nature and level of involvement of tutors in Continuous Professional Development and their social construction of knowledge and finally the association between the frequency and duration taken in the Continuous Professional Development training and tutors' social construction of knowledge. Thereafter, the chapter presents recommendations in line with the findings and proposes areas that may be researched in the future. The overall objective of the study was to examine tutors' social construction of knowledge acquired through CPD in public primary teacher training colleges in Nyeri and Murang'a Counties of Kenya.

5.1 Summary of Findings

Most of the tutors in the sampled institutions believe that a school-based teacher professional development programmes is important as it focuses on core issues, teacher professional development, and improving the quality of education. However, the study findings reveal that some teachers appear pessimistic in their views on the real contributions of the programmes to improve teacher knowledge, skills, and attitudes, as such they do not engage in meaning-making process even when they attend these CPD programmes.

The CPD training process plays a significant role in helping tutors socially constructs knowledge. The study found that collaboration is the most preferred and effective

method, allowing teachers to work together on lesson planning, share expertise, and address common issues.

It is a key ingredient for effective CPD, especially when coupled with other factors such as a common context and various media to enhance the process. It can be deduced that teachers work collaboratively, especially in a common environment, as it has the advantage of harnessing teachers' synergies in lesson planning and execution to deliver more qualitative learning. The social interaction is a key ingredient for the successful construction of new knowledge. The effectiveness of these collaborative processes is further enhanced when they occur within a supportive environment provided by the administration and the wider professional community.

The nature and level of a tutors' involvement in CPD directly impacts their social construction of knowledge. These study findings indicate the benefits of involving tutors actively and meaningfully in the entire CPD programmes, they are more likely to become knowledge producers rather than positive recipients. However, a key finding that was that tutors were minimally involved in the design of CPD programmes and felt marginalized, which consequently hindered their ability to reconstruct knowledge in a way that meet their classroom needs.

The study also revealed a strong association between the frequency and duration of CPD training and tutors' social construction of knowledge. Findings suggest that CPD activities should be prolonged and focused rather than one day-off workshops and courses on preselected topics with inadequate training time accompanied by little follow-up. Longer more sustained training gives tutors ample time to understand, discuss, develop, and implement the newly acquired ideas and skills. Frequent and ongoing professional development is essential for keeping tutors up to date with the

ever –changing demands of the education sector and helps them build confidence and a positive attitude toward their profession.

5.2 Conclusions

The study addressed issues around the quality of education, the government of Kenya intends to develop a culture of life-long learning, in this case, for tutors and administrators with the support of national and sub-national education personnel, teacher education institutions, and development partners. A focus on 21st-century skills will also be an important element in improving the quality of education in Kenyan schools. In this context, the study focused on tutors' social construction of knowledge, the significance which tutors give the Continuous professional development trainings. Social construction of knowledge requires involvement and sharing. Tutors reported lack of involvement in CPD programme planning, design and implementation. This led to a lack of ownership and a disconnect from their actual needs. Teacher activities on CPD could be genuine efforts to learn and improve their performance. CPD was considered mandatory, only as a performance contract related activity. All tutors in colleges should be engaged in the development and implementation of the CPDs in one way or another. Tutors were able to document their experiences and success stories in the form of portfolios on the same. Tutors were not happy about CPD programmes that were offered infrequently and in short span of time. As such there has been a low turnout/low morale for in-service training. It appeared that more time and frequency is needed for tutors to interact. In line with the above, the study made the following conclusions;

CPD leads to positive changes in tutors' professional capacity, motivation, innovation, and confidence, ultimately improving classroom practices and student outcomes. It is also very important to strengthen education quality to align with SDG4,

as well as strengthen regional integration. It also builds social capital and a network for knowledge sharing amongst tutors and colleges.

The cascading model of CPD fails to provide the sustained, collaborative environment needed for the social construction of knowledge. It involved one or just a few tutors attending the CPD training then sharing with their colleagues back at college on what they have learnt. As such in the process of sharing the content of the training, some get watered down and so some tutors end up not benefitting. Additionally, the teachers who have undergone the in-service courses, do not achieve the highest learning outcomes.

Lack of involvement of tutors in CPD programme in levels of planning, design and implementation does not address tutors' training expectations. It also leads to a lack of ownership and a disconnect from their actual needs. Teacher activities on CPD could be genuine efforts to learn and improve their performance. On the contrary, they could be done merely to meet formal requirements. The CPD appears mandatory. All tutors in all colleges should be engaged in the development and implementation of the CPDs in one way or another.

Inadequacy of time in terms of duration and frequency does not address tutors' training needs. From the findings of this study, it was clear that tutors were not happy about CPD programmes that were offered infrequently and in short span of time. As such there has been a low turnout/low morale for in-service training.

5.3 Recommendations

The following are the recommendations of the study:

- i. The Ministry of Education to ensure that tutors' and college principals have the opportunity of continuous professional development (CPD) through several models and approaches as a way of reskilling and up skilling them to remain relevant and effective, especially in the 21st Century.
- ii. The Ministry of Education to develop a more inclusive and tutor-friendly CPD model based on the need analysis which is carried out from time to time using a teacher's professional development toolkit.
- iii. The TSC should actively involve tutors while devising CPD training. This will increase ownership and motivation amongst teachers, hence ensuring maximum benefits from the programme.
- iv. The TSC should provide adequate time for the CPD the tutors to realize the benefits of training. The CPD programmes should be extended to a whole year so that ample follow-up of the participants is done before certification.

5.4 Recommendations for Further Research

This study recommends the following areas for further study:

- i. Broadening the study locations, to include more colleges in other counties in Kenya for comparison.
- ii. Investigate gender differences in their social construction of knowledge through continuous professional development.

REFERENCES

Abakah, E., Widin, J., & Ameyaw, E.K. (2022). Continuing Professional Development (CPD) Practices Among Basic School Teachers in the Central Region of Ghana. <https://doi:10.1177/215824022.1094597>. *Journals.Sagepub.com/home/sgo*.

AbdulRab, H. (2023). Teacher Professional Development in the 21st Century. *African Journal of Education and Practice*. 9 (4), 39-50. doi.org/10.47604/ajep.2237.

Abigail, U. (2020). Assessment of Continuous Professional Development needs among teachers of Twi in the Senior High Schools. Unpublished Master's Thesis, Education Administration: Twi University.

Abreh, K. (2018). Heads of departments Perception of teachers' Participation in CPD Programmes and its Influence on Science and Mathematics teaching in Ghanaian Secondary Schools. *African Journal of Educational Studies in Mathematics and Sciences*, 14(2).

Adem, B. (2014). The Components of Effective Professional Development Activities in terms of Teachers Perspective. *International Online Journal of Educational Sciences*, 2014, 6 (2), 319-327. ISSN: 1309-2707. www.iojes.net.

Admiraah, W., Schenke, W., De Jong, L., Emmelot, Y., & Sligte, H., (2021). Schools as Professional Learning Communities: What can schools do to support the professional development of their teachers? *Professional Development in Education*, 47(4), 684 -698.

Ahmad, K., & Kumar, F. (2019). A Comparative Study of Different Dimensions of Teacher Effectiveness among Directly Recruited and Promoted Senior Secondary School Teachers of Kashmir. *International Journal of Scientific Research and Reviews*, 8(1), 1127–1135.

Aileen, K. (2011). Collaborative Continuing Professional Development (CPD) for teachers in Scotland: aspirations, opportunities & barriers. *European Journal of Teacher Education*, 34(1), 25-41. <http://doi.10.1080/02619768.2010.534980>.

Akala, B. M. (2021). Revisiting education reform in Kenya: a case of competency-based curriculum (CBC). *Social Sciences & Humanities Open*, 3(1), 100-107.

Akinyemi, F., Shumba. J., & Adewumi, M. (2019). Allocation of Time in Communities of Practice: A Strategy to enhance continuing professional development of high school teachers. *Cogent Social Sciences*, 5(1).

Akpan, I., Igwe, A., Mpamah, I., & Okoro, O. (2020). Social Constructivism: Implications on Teaching and Learning. *British Journal of Education*. 8(8), pp.49-56.

Akram, M. (2018). Development and Validation of School Teacher Effectiveness Questionnaire. *Journal of Research and Reflections in Education*, 12(2), 154–174.

Alam, J., Aaamir, M., & Shahzad, S. (2016). Continuous Professional Development of Secondary School Teachers through Peer Observation: Implications for Policy & Practice. Research. *Journal of Social Sciences & Economics Review (RJSER)*, 1(1), 2707-9023.

Alela, P., Kennedy, O., & Getange, N. (2019) Influence of Teacher Professional Development on Learner Academic Achievement in Migori County, Kenya. *Journal of Humanities and Social Sciences*, 24(4), 61-66.

Alemayehu, E. (2021). Does Continuous Professional Development (CPD) Improve Teachers Performance? Evidences from Public Schools in Addis Ababa, Ethiopia. *Research & Reviews: Journal of Educational Studies*.

Alemayehu, E. (2022). Does Continuous Professional Development (CPD) Improve Teachers' Performance. Evidences from Public Schools in Addis Ababa, Ethiopia. *Research & Reviews. Journal of Educational Studies*, 7(1).

Al-Lamki, N. (2019). The Beliefs and Practices Related to Continuous Professional Development of Teachers of English in Oman. A PhD thesis was submitted for the requirements for the degree of Doctor of Philosophy at the School of Education, The University of Leeds.

Al-Ofi, A. (2022). Evaluating the Effectiveness of Continuous Professional Development Programmes for English Language Teachers. *International Journal of Education*, 10(2).

Alvarez, V., & Russell, V. (2020). Going the Distance: Perceptions of Teachers in Open and Distance Continuing Professional Development. *Global Journal of Progressive Education* 10(2). ISSN: 2231-1335.

Amin, M. (2005). *Social Science Research: Conception, Methodology, and Analysis*. Kampala: Makerere University Printers.

Ana, S. & Linet, A. (2020). The Impact of Leadership on the Professional development of teachers in Complementary schools. *Management in Education*, 34 (4), 141-48. *British Educational Leadership, Management & Administration Society (BELMAS)*. <http://doi:10.1177/08920620942509/journals.sagepub.com/home/mie> SAGE.

Andres, P., Pedro, G., & Maria, J.G. (2024). Effects of a professional development programme on teachers' classroom practices in Columbia, *Oxford Review of Education*. 50(2).

Anfaki, M. (2015). Professional Development in English Language Teaching: A teachers' View. *British Journal of Education*, 2(7). pp. 32-49.

Anna, P., David, K., Mary. E., & Violeta, A. (2019). Teacher Professional Development around the World: The Gap between Evidence and Practice. CDG Working Paper 517. Washington, DC: Centre for Global Development <https://www.cgdev.org/publication/teacher-professional-development-around-world-gap-between-evidence-and-practice>.

Antonio, D. (2019). Continuing Development (CPD) of Teacher Educators (TES) Within the ecological environment of the Island territories of the Organisation of Eastern Caribbean States (OECS). Thesis Submitted in accordance with the requirements of the University of Liverpool for the degree of Doctor of Education.

Anuar, K. (2019). Peer Coaching in Malaysia: Exploring the Implementation of a Professional Programme for Arabic Language Secondary School Teachers. A PhD thesis submitted in partial fulfillment of the requirements of Liverpool John Moores University for the degree of Doctor of Philosophy.

Anyango, E., & Kwamba, J. (2024). Influence of Teachers' Professional Training and Development on Students Academic Performance in Public Secondary Schools in Ndhiwa Sub-County, Homabay County, Kenya. *African Journal of Education and Practice*, 10(3), 52-62.

Araujo, M., Carneiro, P., Cruz-Aguayo, Y., & Schady, N. (2016). Teacher Quality and Learning Outcomes in Kindergarten. *Quarterly Journal of Economics*, 131 (3), 14-53

Arnel, C., & Gideon S. (2025). Continuing Professional Development Engagement and Pedagogical Competence of Public Elementary School Teachers. 7(6). <https://doi.org/10.708475>.

Ashiabi, G., & Neal, K. (2015). Child Social Development in Context: An Examination of Some Propositions in Bronfenbrenner's *Bioecological Theory*., 1(1), 1–14. <https://doi.org/10.1177/2158244015590840>.

Asmare, M. A. (2025). Teachers experiences of CPD: Implications for policy & practice. *Journal of Social Sciences & Humanities*, 11(5), 101514. <https://doi.org/10.1016/j.ssa.2025.101514>.

Aucejo, E., Coate, P., Fruehwirth, J. C., Kelly, S., & Mozenter, Z. (2019). *CEP Discussion Paper No 1574 Revised April 2019* (Replaced September 2018 version) Teacher Effectiveness and Classroom Composition. London.

Av, A., Dan, V., & Joan, O. (2020). Going the distance; Perceptions of teachers in Open and Distance Continuous Professional Development. *Globus Journal of Progressive Education*, 10(2), 60-66.

Avidor-Ungar, O. (2016). A Model of Professional Development: Teachers' Perceptions of their Professional Development, Teachers and Teaching, *Theory and Practice*. 22(6), 653-669, [doi:10.1080/13540602.2016.1158955](https://doi.org/10.1080/13540602.2016.1158955).

Bahriadi, A. (2022). Continuous Professional Model to Improve Teacher Professional Competence. *International Journal of Social Science and Human Research*, 5 (12).

Banik, S., & Saha, A. (2023). Importance of Continuous Professional Development Programme in Teaching Profession. *International Journal of Creative Research Thoughts (IJCRT)*, 11(3).

Bantwini, B. (2019). Developing a Culture of Collaboration and Learning among Natural Silence Teachers as a Continuous Professional Development approach in a professional development approach in a province in South Africa, *Teacher Development*, 23(2), 213-232.

Baptise, J., Kampire, E., & Karegeya, C. (2022). Teachers' Perceptions on the Impact of Continuous Professional Development to Promote Quality Teaching and Learning of Chemistry: A Case of Rwamagana Sec Schools, Rwanda. *AJCE*, 12(2). ISSN 2227-5835. African Centre of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS) University of Rwanda-College of Education.

Bartleton, L. (2018). A Case Study of Teacher's Perceptions of the Impact of Continuing Professional Development on their Professional Practice in a Further Education College in the West Midlands. Doctoral theses Submitted at the University of Wolverhampton. Retrieved on 19th August 2022.

Bartleton, L. (2018). Teacher Perceptions of the Impact of CPD on their Professional Practice in a Further Education College in West Midlands. *Educational futures*. 9(2)

Bartleton, L. (2018). Teachers' Perceptions of the Impact of Continuing Professional Development on Their Professional Practice in a Further Education College in the West Midlands, *e-journal of the British Education Studies Association*, 9(2). Educational Futures.

Belay, S. (2016). The Contribution of Teachers 'Continuous Professional Development (CPD) Programme to quality of Education and Its Teachers' Related Challenging Factors at Chagni Primary Schools, Awi Zone, Ethiopia. *The International Journal of Humanities and Social Studies* (ISSN 2321-9203).

Bendsen, M., & Liselott, F., & Bjorklun, M. (2021). Exploring Empowering Practices for Sustainable Continuing Professional Development. doi.org/10.1080/00131881.2021.2000338.

Bernardine, K. (2019). Challenges Faced by Educators in the Implementation of Continuing Professional Teacher Development (CPTD): Gauteng Province. <https://doi:10.5772/intechopen.84836>.

Betemariam, B. A. (2017). Generating Evidence: The Evaluation of the Teacher Continuous Professional Development Framework, in the Case of Ethiopia. ProQuest Dissertations and Theses. Retrieved on 16th May 2020 from <https://search.proquest.com/docview/1983516727/accountid=45204>

Bett, H. K. (2016). The Cascade Model of Teachers' Continuing Professional Development in Kenya: A Time for Change? *Cogent Education*, 3(1). <https://doi.org/10.1080/2331186X.2016.1139439>. Retrieved on 20th August 2021.

Bett, H., & Makewa, L. (2020). Can Facebook groups enhance the continuing professional development of teachers? Lessons from Kenya. *Asia-Pacific Journal of Teacher Education*, 48(2), 132-146.

Bleach, J., (2014). Developing Professionalism through Reflective Practice and Ongoing Professional Development. *European Early Childhood Education Research Journal*, 22(2), 185-197. Routledge, Taylor & Francis Group.

Bogdan, R. C., & Biklen, S. K. (1998). *Qualitative education research: An introduction to theory and methods.* (3rd Ed.). Needham Heights, MA: Allyn & Bacon.

Bogdan, R.C., & Biklen, S. K. (2003). *Qualitative research in Education: An Introduction to Theory and Methods.* Boston, MA: Pearson Education Group Inc.

Brandisauskiene, A., Cesnaviciene, J., Miciuliene, R., Kaminskiene, L. (2020). What Factors matter for the sustainable development of teachers: An analysis from four Countries. *Journal of Teacher Education for Sustainability*, 22(2), 153-170.

Brenda, L., Vivienne. L., Vivienne, V. S., & Christine, W. (2015). Institutional context matters the professional development of academics as teachers in South African higher education. *Higher education journal*, 69 (2), pp.315-330.

Brent, P., T., Natalie, P., Roblin, S.V.B., & Chang. Z. (2019). Improving teacher professional development for online and blended learning: A Systematic Meta-aggregate review. *Education Tech Research Dev*, 67(1), 1145-1174. <https://doi.org/10.1007/s1423-019-09645-8>.

Bridwell-Mitchell, W. (2015). Theorizing Teacher Agency and Reform: How Institutionalized Instructional Practices Change and Persist. *Sociology of Education*, 88(2), 140-159. <https://doi.org/10.1177/0038040715575559>.

Bronfenbrenner, U., & Morris, P. (1998). *The Bioecological Model of Human Development: Chapter 14.* New York: Wiley Publishers.

Bronfenbrenner, U. (2005). *Making Human Beings Human: Bio ecological Perspective on Human Development.* Thousand Oaks, CA: Sage Publishers.

Bronfenbrenner, U., & Ceci, S. J. (1994). Nature-Nurture Reconceptualized in Developmental Perspective: A Bioecological Model. *Psychological Review*, 101(4), 568-586.

Bulimo, A. W., Maiyo, J., & Ndiku, J.N. (2016) Towards Equitable Access to Continuing Professional Development Program by Secondary School Managers in Kenya. *International Journal of Scientific Research*, 1(2).

Bulimo, W. A. (2017). Perception on the Factors Influencing Access to Continuing Professional Development in Kenya. *Kenya Journal of Educational Planning, Economics & Management*, 11 (1).

Bunyi, G. W., Wangai, J., Magoma, C. M. & Limboro, C. M. (2013). *Teacher Preparation and Continuing Professional Development in Kenya: The Transformative Model.* Nairobi. Retrieved from <http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CFwQFjAA&url=http://www.sussex.ac.uk/cie/documents/tpa-synthesis-report-july2011.pdf&ei=KQTGT6vgCqK90QX3tcTUBQ&usg=AFQjCNErOXXcwnzNGSKW0Db17OyOv6Iw9w&sig2=Iu05O9Lz-qxC4eZrRU>.

Burke, P. J. (2007). Identity Control Theory. *International Journal of Social Science and Humanity*, 1(1), 1–7.

Burr, V. (2015). *Social Constructivism*. 3rd Edition. doi.org/10.4324/9781315715421.

Carmal, A., & Sumayo, G.S. (2025). Continuing Professional Development Engagement and Pedagogical Competence of Public Elementary School Teachers. *International Journal of Multidisciplinary Studies in Higher Education*, 2(1). <https://doi.org/10.70847/592788>.

Catherine, M., Gretchen, R., & Gerardo, B. (2022). *Designing Qualitative Research*, 7th edition, Thousand Oaks, California. Sage Publishing.

CEDOF (2025). An Agency of the European Union. Teachers' and Trainers' Professional Development.

Cemile, D., & Yasemin, K. (2022). Promoting Continuous Professional Development of English Teachers Through Action Research. *International Journal of Educational Reform*, 24(6). <http://doi:10.1177/10567879211062224>.

Charles, K. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, 6 (5). <http://doi.org/10.5430/ijhe.v6n3p26>.

Charles, K., Joyce, N., & Isaack, K., (2020). Professional Development Needs to Improve Teaching Science in Secondary Schools: Case Study of Mbeya, Tanzania. *Asian Journal of Probability & Statistics*. 9(3):5-24. [doi:10.9734/AJAS/2020/uqi330227](https://doi.org/10.9734/AJAS/2020/uqi330227).

Chebolei, R. (2021). Primary School Teachers' Perceptions of the Influence of Professional Development Programs on Teaching and Learning in Baringo North Sub-County, Baringo County. Moi University,

Chen, Q., & Lubna, A.M. (2024). Exploring the Impact of Teacher Professional Development on Teachers' Performance; A literature Review Study. *International Journal of Religion*, 5(11):5034-5042. <https://doi.org/10.61707/cxa24m02>.

Cheng, M., & Li, D. (2020). Implementing practitioner research as a teacher professional development strategy in an Asia-Pacific context. *Journal of Education for Teaching*, 46(1), 55-70.

Chepkemoi, R., Ahmed, O., & Kipngetich, E. (2013). Towards Learner Centred Pedagogies by Teacher Educators in Kenya: A Study of Kericho TTC. *International Journal of Asian Social Science*. 3(1).

Chepkuto, W., Sang, J., & Chumba, S. (2018). Influence of continuous professional development programmes on curriculum implementation in selected North Rift Counties public secondary schools, Kenya. *International Journal of Education and Research*, 6(6), 169-182.

Chikari, G., Rudhumbu, N., & Svtwa, D. (2015). Institutional Continuous Professional Development as a Tool for Improving Lecturer Performance in Private Higher Education Institutes in Botswana. *International Journal of Higher Education Management (IJHEM)*, 2(1).

Christensen, J. (2016). Critical Reflection of Bronfenbrenner's Development *Ecology Model*, 69(19).

Coffie, I., Aboagye, G., & Johnson, E. (2019). Contextual Factors Affecting Professional Development Implementation: A Study from College Physics Tutors in Ghana. *American Journal of Educational Research*, 7(11). doi:10.1269.

Cohen L., Manion, L., & Morrison, K. (2007). *Research Methods in Education*. London, England.

Cohen, D., Hill, H., & Kennedy, M. (2002). The benefit to professional development. *American Educator*. 26(2), 22-25.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research Methods in Education* (7th ed.). London: Routledge.

Cohen, L., Mannion, L., & Morrison, K. (2007). *Research Methods in Education* (6th Edition). Routledge.

Conlin, D.M. (2019). Using Bronfrenner's PPTC Model as a lens to understand Refugee Parent-Teacher Communication Processes. Unpublished Doctoral Thesis, The University of North Carolina.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research*. London: SAGE Publications Ltd.

Creswell J.W., & Clark. P. V.L. (2011). *Designing and conducting mixed method research* (2nd Ed) Thousand Oaks. CA. Sage Publications.

Creswell, J. W. (2002). *Educational research: Planning, Conducting, and evaluating quantitative* (pp.146-166). Upper Saddle River, NJ: Prentice Hall.

Creswell, J. W., & Miller, D. L. (2000). *Determining validity in qualitative inquiry. Theory into Practice*, 39(3), 124-131.

Creswell, J., & Creswell, D. (2023). *Design, Qualitative and Mixed Methods Approaches*. Sixth Edition Sage Publications, Inc.

Creswell, J.W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. (3rdEd). Nebraska-Lincoln: Sage Publications

Creswell, J.W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Los Angeles: Sage Publications.

Creswell, J.W., & Creswell, J.D. (2017). *Research Design: Qualitative, Quantitative, and Mixed methods approach*. California: Sage Publications.

Creswell, W. J. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2ndEd.). California: Sage Publications.

Crossman, A. (2017). *Understanding Purposive Sampling; An Overview of the Method and Its Applications*. <https://www.thoughtco.com/purposive-sampling>. Retrieved on 22nd June 2022.

Cunningham, J., & Rosebaum, L. (2015). A Bioecological Framework to evaluate communicative participation outcomes for preschoolers receiving speech – language therapy interventions in Ontario, Canada, *International Journal of Language and Communication Disorders*, 50 (4),405-415.

Dadds, M. (2014). Continuing Professional Development: Nurturing the Expert Within. *Professional Development in Education*. 40(1),9-16. <https://doi.org/10.1080/19415257.2013871107>.

Damaris, K., Florence. K., & Florence, O. (2020). Effects of Teacher Participation in In-Service Training on Achievement in Kenya Certificate of Primary Examination in Kirinyaga County, Kenya. *Msingi Journal of the Department Foundations*, 4(1), 2663-1032.

Daniel, X. (2017). Teacher's Use of Social Construction Networking Sites for Continuing Professional Development. *Educational Leadership & Administration: Concepts, Methodologies, Tools & Applications*, 635-659.

Darling-Hammond, L. (2017). Teacher education around the world: what can we learn from international practice? *European Journal of Teacher Education*, 40(3), 291-309.

Darling-Hammond, L., Hyler, M.E., & Gardner, M. (2017). *Effective Teacher Professional Development Learning*. Learning Policy Institute. <https://learningpolicyinstitute.org/.../effective-teacher-professional-development-brief>.

Darling-Hammond, L., Hyler, M.E., & Gardner, M. (2017). Palo Alto, CA: Learning Policy Institute <https://learningpolicyinstitute.org/product/teacher-prof-dev>.

Davety, N., & Egan, M. (2021). Sustained CPD as an effective approach in the delivery of the Incredible Year's teacher classroom management programme. *Theory, Research, and Practice in Educational Psychology*.

Davis, S. B., Ferholt, S M. Janson, G.C., & Marganoric, S. (2015). *Dramatic Interactions in Education: Vygotskian and Sociocultural Approaches to Drama, Education and Research*. London: Bloomsburg Publishing.

Day, C. (1999). *Developing Teachers: The Challenges of Lifelong Learning*. London: Falmer Publishers.

De Wever, B., Vanderlinde, R., Tuytens, M., & Aelterman, A. (2016). Professional Learning in Education –Challenges for Teacher Educators, Teachers and Student Teachers. Gent, Academia Press. 22(9).

Deborah, T., Giyasetting, D., Petra, C., & Zuleyha, A. (2021). Continuing Professional Development for Physical Education Teachers in Europe. *European Physical Education Review*, 27(1), 150-167. <http://doi:10.1177/1356336X20931531.SagePub.com/journals-permissions>. Retrieved on 17th Nov 2023

Deluca, C., Bolden., & Chan, J. (2017). Systemic Professional Learning through Teacher's Perspectives. *Teaching and Teaching Education*, Vol. 67(2), 67-78.

Denzin, N. K. (1989). *Interpretive interactionism*. Newbury Park, CA: Sage Publishers.

Denzin, N., Lincoln, S., Giardina, D, & Cannella, S. (2024). *The Sage Handbook of Qualitative Research 6th edition*. Sage Publications.

Derakhshan, A., Coombe, C., Zhaleh, K., & Tabatacian, M. (2020). Examining the Roles of Continuing Professional Development Needs and Views of Research in English Language Teachers' Success. *Electronic Journal for English as a Second Language*. Vol 24(3).

Derakhshan, A., Coombe, C., Zhaleh, K., & Tabatacian, M. (2020) Examining the Roles of Continuing Professional Development Needs and Views of Research in English Language Teachers' Success. *Electronic Journal for English as a Second Language*, 24(3).

Desimone, L.M., & Garet, M.S. (2015). Best Practices in Teachers' Professional Development in the United States. *Journal of Psychology, Society & Education*, 7(3),252-263

Desiree, D.A. (2019). Continuing Professional Development of Teacher Educators (TES) within the ecological environment of the Island territories of the Organisation of Eastern Caribbean States (OECS). Unpublished Doctoral thesis, University of Liverpool.

Desta, D., Chalchisa, D., & Lemma. (2013). School-based Continuous Teacher Professional Development in Addis Ababa: An Investigation of Practices, Opportunities and Challenges. *Journal of International Cooperation in Education. CICE Hiroshima University*. 15(3), pp.77-94.

Digolo, O. O. (2006). The Challenges of Education in Kenya in the 21st Century. *The Educator Journal*. 1(1)

Dilshad, M., Hussain. M., & Batool. H. (2019). Continuous Professional Development of Teachers: A Case of Public Universities in Pakistan. *Bulletin of Education and Research*, 41(3), 119-130.

Dogan, C., & Kirgoz, Y. (2022). Promoting Continuous Professional Development of English Teachers Through Action Research. *International Journal of Educational Reform*. 31 (2): 105678792110622.

Donkor, D., & Banki, R. (2017). Assessing the Impact of In-service Training Programmes on Basic School Teachers of China in the Kassena Nankana West District of Ghana. *Journal of Education and Human Development*, 6(4), 64–76. <https://doi.org/10.15640/jehd.v6n4a8>. ISSN:2334-296X.

Douglas, B. (2017). Relationship Between Teacher Effectiveness and Student Achievement: An Investigation of Teacher Quality. *Thesis Paper*, 10(5), 1–161. http://cardinalscholar.bsu.edu/bitstream/handle/123456789/200666/BirdD_2017-2_BODY.pdf?sequence=1. Retrieved on 6th May 2020.

Drakenberg, M., & Malmgren, T. V. (2013). School Principals' Perceptions of Basic Values in the Swedish Compulsory School System regarding Bronfenbrenner's Ecological Systems Theory. *Citizenship, Social and Economics Education*, 12(2), 118–128.

DuFour, R. (2014). What is a “Professional Learning Community?” *Educational Leadership*, 61(8),6-11.

Easaw, A. (2021) Does Continuous Professional Development Improve Teachers' Performance? Evidence from Public Schools in Addis Ababa, Ethiopia. *Development of Educational Planning & Management*, Addis Ababa, University of Ethiopia. Research and Reviews; *Journal of Educational Studies*.

Eli Deen, A. (2023). The Role of Educational Initiatives in EFL Teacher Professional Development: A Study of Mentors' Perspectives. doi.org/j.heliyon.2023.e13342

Ellen, A. (2018). Continuing Professional Development of Teachers in Ghana: An Exploration of Basic School Teachers' Practices Experiences. Unpublished Doctoral Thesis, University of Technology, Sydney.

Elvis, C., & Harry, D. (2018). The Social Construction of a Teacher Support Team: An Experience of University Lecturer's Professional Development in STEM. *Journal of Education for Teaching*, 44(1), 14-26. <https://doi.org/10.1080/02607476.2018.1422610>. Retrieved on 20th November 2023.

Essayas, T. T., & Congman, R. (2021). School-based Continuous Professional of Development: A Case Study of Primary School Teachers in Ethiopia, 3(13). <http://10.1080/03004279.2021.1929382>. Retrieved on 18th June 2023

Ettore B., Monica F., Laura B., & De Marchi, V. (2020). United We Adapt: Communities of Practice to Face Coronavirus Crisis in higher education Knowledge Management Research & Practice, doi:10.1080/14778238.2020.1851615.

Evans. L. (2014) Leadership for Professional Development and Learning. Enhancing our Understanding of how teachers develop. *Cambridge Journal of Education*, 44(2). [10.1080/0305764x.2013.860083](https://doi:10.1080/0305764x.2013.860083).

Fahad, M. A., Lammar, A., Intezari, A., Cardow, A.& Pauleen, D. A. (2018). Grounded Theory in Practice: Novice Researchers Choice Between Straussian and Glasserian. *Journal of Management Enquiry*. 18(2). <http://doi.org.10.1177/1056492618770743>. Retrieved on 1st July 2023.

Farrell, M., & Macapinlac, M. (2021). Professional Development Through Reflective Practice: A Framework for TESOL Teachers. *Canadian Journal of Applied Linguistics/Revue Canadienne de linguistique appliquée*, 24(1),1-25. <https://doi.org/10.37213/cjal.2021.28999>. Retrieved on 11th March 2023

Florence, K., & Angela, K. (2018). Continuous Teacher Professional Support for Effective Implementation of Basic Education Curriculum Framework. *In Education Quarterly Reviews, The Asian Institute of Research Education Quarterly*, 1, (2),309-317.

Furner, C., & McCalla, M. (2019). An exploration of the Influence of School Context, Ethos &Culture on Teacher Career –Stage Professional Learning, *Professional Development in Education*, 45 (3),505-519.

Gacinya, J. (2024). The Influence of Continuous In-Service Training and Teachers' Classroom Performance. Case Study of Public Secondary schools in Kicukiro District Rwanda. *The Strategic Journal of Business & Change Management*, 11(1), 468-482. doi.org/10.61426/sjbcn. v11i.2863.

Gafara, M., Carrillo, V., Barrientos, G. (2025) A pedagogical Model for the Construction of Knowledge through Collaborative Learning in the Era of Connectivity, *Journal of Posthumanism*. 5(7). pp.1623-1650. doi.org/10.6333/2/joph.v5i7.2952.

Galache D. M. (2024). Teachers' Professional Development, Classroom Management Strategies, and Performance. *IOER International Multidisciplinary Research Journal*, 6(4). <https://doi.org/10.54476/ioer-imrj/391320>.

Gathara, M. (2019). Continuing Professional Development; Dilemma of Information Provision for Secondary School Teachers in Kirinyaga County, Kenya. Department of Education Foundations, *Msingi Journal*, 1(1), 2019.

Gengen, G., Ramil, P., Reyhan, G., & Raymond, C. (2021). Professional development Activities and Teacher Performance. *International Journal of Education and Practice*, 9(3), pp.497-506. [doi.10.18488/journal.61.2021.93.497.506](https://doi.org/10.18488/journal.61.2021.93.497.506).

Gentles, S.J., Charles, C., & McKibbon, J.S. (2015). Sampling in qualitative research: Purposeful and stratified sampling. *Journal of Qualitative Social Work*, 14(4).

Ginsberg, R. (2022). Preservice Teacher Action Research: Making Meaning and Generating Knowledge through Inquiry. Theses, Dissertations and Culminating Projects. 846 <https://digitalcommons.montclair.edu.etd/846>.

Giralt, A. (2016). Interrogating the Continuous Professional development policy framework in Ethiopia: a critical discourse analysis, *Professional Development in Education*, 42(2), 179-200. <http://doi:10.1080/19415257.2014.940627>.

Government of Kenya (2001). *A Policy Framework for Education Training and Research: Meeting the Challenges of Education Training & Research in Kenya in the 21st Century. Sessional Paper N0.1* Nairobi, Kenya: Government Printer.

Govil, P. (2013). Ethical Considerations in Educational Research. *International journal of advancement in education and social sciences*, 1(2), 17-22.

Guskey, T. (2002). Professional Development and teacher change, teachers and teaching. *Theory and Practice New York Teachers College*, 8(3):1-121.

Gutierrez, S. (2015). Teachers' Reflective Practice in Lesson Study: A Tool for Improving Instructional Practice. *Alberta Journal of Educational Research*. 61(3). 314-328.

Gyimah, K.E., & Ainsley, A.R. (2022). Teacher Professional Learning, a tool for managing teachers to improve pupil learning: the views of teachers in Ghana, *Practice*, [doi:10.1080/25783858.2022.20.65923](https://doi.org/10.1080/25783858.2022.20.65923). Retrieved 10th October 2021.

Habib, H. (2017). A Study of Teacher Effectiveness and Its Importance. *National Journal of Multidisciplinary Research and Development*, 2(3), 530–532.

Hadjimatheou, A. (2018). The Effectiveness of Physical Education CPD for Primary School Teachers in Cyprus. A PhD thesis Submitted to the University of Birmingham for the degree of Doctor of Philosophy.

Halder, U. K., & Roy, R. R. (2018). Job Satisfaction and Teacher Effectiveness of Secondary School Teachers. *International Journal of Innovative Research Explorer*, 5(4), 47–61.

Halim, S., Wahid, R., & Halim, T. (2018). Classroom Observation –A Powerful Tool for Continuous Professional Development. *International Journal on Language Research and Education Studies*, 2(2): 162-168. [doi:10.30575/2017/IJLRES-2018050801](https://doi.org/10.30575/2017/IJLRES-2018050801).

Hardman, F., Hardman, J., Dachi, H., Elliot, L., Hebzor, N., & Ntekim, M. (2015). Implementing School-Based Teacher Development in Tanzania. *Professional Development in Education*; 41(4); 602-623. [doi:10.1080/19415257.2015.1026453](https://doi.org/10.1080/19415257.2015.1026453). Retrieved on 9th July 2022.

Hennink, M., & Kaiser, B.N. (2022). Sample sizes for 10 types of qualitative data analysis: An integrative review, empirical guidance, and next steps. *International Journal of Qualitative Methods*, 21.

Herman, R. (2017). Effective Teaching. *The Journal of Effective Teaching*, 11(1), 1–94.

Holmquist, M., & Leling, B. (2021). Teacher's Collaborative Professional Development for Inclusive Education. *European Journal of Special Needs Education*. 36(5),819-833.

Leling, B. (2016). Transformation and framework of teacher professional development in Taiwan. *Policy Futures in Education*, 14(7), 926–942. <https://doi.org/10.1177/1478210316666428>. Retrieved on 1st April 2020

Hussain, S., Amin, K., & Khan, M. (2024). Effectiveness of Continuous Professional Development Teacher Training Programmes: From Trainee Teachers' Perspective. *Global Educational Studies Review*. Ix(III): 98-106. [doi:10.31703/gesr.2024\(IX-III\)09](https://doi.org/10.31703/gesr.2024(IX-III)09).

Irene, S., Adelaide, M., & Samson, O. (2021). Teachers Led-Professional Development Among Teachers of English in Bungoma South Sub-County, Kenya. *International Journal of Education & Research* (7).

Iroegbu, E., & Etudor-Eyo, E. (2016). Principals' Instructional Supervision and Teachers' Effectiveness. *British Journal of Education*. 4(7), pp.99-109

Isaac, S., Godwin, K., & Eugene, A. J. (2019). Contextual Factors Affecting Professional Development Implementation: A Study from College Physics Tutors in Ghana. *American Journal of Educational Research*, 7(11), 824-829. Retrieved on 6th August 2021 from <http://doi:10.1269/Education-7-11-11>.

Ismail, S., Shahrill, M., & Mundia, L., (2015). Factors Contributing to Effective Mathematics Teaching in Secondary Schools in Brunei Darussalam. *Procedia - Social and Behavioral Sciences*, 186(2015), 474–481. <https://doi.org/10.1016/j.sbspro.2015.04.169>. Retrieved on 3rd April

Jason, L., & Glenwick, D. (2016). *Handbook of Methodological Approaches to Community-Based Research, Qualitative, Quantitative, and Mixed Methods*. Oxford University Press, USA.

Jillian, M. (2018). Promoting Teacher Engagement with Assessment for Learning through a Flipped CPD -based Community of Practice. Unpublished Doctoral Thesis, University of Dublin.

Judith, H. S., & Cathy, R. (2016). The Influence of Contextual Factors on the Sustainability of Professional Development Outcomes, *Journal of Science Teacher Education*, 27 (2),205-226. Retrieved on 8th July 2022 from <http://doi.org/10.1007/s0972-016-9451-x>.

Kagema, J., & Irungu, C. (2018). An analysis of Teacher Performance Appraisals and Their Influence on Teacher Performance in Secondary Schools in Kenya. *International Journal of Education*, 11 (1), 91-93. Retrieved on 10th February from <http://doi.org/10.17509/ije.v11i1.11148>.

Kamau, G., & Wachira, N. (2019). An Inquiry into Job Satisfaction Habits among Private Secondary School Teachers in Kenya. *Journal of Educational and Social Research*, 4(1) 211–219. Retrieved on 15th March 2020 from <https://doi.org/10.5901/jesr.2014.v4n1p211>

Kamberelis, G., & Dimitriadis, G. (2011). Contingent Articulations of Pedagogy, Politics, and Inquiry. In N.K. Denzin & Yvonna S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research*. London: Sage Publications.

Kedibone, G. (2018). Challenges Faced by Education in the Implementation of Continuing Professional Teacher Development (CPTD): Gauteng Province. <http://10.5772/interchopen.84836>.

Kempen, M., & Steyn, G.M. (2016). Proposing a Continuous Professional Development Model to Support and Enhance Professional Learning of Teachers in Special Schools in South Africa. *International Journal of Special Education*, 31(1).

Kennedy, A. (2005). Models of Continuous Professional Development: A Framework for Analysis. *Journal of In-Service Education*, 31(2) 235- 250. Retrieved on 9th February 2020 from <https://doi.org/10.1080/13674580500200277>.

Kennedy, M.M. (2016). How Does Professional Development Improve Teaching? *Review of Educational Research*, 86,945-980. doi.org/10.3102/0034654315626800.

Kevin, P., Melisa, P., & Deborah, T. (2015). *Helping Teachers Help Themselves: Professional Development That Makes a Difference*. 99 (1), 26-42. Retrieved on 5th August 2021 from <http://doi:10.1177/0192636515576040>. Sage Publications.

Kikegbusi, G. N., & Eziamaka, C. N. (2016). The Impact of Supervision of Instruction on Teacher Effectiveness in Secondary Schools in Nigeria. *International Journal of Advanced Research in Education & Technology*, 3(3), 405–407.

King, F. (2014). Evaluating the Impact of Teacher Professional Development: An Evidence-based Framework. *Professional Development in Education*, 40 (1), 89–111.

King, F. (2019). Professional Learning Empowering Teachers? *Professional Development in Education*, 45(2), 169-172. Taylor & Francis Group.

Kini, T., & Podolsky, A. (2016). Research Report: Does Teaching Experience Increase Teacher Effectiveness? A Review of the Research. *Learning Policy Institute*, (June), 1–64. <https://doi.org/10.1016/j.tplants.2013.09.008>.

Kisirkoi, F., & Kamanga, A. (2018). Continuous Teacher Professional Support for Effective Implementation of Basic Education Curriculum Frameworks. *The Asian Institute of Research Education Quarterly Reviews*, 1(2), 309-317.

Kuhn, S.T. (1970). *The Structure of Scientific Revolutions* (2nd Ed.). Chicago: University of Chicago Press.

Kumba, W., & Nkumbi, E. (2008). Teacher Professional Development in Tanzania: Perceptions and Practices. CICE Hiroshima University. *Journal of International Cooperation in Education*. 11(3); 67-83.

Kvale, S., & Brinkmann, S. (2009). Interviews: *Learning the Craft of Qualitative Research Interviewing*. (2nd ed.) Sage Publications, Inc.

Kyriaki, M. (2018). An investigation into the complex process of facilitating effective professional learning: Continuous Professional Development tutor's practices under the microscope. *Physical Education and Sport Pedagogy*, 23(3), 250-266. Retrieved on 9th October 2021 From. <http://doi:10.1080/17408989.2017.1406463>.

Laverty, S.M. (2003). Hermeneutics Phenomenology: A Comparison of Historical and Methodological Considerations. *International Journal of Historical and Methodological Considerations*. *International Journal of Qualitative Methods*, 2(3). Retrieved on 24th June 2022 from <http://www.valberta.ca/-iijqm/backissues/23%20final/pdf/laverty.pdf>.

Lavonen, J. (2018). Educating Professional Teachers' in Finland through the Continuous Improvement of Teacher Education Programme. Retrieved on 14th May 2023 from <http://dx.doi.org/10.5772/Interchopen.77979>.

Leonard, J. (2011). Using Bronfenbrenner's Ecological Theory to Understand Community Partnerships: A Historical Case Study of One Urban High School. *Urban Education*, 46(5), 988–1010. Retrieved on 19th March 2020 from <https://doi.org/10.1177/0042085911400337>.

Linda, E. (2014). Leadership for Professional Development and Learning: Enhancing our Understanding of how teachers develop. *Cambridge Journal of Education*, 44:2, 179-198. Retrieved on 2nd July 2021 from <http://doi:10.1080/0305764X.2013.860083>.

Linnemanstons, K., & Jordan, I. (2017) Learning through Place: Evaluating of a professional development programme for understanding the impact of place – based education and teacher continuing education needs. *Journal of Sustainability Education*, 12(2).

Lofland, J., & Lofland, L. (1984). *Analyzing Social Settings*. Belmont, CA: Wadsworth Publishing Company, Inc.

Luvinzu, A. (2021). CBC good idea but empowers tutors to ensure success in its execution. The Standard Online. Retrieved on 10th May 2022 from <https://www.standardmedia.co.ke/education/article/2001423217/cbc-good-idea-but-empower-tutors-to-ensure-success-in-its-execution>.

Mabele, S., Likoko, S., & Onganyi, P, (2023). Future of Teacher Professional Development in Kenya: Strategic Leadership Approach. *European Journal of Education Studies*, 10(1.) doi:10.46827/ejes.VIoiL.4658.

Macheng, P. (2016). Continuing Professional Development of Teachers in Junior Secondary Schools in Botswana. Research & Reviews. *Journal of Educational Studies*, 2(3).

Mack, L. (2010). The Philosophical Underpinning of Educational Research. *Polyglossia*, 19:5.

Makindi. M. (2018). Principal's Facilitation of Teacher Professional Development Programmes for Life Skills Education in Public Secondary Schools in Nairobi County, Kenya. *International Journal of Innovative Research and Advanced Studies (IJIRAS)*. 5(7).

Makunja, G. (2016). Challenges Facing Teachers in Implementing Competence-Based Curriculum in Tanzania: The Case of Community Secondary Schools in Morogoro Municipality. *International Journal of Education and Social Science*, 3(5), 30–37.

Malik, M.I., & Tirmizi, M.A. (2019). Job Satisfaction of Academicians –A Conceptual Study in Higher Education Sector. *International Journal of Recent Technology and Engineering (IJRTE)*8(1), 17-21.

Mansour, N., El-Deghaidy, H., Alshamrani, S., and Aldamash, A. (2014). Rethinking the Theory and Practice of Continuing Professional Development: Science Teachers' Perspectives. Springer Science and Business Media Dordrecht Retrieved on 17th September 2021 from doi:10.1007/s1165-014-9409-y.

Mardapi, S., Sugiman, D., & Herawan, T. (2018). Assessing Teacher Competence and Its Follow-up to Support Professional Development Sustainability. *Journal of Teacher Education for Sustainability*, 20(1), 106–123. Retrieved on 12th August 2022 from <https://doi.org/10.2478/jtes-2018-0007>.

Marion, D. (2014). *Continuing Professional Development: Nurturing the Expert within Professional Development in Education*. Taylor and Francis Ltd. <https://doi.org/10.1080/19415257.2013871107>.

Marope, P. (2016). Quality and development-relevant education and learning: Setting the stage for the Education 2030 Agenda. *Prospects*, 46(1), 1-3.

Marshall, C. (2016). *Face-to-Face Interviews - Analysing the Face-to-Face Interviews - Advantages and Disadvantages*. Retrieved on 23rd August 2018 <https://www.linkedin.com/pulse/face-to-face-interviews-advantages-disadvantages-charlie-marshall>.

Martin, T., & Thomson, I. (2018). Adaptive capacity in the Pacific region: A study of continuous professional development for in-service teachers in Kiribati. *Asia-Pacific Journal of Teacher Education*, 46(1), 6-21.

Martinez, J. (2021). Action Research and Collaborative Reflective practice in English Language teaching, *Reflective Practice*, doi:10.1080/14623943.2021.1982688.

Mc-Graw, M. (2004). Data analysis techniques in qualitative research. *Journal of Research in Education*, 14(1), 96-113.

Melesse, S., & Kassa, G. (2019). The Implementation of Teachers' Continuous Professional Development and Its Impact on Educational Quality Primary Schools. In Fagita Lekoma Woreda, Awi Zone Amhara Region, Ethiopia. *Research in Pedagogy*, 9(1), pp.81-94.

Mendelsohn, G. (2023). Research ethics and Informed consent. *Educational Research Basics by Del Siegel*

Michael, S. (2017). *The Research Wheel*. 3rd Edition: Sage Publications Ltd.

Miller, R. R. (2017). Is Teaching Enough? The Impact of Effective Teachers on Student Performance in High Poverty – Schools in New Jersey. *The Journal of School & Society*, 4(2)85-97.

Ministry of Education (2018). *Ministry of Education, Republic of Kenya: A Policy Framework for Education*. Nairobi: Government Printers.

Mitchell, R., Ayinselya, R., Barrett, A., Cortez, O., David, O., Nwako, Z., Reda, N., & Singh, M. (2024). *Teacher Professional development in Africa: A Critical Synthesis of Research Evidence*. CIRE, Bristol. doi:/10.5281/Zenodo.109444685.

Mohammad, M., & Khaled, M. (2017). Exploring Change in EFL Teachers' Perceptions of Professional Development. *Journal of Teacher Education for Sustainability*, 19(1), 22-42.

Mohd, S. Y., Mohamad, H., Muhamad, M. S., & Nabilah, A. (2015). Science Teachers Continuous Professional Development: Nature of School-Based Teacher Training and Its Implementation. 2nd International Conference on Role of Multidisciplinary Innovation for Sustainability and Growth Policy (MISG-2015), 1(4), 94–106.

Molina, E., Fatima, S., Ho, A., Hurtado, C., Wilichowsk, T., & Pushparatnam, A. (2018). Measuring Teaching Practices at Scale: Results from the Development and Validation of the Teach Classroom Observation Tool. Policy Research Working Paper 8653, World Bank, Washington, DC.

Momanyi, J. M., & Rop, P. K. (2020). Teacher preparedness for the implementation of competency-based curriculum in Kenya: A survey of early grade primary school teachers in Bomet East Sub-County. *The Cradle of Knowledge: African Journal of Educational and Social Science Research*, 7(1), 10-15.

Monica, S., & Paulus, K. (2019). Benefits and Challenges of Teacher Professional Development Implementation: English Teachers' Perspectives. IJET. *International Journal of Indonesian Education and Teaching*. 3(2):253-265.

Morales, E. (2016). Participatory Action Research (PAR) cum Action Research (AR) in Teacher Professional Development: A Literature Review. *International Journal of Research in Education and Science (IJRES)*, 2 (1) ,156-165.

Muchanje, P., Njuguna, F., Kalai, J., & Bironga, S. (2016). An Exploration of factors Influencing Career Progression of Tutors in Public Primary Teachers' Training Colleges in Kenya. *Universal Journal of Educational Research*, 4(3):582-588. doi:10.13189/ujer.2016.040316.<http://www.hrpublish.org>.

Muhammad, D., Bashir, H., & Humera, B. (2019). Continuous Professional Development of Teachers: A Case of Public Universities in Pakistan. *Bulletin of Education and Research*, 41(3), 119-130.

Muijis, D. (2011). *Doing Quantitative Research in Education with SPSS* (2nd ed.) City of publication: Sage Publication.

Mukabeta, T.(2020).Action Research Training as a Professional Development Strategy in Primary Schools: A Case of Bikita District Zimbabwe. A Phd Thesis Submitted in accordance with the requirements for the degree of Doctor of Philosophy in Education in Curriculum Studies at the University of South Africa.

Mukhale, P. N. (2017). Towards Improvement of Student Learning Outcomes: An Assessment of the Professional Development Needs of Lecturers at Kenyan Universities. *Journal of Education and Practice*, 8 (12).

Mwangi, B. W., & Njuguna, R. (2019). Performance Appraisal Strategies on Performance of Teachers in Public Secondary Schools in Kiambu County, Kenya. *International Journal of Current Aspects*, 3(II), 218–230. Retrieved on 2nd February 2020 from <https://doi.org/10.35942/ijcab.v3iii.19>.

Mwila, K., Namuchana, M., Lufungulo, E. S., & Chinemerem, O. G. (2022). Teachers' continuous professional development (CPD) in Southern African Development Community (SADC): A review of policies, approaches, and implementation strategies in enhancing teacher competencies. *Continuing Professional Development (CPD)*, 5(1).

Nagy, K. (2020) The Factors determining the Learning and Continuous Professional Development of Tutors. Doctoral Thesis Submitted to the School of Education. Department of Education and Psychology.

Nalia, W., & Ruqia, M. (2022). Continuous Professional Development and its Impact on Teachers' Pedagogy. 5(2).

Nasreen, A., & Odhiambo, G. (2018). The Continuous Professional Development of School Principals: Current Practices in Pakistan. *Bulletin of Education and Research*, 40(1),245-266.

Nataliya, M., Halyna, Y., Yuriy, K., Volodymyr, O., & Oksana, I. (2019). Teachers' Continuous Professional Development: Australian Experience. *Advanced Education*, 1 (12), 2409-3351. The National Education Sector Strategic Plan (NESSP) 2018-2022

Ndebele, N., & Dagogo, W. (2022). The Impact of Mentoring in the Development of Pre-Service Teachers from a University in South Africa. *International Journal of Learning, Teaching and Educational Research*. 21(3), 88-105.

Neuman, L. (2018). *Social Research Methods: Qualitative and Quantitative Approaches*. Pearson New International Edition. 7th edition.

Neuman, L. (2021). *Social Research Methods: Qualitative and Quantitative Approaches*, 8th edition. Published by Pearson, University of Wisconsin, Whitewean.

Ngendahayo, E., & Askell-Williams, H. (2016). *Publishing Higher Degree Research. Research Gate*. New York: Rotterdam: Sense Publishers. Retrieved on 10th February 2022 From <https://doi.org/10.1007/978-94-6300-672-9>.

Ngubane, I., & Gumede, C. (2017). Peer Observation of Teaching for Professional Development in Higher Education: Experiences of Two Novice Lecturers Across Two Disciplines. *International Journal of Education & Research*, 5 (2).

Njenga, M. (2014). Continuing Professional Development of Vocational Teachers in Kenya: Challenges and Coping Strategies. *Journal of Adult and Continuing Education*, 30(5), [doi:10.11779714241232595.0\(0\),1-22](https://doi.org/10.11779714241232595.0(0),1-22).

Njenga, M. (2018). Continuing professional development for TVET teachers in Kenya. In *8th Trefort Agoston Conference on Vocational and Higher Education Pedagogy* (pp. 21-22).

Njenga, M. (2024). Content and Effectiveness of TVET Teacher Continuous Professional Development in Kenya. *Hungarian Educational Research Journal*, 14(3), 261-278. [doi:10.1556/063.2023.00257](https://doi.org/10.1556/063.2023.00257).

Njenga, M. M. (2019). Effective Continuing Professional Development for TVET Teachers in Kenya: A Research Agenda. A Conference Paper Presented during the 2019 Hucer Conference, May 23-24 Eszterhazy Karuly University, Eger, Hungary.

Njenga, M. (2023). Continuing Professional Development of Vocational teachers in Kenya: Motivations ,Practices and teacher profiles. *International Journal of Education and Research Open*, 5(2). <https://doi.org/1016/j.ijedro.2023.100282>.

Njuguna, S.M. (2018). Issues Affecting Curriculum Support Centers in Enhancing Teacher Professional Development in Nyeri County, Kenya. Unpublished Master's Thesis Kenyatta University.

Njui, H. (2018). Professional Development: Promoting Quality Education in Learning Institutions in Kenya through Enhanced Teacher Capacity. *European Journal of Education Studies*. 4(3). Retrieved on 1st August 2021 from www.oapub.org/Edu.

Noor, U. S., & Bhamani, S. (2019). Engagement of School Leadership in Teachers' Continuous Professional Development: A Case Study. *Journal of Education and Educational Development*, 6 (1), 95-110.

Ntshangase, S. (2017). Towards a Conceptual Framework for Understanding the Ecological Factors Associated with Talent Development among Football Players in South Africa. Unpublished Doctoral Thesis, University of South Africa.

Nyaaba, A., Abdul-Gafaar, A., & Kwaye, O. (2023). Assessing the Impact of Continuous Professional Development of Teachers and its Effects on Satisfaction and Engagement: Colleges of Education, Northern Ghana. *Journal of Education and Teaching Methods*, 2(2), PP 41-57. doi.org/10.58425/jetm.v2i2.178.

Nzivu, P.M., Piliyesi, E., & Ndanu, C. (2020). Teacher Professional Development Programmes on Pupil's Academic Performance in Wote Division, Makueni County, Kenya. *Journal of Popular Education, Education in Africa*, 4 (10), 35-62.

Obiero, C. (2020). Teachers' Experiences and Understanding of Continuous Professional Development (CPD in Uganda). PhD thesis, Department of Education, University of Sussex.

Obonyo, G. (2017). Factors Influencing Implementation of Child Friendly Model in Public Primary Schools in Nyando Sub -County, Kisumu County, Kenya. Masters Research Project in Curriculum Studies, University of Nairobi.

Obuya, E. (2024). Influence of Continued Teacher Professional Development by the County Government on the Implementation of Early Childhood Education Curriculum in HomaBay County, Kenya. *International Journal of Research And Innovation In Social Science*. 8(6),71-90. <https://dx.doi.org/10.47772/IJRISS.2024.806080>.

OECD (2009). Creating *Effective Teaching and Learning Environments*: First results from TALIS, Paris: Organization for Economic Co-operation and Development. Retrieved on 10th November 2017 from http://www.oecd.org/document/54/03343_en-2649-39263231-42980662-1-1-1.html.

Oguta, P., & Getange, K. (2019). Perception of Teachers on Continuous Professional Development Programmes. *Journal of Humanities and Social Science*. 24(4), 61-66.

Okoth, A., & Simiyu, I. (2017). Action Research: The Panacea for Challenges in ESL Teaching in Kenya. *Universal Journal of Educational Research*, 5(4):698-704. [doi:10.13189/ujer.2017.050420](https://doi.org/10.13189/ujer.2017.050420).

Okumu, J.B., & Opio, G., (2023) Continuous Professional Development and Teachers Improved Pedagogical Skills in Secondary Schools in Gulu City. *East African Journal of Education Studies*, 6(3), 430-440. Retrieved on 20th April 2023 from <https://doi.org/10.37284/eajes.6.3.1594>.

Opando, R., Afwade, J., & Kamau, L. (2023). Implementation of Competence -Based Assessment in Kenyan Primary Schools, Case of Kajiado County. *International Journal of Education and Research*, 11(1).

Ovenden-Hope, Sonia, B.T., Tim, C., & Bronwen, M. (2018). Early Career Teacher Retention Programme: Evaluating the Role of Research Informed Continuing Professional Development for a High Quality Sustainable 21st Century Teaching Profession. *Journal of Education for Teaching*. Taylor & Francis

Oviawe, J. I. (2016). Teachers' Effectiveness as Correlates of Students' Academic Achievement in Basic Technology in Nigeria. *International Journal of Academic Research in Progressive Education and Development*, 5(2), 111–119. Retrieved on 22nd February 2023 from <https://doi.org/10.6007/ijarped/v5-i2/2129>.

Paleman, B., Lazzari, A., Budginaitė, I., Siarova, H., Hauari, H., Peters, J., & Cameron, C. (2018). Continuous professional development and ECEC quality: Findings from a European systematic literature review. *European Journal of Education*, 53(1), 9-22.

Paolini, A. (2015). Enhancing Teaching Effectiveness and Student Learning Outcomes. *The Journal of Effective Teaching*, 15(1), 20–33.

Patricia, C. (2016). *New Directions for Adult & Continuing Education*. Retrieved on 10th January 2023 from <http://doi.10.1002/ace.20194>.

Patton, M. (2002). *Qualitative evaluation and research methods*. (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Phelta, D., & Newman, W. (2020). Effectiveness of teacher professional development programmes: Literature review. *Journal of Entrepreneurship Education*, 23(S2).

Pier, G. (2003). *Social Corbetta; Theory, Methods, and Techniques*. Thousand Oaks. New Delhi; Sage Publications Ltd.

Podolsky, A., Kini, T., & Darling-Hammond, L. (2019). Effective Schools, Equity and Teacher Effectiveness: A Review of the Literature. *Journal of Professional Capital and Community*, 4(4), 286–308. Retrieved on 20th December 2019 from <https://doi.org/10.1108/JPCC-12-2018-0032>.

Ponsiano, M., Fredrick, S., & Sarah, N., (2022). Role of In-Service Teacher Training as a Tool for the Students' Performance in Selected Public Secondary Schools in Kesoro District. *International Journal of Educational Policy Research and Review*, 9 (1);1-13.

Postholm, M. B. (2018). Teachers' Professional Development in School: A Review Study. *Cogent Education* 5(1):22.

Prithiviraj, P. (2018).Continuing Professional Development and Quality Teaching: A Case Study of State Secondary Schools in Mauritius. PhD Thesis in Doctor of Education, Peninsula University of Technology.

Purnamasari, A. (2023). Continuing Professional Development (CPD): How In-Service EFL Teachers See Mentoring as Relevant Technique. *Docens Series in Education*, 4, (01) -18. doi.org/10.20319/dv4.0118.

Raanhvis, J. (2023).Teachers' Views of Continuous Professional Development related to Social Cohesion in the Western Cape, South Africa. Doctorate Thesis in the Faculty of Education and Centre for International Teacher Education.

Rahman, F., Jumani, N., Akhter, Y., Chisthi, S., & Ajmail, M. (2020). Relationship between training of teachers and effectiveness in teaching. *International Journal of Business and Social Sciences*.

Rahman, S., Fambi, F., & Anny, Z. (2020). The Importance of enhancing Pedagogical skills through Continuing Professional Development. *Research in Business & Social Science*. 9(4).ISSN:2147-4478.

Ranjit, K. (2011). *Research Methodology a step-by-step guide for beginners*. Thousand Oaks, California. SAGE Publications Ltd.

Ravhuhalu, F., Kutame, A., & Mutshaeni, H. (2015). Teachers' Perceptions of the Impact of Continuing Professional Development on Promoting Quality Teaching and Learning. *International Journal of Educational Sciences*, 10(1), 1–7. Retrieved on 17th July 2022 from <https://doi.org/10.1080/09751122.2015.11890332>.

Razak, A., Yusop, D., Halili, H., & Chukumarana, L. (2015). Electronic Continuous Professional Development (E-CPD) for Teachers: Bridging the Gap between Knowledge and Application. *The Turkish Online Journal of Educational Technology. TOJET*, 14 (4).

Redman, E., Wiek, A., & Redman, A. (2018). Continuing professional development in sustainability education for K-12 teachers: Principles, program, applications, outlook. *Journal of Education for Sustainable Development*, 12(1), 59-80.

Republic of Kenya (2012). Sessional Paper No.14 of 2012 on Reforming Education and Training Sectors in Kenya.

Republic of Kenya (2019). *Basic Education Curriculum Framework*. Nairobi: Kenya Institute of Curriculum Development.

Republic of Kenya (2019). Sessional Paper no. 1 of 2019 on a Policy Framework for Reforming Education and Training for Sustainable Development in Kenya.

Richard, M., & Nancy, Z. (2025) Peer Mentoring for Professional growth & Sustainability: A Model for Support, Leadership & Learning. *NECTFL Review*, 94 p.15-34.

Richards, T. J., & Richards, L. (1994). Using Computers in Qualitative Research. In N. Denzin, & Y. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 445-462). London: Sage Publications.

Robinson, O.C. (2014). *Sampling in qualitative research*. In SAGE Research Methods Foundations.

Rosenshine, B. (2018). Principles of Instruction: Research-Based Strategies That All Teachers Should Know. *American Educator*, 1(1), 12–20.

Roy, R., & Halder, K. (2018). Teacher Effectiveness: A Self-Report Study on Secondary School Teachers. *International Journal of Research and Analytical Reviews*, 5(3), 914–919.

Ru, Y., & Anne B. (2016). Teachers' Identity development through action research: A Chinese Experience, Teachers and Teaching, [doi:10.1080/13540602:2016.1219713](https://doi.org/10.1080/13540602:2016.1219713).

Rudolf, A., Abdul-Gafaar, S., Christopher A., Kwaye, D. (2023). Assessing the Impact of Teacher and Its Effects on Satisfaction, Achievement and Engagement: Colleges of Education, North Ghana. *Journal of Education and Teaching Methods* 2(2), pp 41-57. doi.org/10.58425/jetm.v2i2.178.

Sajedur, R., Fatimah, Y., & Nusrat, A. (2020). The Importance of Enhancing Pedagogical Skills through Continuing Professional Development. *International Journal of Research in Business and Social Science*, 9(4) 121-129.

Saleem, A., Masrur, R., & Afzal, M.T. (2014). Effect of Professional Development on enhancing the Knowledge Level of University teachers in Pakistan: *Journal of Research & Reflections in Education (JRRE)*, 8(2), 162-168.

Saljooghi, B., & Salehi, K. (2016). Developing a Teacher Evaluation Model: The Impact of Teachers' Attitude toward the Performance Evaluation Systems (PES) on Job Satisfaction and Organizational Commitment with the Mediating Role of Teachers 'Sense of Self-efficacy. *International Journal of Medical Research & Health Sciences.*, 5 (1), 200-209.

Sammons, P., & Bakkum, L. (2019). Effective Schools, Equity and Teacher Effectiveness: a review of the literature. *Profesorado*, 15(3), 1-18.

Santos, D. (2017). How do Teachers Make Sense of Peer Observation Professional Development in Urban School? *International Educational Studies*. 10(1). Published by Canadian Centre an Education.

Sarah, T. (2020). *Qualitative Research Methods, Collecting Evidence, Crafting Analysis, Communicating Impact* (2nd Ed.). Wiley Blackwell and Sons, Inc.

Schneider, B. (Ed.). (2018). *Handbook of the Sociology of Education in the 21st Century*. Springer.

Schunk, D. (2008). *Learning theories: an educational perspective* (5th Ed.). Prentice Hall.

Seidel, T., & Shavelson, R. J. (2017). Teaching Effectiveness Research in the Past Decade: The Role of Theory and Research Design in Disentangling Meta-Analysis Results. *Review of Educational Research*, 77(4), 454-499. Retrieved on 5th March 2020 from <https://doi.org/10.3102/0034654307310317>.

Sengottuvvel, A., & Aktharsha, U. S. (2015). Teacher Effectiveness and Professional Competency in School Education. *International Journal of Management*, 6(1), 181-190.

Setiawan, W.A., & Kuswandono, P. (2020). Review of Teachers' Professional Development Research Studies in South Asia. *International Journal of Pedagogy & Teacher Education (IJPTE)*, 4(1), 19-32. <https://dx.doi.org/10.2096/ijpte.v4i1.33686>.

Setty, R., Iyengar, R., Witensein, M., Byker, E.J., & Kidwa, H. (2019). Teaching and Teacher Education. Designing for Technology Enabled Reflective Practice Teacher's Voices on Participating in a Connected Learning Practice. South Asian Perspective. Retrieved on 16th November, 2023 from <https://www.palgrave.com/us/book/9783030268787>.

Siebrich, D. V., Wim, J. M., Van, D. G., & Ellen, P. J. (2014). How teachers' beliefs about learning and teaching relate to their Continuing Professional Development; *Teachers and Teaching: Theory and Practice*. 20 (3),338-357. Retrieved on 2nd December 2023 from <http://dx.doi.org/10.1080/13540602.2013.848521>.

Silverman, D. (2010). *Doing qualitative research: A practical handbook*. London: Sage Publications.

Simiyu, I., Bwire, A., & Ondigi, S. (2021). Teacher-Led Professional Development among Teachers of English in Bungoma South Sub-County. *International Journal of Education and Research*,9(7).

Sin. L., & Tank, M. (2021). Curriculum Development as a Tool for Professional Development: Teacher Learning through Collaboration and Communication. *GILE Journal of Skills Development*. 1(2), 2732-3781.

Smith, B., & McGannon, K. (2017). *Developing Rigor in Qualitative Research: Problems and Opportunities within Sport & Exercise Psychology*. Retrieved on 10th December 2018 from <http://doi:10.1080/1750984X.2017.1317357>.

Soodmand, H., & Doosti, M. (2016). Language Teaching Research Investigating the impact of job satisfaction/dissatisfaction on Iranian English teachers' job performance. *Iranian Journal of Language Teaching Research*, 4(1), 97–115.

Srinivachariu, A. (2019). Continuing Professional Development (CPD) of Teacher Educators in 21st Century. *Shanlax International Journal of Education*,7(4). pp.29-33.doi.org/10.34293/education.v7i4.624.

Stevenson, K., Hedberg, J.G., O'Sullivan, K.A., & Howe, C. (2016). *Leading Learning: The role of school leaders in Supporting Continuous Professional Development in Education*. (City of publication): Routledge Taylor & Francis Group.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded Theory procedures and techniques*. Newbury Park, CA: Sage Publications, Inc.

Subitha, G.V. (2018). Re-conceptualizing Teachers' Continuous Professional Development within a New Paradigm of Change in the Indian Context: An Analysis of Literature and Policy Documents. *Professional Development in Education*. 44(1)- 176-91.

Sumaryanta, M., Sugiman, D., & Herawan, T. (2018). Assessing Teacher Competence and Its Follow-up to Support Professional Development Sustainability. *Journal of Teacher Education for Sustainability*, 20(1), 106–123. Retrieved on 20th February from <https://doi.org/10.2478/jtes-2018-0007>.

Swargiary, J., & Baglari, N. (2018). A Study on Teacher Effectiveness at Primary Level. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, 23 (1), 23 (1),28-35. <https://doi.org/10.9790/0837-2301042835>.

Sylvia, Y. F. T., & Pink, L.C. (2009). Teachers' Professional Lives and Continuing Professional Development in Changing Times. *Educational Review*, 61(1), 1-18. Retrieved on 15th May 2021 from <http://doi:10.1080/00131910802684748>.

Talis (2018). The Impact of Teachers' Professional Development on the Teachers' Instructional Practices: An Analysis of Talis 2013, Teacher Questionnaire, Lower Secondary School Teachers in Finland. *World Voices Nexus. The WCCESS Chronicle*, 2(3). ISSN:2522-7483.

Tan, S. (2009). Professional Development of Teachers for Computer-Supported Collaborative Learning: A Knowledge-Building Approach. *Teacher's College Record: The Voice of Scholarship in Education*.

Tang, A., Wenye L., & Dawei, L., (2019). The Impact of Teachers Professional Development in Science Pedagogy on Students' Achievement: Evidence from Timiss.

Tanya, G., & Mishaleen, A. (2015). Professional Development Urban Schools: What Do Teachers Say? *Journal of Inquiry & Action in Education*, 6 (2),2015.

Tarhan, H., Cendel K., Kemppinen, L., & Aerila, J., (2019). Understanding teacher evaluation in Finland: A professional development framework. *Australian Journal of Teacher Education*, 44(4), 33–50. Retrieved on 10th March 2021 from <https://doi.org/10.14221/ajte.2018v44n4.3>

Teslo, S., Jenssen, E., Thurston, M., Mandedid, M., Resaland, G., Chalkey, A., & Tjomsland, K. (2023). Its the Journey, not the arrival that matters –Teachers' Perception of their Practice after Participating in a Continuing Professional Development in Physically Active Learning. *Journal of Teaching and Teacher Education*.136(2023)104377. [doi.org.1016/j.tate.2023.104377](https://doi.org/10.1016/j.tate.2023.104377).

Toropova, A., Myrberg, E., Johansson, S., & Myrberg, E. (2019). Teacher Job Satisfaction: The Importance of School Working Conditions and Teacher Characteristics. *Educational Review*, 1(1), 1–27. Retrieved on 1st March 2015 from <https://doi.org/10.1080/00131911.2019.1705247>.

Tororei , P.K., (2015). Factors affecting CPD of Teachers in Technical & Vocational Institutions in Kenya. A Case of North Rift Region of Kenya. A Master's Thesis, University of Eldoret, Kenya.

Trust, T. (2016). Using Cultural Historical Activity Theory to examine how teachers seek and share knowledge in a peer-to-peer professional development network. *Australian Journal of Educational Technology*. 33(1). AJET Publishers.

Tudge, J. R., Mokrova, I., Hatfield, B. E., & Karnik, R. B. (2009). Uses and Misuses of Bronfenbrenners Bioecological Theory of Human Development. *Journal of Family Theory & Review*, 1(12), 198–210.

Tuli, F. (2017). Teachers Professional Development in Schools: Reflection on a move to create a culture of Continuous Improvement. *Journal of Teacher Education and Educators* .6(3), 275-296.

Tulu, A. (2019). The Practice and Challenges of School-based Teacher Continuous Professional Development: A Case of Government Secondary Schools of Hawassa City in Ethiopia. *Educational Research and Reviews (Academic Journals)*.14(1), 33-43.

Tumar, B., Asimiran, S., Pilie, L., & Ismail, A. (2015). Sustaining Continuous Professional Development for Quality Teaching and Learning in Higher Education. The Role of Policy and Policy Implementers. *TOJET: The Turkish Online Journal of Educational Technology* August 2015 Special Issue for INTE 2015.

Twigirayezu, F., & Andala, H. (2024). Effect of Continuous Professional Development (CPD) programme Implementation on Students' Academic Performance in Mathematics in Public Secondary Schools in Rwanda, A Case of Ngoma District. *International Journal of Innovative, Science and Research Technology*, 9(11).

Ucan, S. (2016). The Role of Continuous Professional Development of teachers educational change: A Literature review. *Harran Educational Journal*, 1(1), 36-43 <https://10.22596/2016.0101.36.43..>

Van, B., Ros, L., & Beijaard, D. (2015). Teacher Learning in the Context of a Continuing Professional Development Programme: A Case Study. *Teaching and Teacher Education*

Vélez-agosto, N. M., & Soto-crespo, J. G. (2017). Bronfenbrenner's Bioecological Theory Revision: Moving Culture from the Macro into the Micro. *Association for Psychological Science*, 1(November), 1–35. <https://doi.org/10.1177/1745691617704397>.

Ventista, M., & Brown, K. (2023). Teachers' Professional Learning and Its Impact on Students' Learning Outcomes: Findings from a Systematic Review. *Journal of Social Sciences and Humanities*. doi.1016/j.ssaho.2023.100565.

Vorotnykova, I., & Kovalchuk, V. (2017). E-Coaching, E-Mentoring for Lifelong Professional Development of Teachers within the System of Post-Graduate Pedagogical Education. *Turkish Online Journal of Distance Education*-TOJDE,18(3).

Vygostky, L.S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.

Wabule, A. (2016). Continuous Professional Development: What Role and Who Benefits? Reflections on Teacher Development in Uganda. *Africa Education Review*,13(4),141-144. <http://doi:10.1080/18146627>.

Wafula, P. (2023). Challenges Facing Implementation of Effective Teacher Professional Development Programmes in Kenya. Teachers Service Commission.

Waihenya, K. (2021). Now TSC pushes for mandatory retraining of secondary teachers. *The Standard*. Retrieved on 11th May 2022 from <https://www.standardmedia.co.ke/education/article/2001419871/now-tsc-pushes-for-mandatory-retraining-of-secondary-teachers>.

Wamalwa. P. (2023).Challenges Facing Implementation of Effective Teacher Professional Development Programme in Kenya. Teachers' Service Commission.

Wambugu, P., Stutchbury, K., & Dickie. W. (2019). Challenges and Opportunities in the Implementation of School Based Teacher Professional Development: A Case from Kenya. *Journal of Learning for Development-JL*, 4D,6(1), PP.76-82. The Open University's Repository of Research Publications and other research outputs.

Wanjala, E. (2017). Level of Teachers' Efficiency in Work Performance in Public Secondary Schools in Wajir North District, Kenya. *International Journal of Scientific Research and Innovative Technology*, 4(4),23-36.

Wanjala, G., Osendo, L. P., & Okoth, U. (2019). Influence of Teacher Performance Appraisal on Job Performance in Public Primary Schools in Mumias East Sub-County, Kenya Influence of Teacher Performance Appraisal on Job Performance in Public Primary Schools in Mumias East. *International Journal of Scientific and Research and Innovative Technology*, 6(5), 45–59.

Wasike, M. (2018). Professional Development of Teachers in relation to the Administration of Head Teachers In Relation to the Administration of Head Teachers in Public Primary Schools in Transnzoia County, Kenya. Masters of Education Research, Department of Educational Management, Policy and Curriculum Studies, School of Education, Kenyatta University.

Watene, D., Choge, R.J., & Kodak, B. (2020). Influence of Teacher's Professional Development on Performance in Kenya Certificate of Secondary Education in Public Secondary Schools in Nyandarua County, Kenya. *International Journal of Humanities*. Vol 8, Issue 5. Retrieved on 11th November from [Doi:10.29940/theihss/2020/v8/i5/#s2005/101](https://doi.org/10.29940/theihss/2020/v8/i5/#s2005/101).

Waweru, J. (2018). Influence of teacher Preparedness on Implementation of Competency Based Curriculum in Public Schools in Nyandarua North Sub-County, Kenya. Master's thesis, University of Nairobi.

Wei, R.C., Darling-Hammond, L., & Adamson, W. (2010). *Professional development in the United States: Trends and Challenges, Phase II of a Three –Phase Study*. Technical Report. National Staff Development Council. The Stanford Centre for Opportunity Policy in Education.

Weisner, T. (2008). The Urie Bronfenbrenner Top 19: Looking Back at His Bioecological Perspective, *Mind, Culture, and Activity*, 15:3, 258-262. [doi.10.1080/10749030802186785](https://doi.org/10.1080/10749030802186785).

Wenger, E. (2004). Knowledge management as a doughnut: Shaping your Knowledge strategy through communities of practice. *Ivey Business Journal*,1-8.

Wenham, K. (2018). How Cultural Constructions of Gender Interact with Social Structures to Shape Intimate Partner Violence in the African Immigrant Community in Chicago, Chicago: PhD thesis at Griffith University, Queensland Australia.

Wever, B., Vanderlinde, R., Tuytens, M., & Aelterman, A. (2016). Professional Learning in Education: Challenges for teacher's educators, teachers and student teachers. Academia Press, 22(9).

Widayati, A., & Woods-MConney. A. (2021). Teacher's Perceptions of Continuing Professional Development: A Study of Vocational High School Teacher's in Indonesia, *Teacher Development*, 25 (5), 604-621: Routledge Taylor & Francis Group.

William, K. C., James, S. & Sammy, C. (2018). Influence of Continuous Professional Development Programme on Curriculum Implementation in Selected North Rift Counties Public Secondary Schools, Kenya. *International Journal of Education and Research*. Vol.6 (2).

Williams, T., Kamarulzaman, S., & Cuthrell, M. (2022). Reviewing Kennedy's Models of Continuous Professional Development and the Relevance in TEL. *Asian Journal of Advanced Research and Reports*. 17(1):19-25.

Xaso, A.M., Galloway, G., & Adu, E.O. (2017). Continuing Professional teacher Development (CPTD); *A National and international perspective*. 28(1-2):9-18. <http://doi:10.1080/09720073.1311667>.

Yangambi, M. (2021). Teacher Professional Development and Student Achievement in a Developing Country. *Creative Education*, 12, 2283-2300. doi.org/10.4236/ce.2021.1210173.

Yayuk, P., Yotok, S., & Kustiono, S. (2019). The Effect of the Education and Training Program on Modes on Pedagogical &Professional Competence of Teachers in Kendal. *Innovative Journal of Curriculum and Educational Technology*, 8(2): 90-97. <https://journal.unnes.ac.id/sju/index.php/ujet/article/view/33091>

Yin, K. (2018). *Case Study Research and Applications Design and Methods*. 6th edition. Cosmas Corporation Sage Publications, Inc.

Yin, R. (2011). *Qualitative Research for Start to Finish*. New York, London: The Guildford Press.

Yokozeki, Y., & Engida, T. (2017). Teacher Development for SDG 4 and AUC CESA 2016-25: The role of Private Higher Education in Continuous Professional Development for Teachers in Africa. 15th International Conference on Private Higher Education in Africa.

Yuan, R., & Burns, A. (2016). *Teachers' Identity development through action research: A Chinese Experience*, *Teachers and Teaching*, [doi:10.1080/13540602:2016.1219713](https://doi.org/10.1080/13540602:2016.1219713).

Zarrow, J. (2018). *Five Strategies for Better Teaching Professional Development*. Retrieved on January 2022 from. <http://www.teachthought.com>Teaching>.

APPENDICES

Appendix 1: Introduction Letter

School of Education
 Department of Education Foundations
 P.O Box 3400
 ELDORET

Dear Fellow Educator,

RE: PARTICIPATION IN RESEARCH

I am a post graduate student in the Department of Educational Foundations, School of Education, Moi University. I am carrying out research study on how *tutors in public Primary Teachers Training Colleges in Nyeri and Murang'a Counties socially construct knowledge through Continuous Professional Development trainings*. The exercise will involve conducting in-depth interviews and focus group discussions among the participants. You are among those who have been selected to participate in the study. I kindly request you to respond to all the questions. All the information you will provide is used only for the purpose of this study and is treated as confidential. Your participation in this study is strictly voluntary and your responses will remain anonymous. Furthermore, the information will not be used for any other purpose other than research. Thank you in advance for your time and consideration. Your participation and cooperation is highly appreciated.

Sincerely

Gladys Nyambura Njogu

PhD Student

Department of Education Foundations

Moi University

Eldoret

Appendix 2: Consent Letter/Form**CONSENT/ASSENT TO PARTICIPATE IN THIS STUDY**

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation. I have read (or had explained to me) and understood the study as explained in the information sheet. I have had sufficient opportunities to ask questions and am prepared to participate in the study. I understand that my participation is voluntary and that I can withdraw without penalty (if applicable).

I am aware that the findings of this study is processed into a research report, journal publications and/or conference proceedings but that my participation is kept confidential unless otherwise specified. I have received a signed copy of the informed consent agreement.

Participant Name & Surname _____

Participant Signature _____

Date _____

Researcher's Name & Surname _____

Researcher's Signature _____

Date _____

Appendix 3: In-Depth Interview Guide for College Principals

Part A: Participant Bio Data

Q1) The person sharing in this discussion is a Male () Female ()

Q2) Kindly tell me about your age bracket (35-40) (40-45) (45-50) (50 -55) (55-60)

Q3) Your highest level of education: (Bachelors)(Masters)(PhD)

Q4) Experience in teaching at college level (in years) _____

Q5) What are your teaching subjects?

Part B: Tutors' Social Construction of Knowledge through CPD

Q1) How would you describe/define CPD for tutors? What do you think of as CPD?

Your views and expectations of CPD? (Probe as required)

Q2) Can I take you right back to the beginning to your early professional development. What support/professional development did you have when you started to teach? Does anything about it strike you as important or particularly valuable? Probe as required: Did you have a mentor? How did that relationship work? How did your early experience of CPD influence your current views about CPD?

Q3) What forms of CPD activities do tutors in this college engage in? (Probe for in-service training, workshops /trainings, conferences, higher academic study, observation visits to other colleges, study networks among tutors (for instance via WhatsApp), mentorship/coaching, independent reading of professional literature for instance journals/books or even reports, engaging in informal dialogue with colleagues on how to improve teaching lesson observation, team teaching, self-directed CPD activities, online study (KEMI, TPD), scheduled in-service activities by

college administrator. Among these activities, which are the most common accessed by tutors and why?

Q4) In your own opinion, what would you consider to be critical CPD activities for any tutor? (Probe for reasons of the choice given)

Q5) How do you perceive Continuing Professional Development in terms of the way it affects the way you practice (teaching and learning process) (Probe for the benefits /impacts of engaging in CPD programmes) Probe for improvement in pedagogical skills, reinforcement in tutor's expertise, improvement in students' outcomes, integration in ICT, building quality learning environments, syllabus coverage amongst other benefits e.g. understanding learners' diversity.

Q6. How does CPD affected tutors' career progression if at all? Any CPD experiences which did contribute to their career development? (Probe on how)

Q7) To what extent would you say that CPD is an individual or institutional responsibility/or employer? (Probe on the why?)-How does your institution support the CPD of tutors? Are there incentives? (Probe)

Q8) How is professional development managed within the college? Do you think an appropriate balance is struck between onsite/offsite provision? What changes would you like to made? (Probe as required) Who decides on the focus of the in-college trainings? Who decides which outside courses tutors attend? What are your views/perceptions on the above as far as tutor social construction of knowledge? (Probe as required)

Q9) Right I want to move you to talk about your tutors needs in the context of college development needs I) Do you ever feel there is a tension between what you would like

/need to do and what your / the government (employer)needs you to do? Probe as required: Pursue each of above list separately -can you give examples?

ii)What would you say has largely driven your professional development activities – you/ the college/ the government/ performance management targets etc.? Probe as required: Pursue above list -has the balance changed over the years? importance placed on CPD/support given: college/Government?

iii)Who identifies opportunities/activities for the tutors you to participate in? How do you identify needs? Views on this (Probe as required)

iv) Have you ever sought out any professional development to help your tutors' career progression? Have you been involved in CPD which you have initiated (alone or in collaboration with others)? (Probe on the reactions from tutors about the same)

Q10) Just quickly because I know you may have answered this question on the interview schedule. What professional challenges are you facing in the immediate CPD trainings? What kind of professional development and support do you need/would you like? What would you like CPD to offer? (Probe as required)

Q11) Finally. as we have said, it is our belief that policy-makers are really listening. Are there any other perceptions about CPD which you think we need to take account of? What is, from your point of view, the central message(s) which you would want us to pass to government/employer about your perceptions of CPD and what you would like to see in the future.

Part C) Process of CPD Training and Tutors' Social Construction of Knowledge

Q1) In your own opinion, how do the process taken in conducting CPD trainings impacts tutors' construction of knowledge:

a) Please provide details of how these practices are conducted.

- i) Collaboration/Communities of Practice/Study groups
- ii) Reflective Practice/Learning
- iii) Action Research
- iv) Team teaching
- v) Peer Observation
- v) Mentorship
- ix) Blended Learning
- xi) Active learning

b) Does these CPD trainings support active participation/learning, collaboration/study groups amongst participants, are there mentoring sessions offered to tutors, are there opportunities for peer coaching, does the training process allow for action research?

c) Again, in your own opinion which among the many mentioned process has proven effective in enhancing tutor's social construction of knowledge? (Probe for the choice given)

d) Could there be other processes through which CPD sessions are conducted? Probe on whether they have been effective in furthering tutor's construction of knowledge)

Q2) In CPD trainings, to what extent do the trainers check whether participants are familiar with material presented as at the beginning of the trainings? (Probe for

extent such as fair, good, excellent) Do you like the extent or not? How do they do it?

Q3) Do they (trainers) support participants to explore ways of implementing new ideas into them lesson? (Follow up sessions during the training) (Probe as required)

Q4) In what ways are the tutors encouraged to share best practices, ideas and experiences during CPD trainings? Are tutors given an opportunity to share and critically interrogate their practices in an ongoing, reflective, collaborative, inclusive, learning –oriented, and growth promoting way to mutually enhance teacher learning? (Probe)

Q5) Do trainers give feedback and evaluation mechanism as a way of determining how effective CPD trainings are on the tutors? (Probe)

Q6) Do CPD trainers use models of effective practice (Probe for models like lesson plans, practical's/laboratory sessions, observations as they conduct CPD programmes? (Probe as required)

Part D) The Nature and Level of Involvement in CPD programmes and Tutors' Social Construction of Knowledge

Q1) In your own opinion, how does the nature and level of tutor involvement relate to social construction of knowledge? (Probe as required)

Q2) From your own experience, are participants(tutors) involved in determining the topics and content of the CPD trainings? (Probe as required)

Q3) Do these CPD trainings take into account individual tutors existing knowledge, experiences and needs of tutors before designing the training materials? (Probe)

Q4) Are the tutors given an opportunity to provide feedback on the professional development activities? (Probe for how)

Q5) In your own opinion, are the Continuous Professional Development sessions planned with the tutors and Education system (Education reform) goals in mind?
 (Probe for each separately)

Part E) Frequency and Duration of CPD trainings and Tutors' Social Construction of Knowledge

Q1) In your opinion, is the time factor of necessity on tutors' social construction of knowledge? (Probe for why)

Q2) Do you encourage CPD participation opportunities that extend over a long /short duration of time? (Probe)

Q3) How often are tutors taken through the Continuous Development Programmes?
 (Probe for the frequency)

Q4) For how long are tutors taken through the Continuous Professional Development Programmes?

Q5) Do you think that the time that is accorded for CPD trainings is adequate for the tutors' to socially construct knowledge? (Probe)

Closing thoughts/remarks

Q1) What are some of the issues that tutors may have presented to you regarding Continuous Professional Development trainings? (Probe as required).

Q2) As a principal, in your endeavor to support tutors on CPD trainings are there challenges and impediments you encounter? (Probe) How does the administration work on overcoming these challenges?

Q3) As a head of institution, what do you see as the future of Continuous Professional Development trainings at Primary Teachers Training colleges in Kenya?

Q4) What advice would you give to other educational leaders about meeting the CPD needs of tutors over the years? What system (s) would you suggest need to be established? What CPD policies do you envision that are needed for the tutors to assist in harmonizing their CPD practices?

Q5) Is there something about social construction of Continuous Professional Development that you feel this research needs to capture or address for future action or intervention? What message or even lessons would you like to share with readers?

Q6) Comment on your way forward on some of the ways to improve how tutors socially construct knowledge.

THANK YOU FOR YOUR TIME

Appendix 4: Interview Guide for Tutors

Part A: Participant Bio Data

Q1) The person sharing in this discussion is a Male () Female ()

Q2) Kindly tell me about your age bracket (25-30) (30-35) (35-40) (40-45) (45-50) (50-55) (55-60)

Q3) Your highest level of education (Bachelors)(Masters)(PhD)

Q4) Experience in teaching at college level (in years) _____

Q5) What are your teaching subjects?

Q6) What roles and responsibilities have you held before and do you hold at college.

Part B: Tutors' Social Construction of Knowledge through CPD

Q1) How would you describe/define CPD of tutors? What are teachers' perceptions of CPD activities and their professional development needs? Others' views of and expectations of CPD? (Probe as required for novice versus experienced teachers)

Q2) What forms of CPD activities do tutors in your college engage in? (Probe for in-service training/insets, workshops/training's, conferences, higher academic study, observation visits to other colleges, online professional development such as TPD, lesson study (micro-teaching (for teacher trainees), team teaching ,peer learning/observation, study networks among tutors (for instance via WhatsApp), Mentor ship and Coaching, independent reading/learning of professional literature for instance journals/books or even reports, engaging in informal dialogue with colleagues on how to improve teaching and learning, team teaching, self-directed CPD activities (Probe for any other CPD activity engaged in).

Q3) In your own opinion, among the mentioned processes, what would you consider to be critical/key CPD activities for any tutors learning? (Probe for reasons)

Q4) Can I take you right back to the beginning of your early professional development. What support in form of professional development did you have when you started to teach? Does anything about it strike you as important or particularly valuable? Probe as required: Did you have a mentor? How did that relationship work? How did your early experience of CPD influence your current views/perception about it?

Q5) How do you perceive Continuing Professional Development in the way it affects how you practice (teaching and learning process) (Probe for the benefits /impacts of engaging in CPD programmes)

Q6) As a tutor what are some of the internal and external environment /ecological factors that influence your social construction of knowledge through CPD? Probe for factors such as whether the culture of your institution/department as it relates to fostering teacher CPD? Are tutors supported by the administration on CPD programs; Are tutors supported by the external agencies like statutory bodies of the Ministry of Education, KICD and TSC; How has leadership supported tutors to engage in active CPD programs, by offering opportunities for practical application, facilitating tasks and interactions and tailoring provision? What form of resources are accorded to support tutors in engaging in CPD programmes (in terms of funding, time for attending training, planning and reflection)?

Q7) To what extent would you say that CPD undertaking is an individual or institutional/employer responsibility? (Probe on the why?) How does your institution support the CPD of tutors? Are there incentives/facilitation? (Probe as required)

Q8) How has CPD training affected your career progression if at all? Can you point to any CPD experiences which did contribute to your career development? (Probe as required)

Q9) How is professional development managed within the college? Do you think an appropriate balance struck between onsite/offsite provision? Having identified gaps on the above, what changes would you like to made? (Probe as required) Who decides on the focus of the onset CPD models? Who decides which outside/offsite courses you attend? How do you get to hear of them? What are your views/perceptions on the above?

Q10) Just quickly because I know you may have answered this question earlier in our interview. What professional challenges/barriers are you facing in the immediate CPD programme? What kind of professional development and support do you need/would you like? What would you like CPD to offer? (Probe as required)

Q11) Finally, as we have said, it is our belief that policy-makers are really listening. Are there any other perceptions about CPD which you think we need to take account of? What is, from your point of view, the central message(s) which you would want us to pass to the employer (TSC) about your perceptions of CPD and what you would like to see in the future as a way of improving on how these CPD programme are being conducted.

Part C) Process of CPD Training and Tutors' Social Construction of Knowledge

Q1). In your own opinion, how do the process taken in conducting CPD trainings impacts tutors' construction of knowledge: (Probe for Collaboration (Community of practice), Reflective practice, Mentorship, Action Research(Practical), Peer learning, team teaching)

a) Please provide details of how these practices are conducted.

- i) Collaboration /Communities of practice/Study networks
- ii) Personal reflective learning
- iii) Action Research
- iv) Team teaching
- vi) Peer observation/learning/lesson observation
- v) Mentorship/Coaching/Induction
- ix) Blended Learning
- xi) Active learning/Participation/Participatory

b) Does these CPD trainings support active participation/learning, collaboration/study groups amongst participants, are there mentoring sessions offered to tutors, are there opportunities for peer coaching, does the training process allow for action research?

c) Again, in your own opinion which among the many mentioned process has proven effective in enhancing tutor's social construction of knowledge?
 (Probe as required)

Q2) In CPD trainings, to what extent do the trainers check whether participants are familiar with the training material presented? (Probe for extent such as fair, good, excellent) Do you like the extent or not? How do they do it?

Q3) Do they (trainers) support participants to explore ways of implementing new ideas into the lesson? (Follow up sessions/monitoring) (Probe as required)

Q4) In what ways are the tutors encouraged to share their best practices, ideas and experiences amongst themselves during CPD trainings? Are tutors given an opportunity to share and critically interrogate their practices in an ongoing, reflective, collaborative, inclusive, learning –oriented, and growth promoting way to mutually enhance teacher learning? (Probe)

Q5) Are the tutors given opportunities to practice newly acquired skills within the activity? (Probe as required)

Q6) After the CPD training, were you able to discuss the newly acquired concepts and skills with colleagues at the dept./college? (Probe as required)

Q7) Do trainers/organizers give feedback and evaluation mechanism as a way of determining how effective CPD trainings are on the tutors? (Probe)

Q8) Do trainers use models of effective practice (Probe for models like lesson plans, schemes of work, practical's/laboratory sessions, modular approach, observations as they conduct CPD programmes? (Probe)

Part D) The Nature and Level of Involvement in CPD programme and Tutors' Social Construction of Knowledge (Planning, design, implementation, review)

Q1) In your own opinion, is there a need to involve tutors in the CPD programmes? (Probe as required)

Q2) In your own experiences, do participants in CPD activities involved in determining the topics and content of the training? (Probe as required)

Q3) Do these CPD training take into account individual tutors' existing knowledge, experiences and needs tutors before designing the training materials? /gaps in the field (Probe as required)

Q4) In CPD trainings, how often do the trainers check whether participants are familiar with the material that has been presented? (Probe as required)

Q5) Are the tutors given an opportunity to provide feedback on the professional development activities?

Q6) Are the Continuous Professional Development sessions planned with the tutors and system (Education reform) goals in mind?

Part E) Frequency and Duration of CPD training's and Tutors' Social Construction of Knowledge

Q1) In your opinion, is the time factor of necessity on tutors' social construction of knowledge? (Probe for how)

Q2) Do you encourage CPD participation opportunities that extend over a long or short duration of time? (Probe as required)

Q3) How often are tutors taken through the Continuous Development Programmes? (Probe for frequency)

Q4) For how long are tutors taken through the Continuous Professional Development Programmes? (Probe for the different programmes and the approximate time accorded for training)

Q5) Do you think that the time that is accorded for CPD training is adequate for the tutors' to socially construct knowledge? (Probe for why)

Part F) Closing thoughts/remarks

Q1) What do you perceive as your main CPD needs? (Probe as required)

Q2) What forms of CPD activities is most suitable to provide for your CPD needs? (Probe as required)

Q3) What advice would you give to education leaders about meeting the CPD needs of tutors over their career? (Probe)

Q4) What system(s) would you suggest need to be established to improve CPD training in the future? (Probe)

Q5) Are there any challenges/constraints that tutors in this college encounter as they undertake CPD training? (Probe as required)

Q6) Is there something about social construction of knowledge through CPD by tutors that you feel this research needs to capture or even address for some later action or intervention? What message would you like to share with other readers, may be some kind of lessons learnt?

THANK YOU FOR YOUR TIME

Appendix 5: Interview Schedule for the Key Stakeholders (Curriculum Support Officers, Director Quality Assurance Officer & County Director of Education)

Part A) Participant Bio data

Q1) The person sharing in this discussion is a Male () Female ()

Q2) Kindly tell me about your age bracket (35-40) (40-45) (45-50) (50-55) (55-60)

Q3) Your highest level of education: (Bachelors) (Masters) (PhD)

Q4) How many years have you been a County Director of Education/Curriculum support officer/DQASO- Quality Assurance officer?

Part B) Tutors' Social construction of Knowledge through CPD

Q1) How would you describe/define CPD? What do you think of as CPD? Others' views of and expectations of CPD? (Probe as required)

Q2) What forms of CPD activities do tutors engage in? (Probe for in-service training(INSET), workshops /training, conferences, higher academic study, observation visits to other colleges, study networks among tutors (for instance via WhatsApp), mentoring/coaching, independent reading/research of professional literature for instance journals/books or even reports, online TPD for TSC (Internal) and External(engaged by TSC to help teachers, KEMI), engaging in informal/reflective dialogue with colleagues on how to improve teaching and learning , team teaching, self-directed CPD activities., projects done to brainstorm on the notes done.

Q3) As a SCDE/CDE/CSO, what would you consider to be critical /effective CPD activities for any tutor learning? Why?

Q4) What are your major concerns about tutor's CPD? (Probe as required)

Q5) As a CDE/County Quality Assurance Officer /CSO do you acknowledge CPD trainings for the tutors? (Probe for benefits if any)

Q6) In your own opinion, to what extent have these CPD programme /activities been developed in your area? (Probe as required)

Q7) To what extent would you say that CPD undertaking is an individual and or institutional/employer responsibility (Probe for reasons)

Q8) How does the Ministry of Education /TSC/KICD support the CPD of tutors'? Are there incentives? (Probe)

Q9) As we close this part, how do tutors take CPD training? their perception?

Part C) CPD Training Processes and Tutors' Social Construction of Knowledge

Q1) How are the CPD programme offered/conducted to tutors? (Probe as required)

Q2) In your own opinion how do the process taken in conducting CPD training impacts tutors' construction of knowledge; (Probe for Collaboration, Reflective, Mentoring, Action Research, Peer coaching, team teaching)

- Please provide details below of how these processes used in conducting CPD programme.
- Does these CPD training support active participation/learning, collaboration/study groups among participants, are there mentoring sessions offered to tutors, are there opportunities for peer coaching, reflective, action research, does the training does the training process allow for action research?

- Again, in your own opinion which among the many mentioned process has proven effective in enhancing tutor's social construction of knowledge? (Probe)

Q3) In CPD training, how often do the trainers check whether participants are familiar with the material presented at the beginning of the training? (Probe for fair, good, excellent) How is it done?

Q4) Do they (CPD trainers) check /do need analysis for tutors/ participants before the actual training/ so use this information to shape the content of the course? /teachers' challenges (Probe)

Q5) Do they support participants to explore new ways of implementing their new ideas into lesson? (Probe on the how)

Q6) Do trainers give feedback and evaluation mechanism as a way of determining how effective CPD training are on the tutors? (Probe on the frequency of mechanism)

Q7) Do trainers use models of effective practice (Probe for models like lesson plans, schemes of work, unit plans, laboratory/practical and observations) as they conduct CPD training?

Q8) As a SCDE/SCQASO/CSO, do you acknowledge the importance of regular access to external expertise in various contexts for instance external partners that stimulate new thinking, offer challenge and support to tutors to improve their practices? (Probe as required/ask for instance)

Part D) Nature and Level of Tutors' Involvement in CPD design and Social Construction of Knowledge (Planning, design, implementation, actual training and final review/evaluation of the CPD programme)

Q1) In your own opinion, is there any need of engaging tutors in the design, planning and implementation of CPD programme (Probe on the importance/benefits if any as required)

Q2) How are CPD activities decided upon and by who? (Probe as required)

Q3) Do these CPD training consider individual tutors' prior knowledge, needs and experiences before planning and designing the training materials?

Q4) In your own opinion, to what extent do you think should tutors be involved in the decision-making processes which involve their CPD? (Probe the extent as required)

Part F) Frequency and Duration of CPD Training and Tutors' Social Construction of Knowledge

Q1) In your opinion, is time a necessity factor in CPD training? (Probe for why)

Q2) Do you encourage CPD participation opportunities that extend over a long /short of time? Why? (Probe for the reasons)

Q3) How often are tutors taken through the Continuous Development Programme? (Probe on the approximate)

Q4) For how long are tutors taken through the Continuous Professional Development Programme? (Probe on the duration)

Q5) In your own opinion, do you think that the time that is accorded to tutors during CPD training is adequate to enable them to socially construct knowledge? (Probe on the why)

Closing thoughts/remarks

Q1) What policies currently exist to guide the CPD for tutors? How are CPD policies and plans made? (Probe on whether the policies are supportive /not supportive in furthering or inhibiting tutors learning) In your own opinion, what policies do you envision that are needed by tutors to assist them in harmonizing their CPD practices?

Q2) In your own view, what is the role of the Ministry of Education via TSC in helping tutors to socially construct their professional knowledge through Continuous Professional Development programmes? What concerns, if any, does Ministry have about meeting the CPD needs of tutors? To what extent has the Ministry been active in this process?

(Probe as required)

Q3) Teacher educators are seen by researchers and educationalists in general to stand at the pinnacle of providing a quality education system and their CPD is essential to this realization. How can your influence as a leader in education ensure that political, economic and social issues promote rather than hinder their CPD?

Q4) What are some of the challenges facing you as a CSO /SCD in your effort to improve/facilitate Continuous Professional Development programme? As an expert in CPD training in the Ministry of Education, what are some of the strategies you employ to overcome these challenges?

Q5) As a CSO/SCD/CDE, what do you see as the future of CPD programme in the PTTCs in Kenya?

Q6) Is there something about social construction of knowledge through CPD by tutors that you feel this research needs to capture or even address for some later

action or intervention? What message/s would you like to share with other readers, may be some kind of lessons learnt?

Q7) Do you have any questions before we end?

THANK YOU FOR YOUR TIME

Appendix 6: Focus Group Discussion for the Tutors

Part A) Participant Bio Data

Q1) Gender

How many females? _____

How many males? _____

Q2) Years of Teaching experience; (0-5) (5-10) (10-15) (15-20) (20-25) (25-30)

Q3) Age range-(30-35) (35-40) (40-45) (45-50) (50-55) (55-60)

Q4) Highest academic qualifications(Bachelor)(Masters)(PhD)

Q4) Teaching subjects (Sciences) (Languages) (Technical) (Humanities)

Q5) Other responsibilities held apart from teaching (e.g., Head of Department, Director of Studies, Dean student's welfare)

Part B) Tutors' Construction of Knowledge through CPD

Q1) How do you understand CPD training? What are your perceptions about benefits that tutors accrue from CPD training (Probe for Improvement in pedagogical skills, reinforcement in tutor's expertise, improvement in student outcomes, integration of ICT/pedagogical skills, building quality learning environments, syllabus coverage amongst other benefits of engaging in CPD programme?

Q2) What forms of CPD activities do tutors in this college engage in? (Probe for in-service training, workshops/training, conferences, higher academic study, observation visits to other colleges, study networks among tutors, peer class observations/, mentoring /coaching, independent reading of professional literature for instance journals/books or even reports/, engaging in informal dialogue with colleagues on how to improve teaching lesson observation and team teaching, self-directed CPD) ; Have you ever participated in any of the above mentioned CPD activities after your initial teacher education programme? (Probe for the above highlighted CPD activities)

Q3) Among the many mentioned CPD activities, what would you consider to be critical/key CPD activities for any tutors learning? (Probe for reasons)

Q4) What is your opinion about CPD in reference to the amount of funding, time and energy spent?

Q5) To what extent would you say that CPD undertaking is an individual or institutional /employer responsibility? (Probe on the why?) How does your institution support the CPD of tutors? Are there incentives/facilitation? (Probe as required)

Part C) CPD Training Process and Tutors' Social Construction of Knowledge

Q1. In your own opinion, how do the process taken in conducting CPD trainings impacts tutors' construction of knowledge

a) Please provide details of how these practices are conducted.

i) Collaboration/Communities of Practice/Study Groups

ii) Reflective practice/learning

iii) Action Research

iv) Team teaching

v) Peer Coaching/Learning/Observation

v) Mentorship

ix) Blended Learning

xi) Active learning/Participation /Participatory by tutors

b) Does these CPD trainings support active participation/learning, collaboration/study groups amongst participants, are there mentoring sessions offered to tutors, are there opportunities for peer coaching, does the training process allow for action research?

c) Again, in your own opinion which among the many mentioned process has proven effective in enhancing your social construction of knowledge? (Probe) Please provide details below of any other practices for improving the process of conducting CPD.

Q2) In what ways are the tutors encouraged to share their best practices, ideas and experiences amongst themselves during CPD trainings? Are tutors given an opportunity to share and critically interrogate their practices in an ongoing, reflective, collaborative, inclusive, learning –oriented, and growth promoting way to mutually enhance teacher learning? How? (Probe as required)

Part D) The Nature and level of Involvement in CPD programmes and Tutors' Social Construction of Knowledge (Planning, design, implementation, review)

Q1) In your own opinion, is it necessary to involve tutors in their CPD programmes? Probe for why? To what extent should tutors be involved in the decision-making processes concerning CPD programmes which will allow their learning?

Q2) In CPD trainings, how often do the trainers check whether participants are familiar with material presented?

Q3) Do these CPD trainings take into account individual tutors existing knowledge, needs and experiences before designing the training materials / so use this information to shape the content of the course? (Probe as required)

Part E) Frequency and Duration of Training and Tutors' Social Construction of Knowledge

Q1) In your own view, is time a necessity factor in tutors' social construction of knowledge

Q2) Do you encourage CPD participation opportunities that extend over a long or short duration of time? Why (Probe as required)

Q3) Do you think that the time that is accorded for CPD trainings is adequate for the tutors' to socially construct knowledge? (Probe for why)

Closing thoughts/remarks

Q1) What system(s) would you suggest need to be established in a bid to improve CPD training?

Q2) Are there any challenges that tutors in this college encounter as they undertake CPD training?

Q3) Is there something about social construction of knowledge through CPD by tutors that you feel this research needs to capture or even address for some later action or intervention? What message would you like to share with other readers, may be some kind of lessons learnt?

Q4) Any other question before we close?

THANK YOU FOR YOUR TIME

Appendix 7: Sampling of Study Sites (Sampling Units)

Clusters	Region	TTCS	Total
1.	Coast	1.Shanzu	1
2.	North Eastern	1.Garissa	1
3.	Nyanza	1.Bondo 2.Asumbi 3.Ugenya 4.Migori 5.Kenyanya 6.Borabu	6
4.	North Rift	1.Moi-Baringo 2.Baringo 3.Chesto 4.Bomet 5.Narok 6.Kericho 7.Mosoriot 8.Tambach	8
5.	Western	1.Eregi 2.Trans-Nzoia 3.Bungoma	3
6.	Central	1.Kilimambogo 2.Thogoto 3.Kamweja 4.Murang'a	4
7.	Eastern	1.Meru 2.Kigari 3.Machakos 4.Egoji 5.Kitui	5
			Total=28

Data Source: KNBS (2023)

Appendix 8: NACOSTI Research Permit

Appendix 9: Plagiarism Awareness Certificate

SR734

ISO 9001:2019 Certified Institution

THESIS WRITING COURSE

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Word count: 60572

Awarded by



Prof. Anne Syomwene Kisilu
CERM-ESA Project Leader Date: 06/11/2024