

Enhancing Teachers' Continuous Professional Development in Tanzania: Challenges, Strategic Interventions, and Regional Comparisons

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Abstract

Teachers' Continuous Professional Development (CPD) plays a vital role in elevating teaching standards, boosting student achievement, and advancing the education sector as a whole. The frequently change of teaching methods, curricula, and learners' needs necessitate the continual transformation of teachers, CPD provides teachers with opportunities to enhance their skills, update their knowledge, and adopt innovative practices and bring them up to speed. Research into CPD is crucial as it helps to identify teachers' needs, effectiveness of the CPD programs in a process to improve teaching quality, foster student success, and contribute to the sustainable development of the education sector. While Tanzania acknowledges the significance of CPD, its execution encounters major obstacles that impede teacher development. Key issues include low teacher awareness, cultural reluctance toward modern teaching approaches, insufficient financial resources, and weak institutional backing from school leaders. Additionally, existing CPD initiatives are often inconsistent, poorly organized, and unable to address the varied needs of educators, especially those in remote regions. This review offers an in-depth exploration of the primary barriers undermining effective CPD implementation in Tanzania. It analyzes how insufficient funding, resistance to change, and the absence of a strong policy framework contribute to these systemic challenges. To address these issues, the study suggests actionable solutions, such as greater government funding for CPD, incorporating professional development into teacher career progression, conducting targeted awareness campaigns on the value of CPD, and enhancing leadership support in schools. The study also compares Tanzania's CPD efforts with those of other East and Sub-Saharan African nations. Further it analyzed best practices from the selected countries in the Global North and provide insights for the improvement of Tanzanian CPD practices. The paper underscores the necessity of a comprehensive strategy for CPD in Tanzania, emphasizing policy improvements, government commitment, and community involvement to cultivate a sustainable culture of professional growth among teachers.

Keywords: Continuous Professional Development CPD, teacher professional development, educational quality, teacher career progression, education policy.

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1. Introduction

Continuous Professional Development (CPD) for teachers is an essential aspect of education systems worldwide, which serves as a structured approach to learning that enhances teachers' skills, knowledge, and professional competencies (Alemayehu, 2021; Saleem et al., 2021). CPD ensures educators remain current with pedagogical advancements, curriculum changes, and emerging technologies (Ambon et al., 2024). In many countries, well-structured CPD programs have significantly improved teaching quality, student outcomes, and overall educational performance (Nadeem et al., 2025; William et al., 2025). However, in Tanzania, the implementation of CPD has faced numerous challenges that hinder its effectiveness and accessibility (Mgaiwa & Milinga, 2024; Mpate, 2025; Said et al.). This paper aims to analyze these barriers, propose viable solutions, and compare Tanzania's CPD landscape with that of other countries in East and Sub-Saharan Africa. Despite the recognized

importance of CPD, many teachers in Tanzania struggle to access quality professional development opportunities (George et al., 2024; Mwinuka & Farrelly, 2023). Limited financial resources, inadequate government support, and logistical constraints prevent many educators, especially those in rural areas, from participating in continuous learning (Mpate, 2025; Pham et al., 2020; Said et al.). Moreover, CPD programs, when available, often lack consistency and alignment with the evolving educational demands (Chachage & Thakrar, 2023; Mwinuka & Farrelly, 2023). For instance, while countries such as Kenya and Rwanda have implemented national CPD frameworks with clear guidelines and incentives (Peter L Barasa, 2021; do Nascimento & ValdĂŠs-Cotera, 2018), Tanzania is still grappling with fragmented and irregular training sessions, leaving many teachers without the necessary skills to meet modern educational challenges (George et al., 2024; Ingiaimo, 2012; RWEHUMBIZA, 2018). A case in point is the adoption of digital learning tools in classrooms. With the rapid expansion of digital education globally, many countries have integrated ICT-based CPD programs to equip teachers with the skills needed to incorporate technology into their teaching (Boonmoh & Sanmuang, 2024; Mukuna, 2013). In Kenya, for example, the Teachers Service Commission (TSC) has partnered with EdTech organizations to provide online training modules, ensuring that educators remain competent in the digital era (Myers et al., 2021; Otieno & Taddese, 2020). Conversely, Tanzanian teachers often lack access to such opportunities due to poor internet infrastructure, limited government investment in digital education (Shekaoneka & Arthur, 2024), and the high cost of training materials (Kweka & Ndibalema, 2018; Jessina Nieminen, 2020). As a result, many educators are left behind, unable to effectively integrate technology into their teaching methodologies (Shekaoneka & Arthur, 2024). Another critical challenge facing CPD in Tanzania is the absence of a structured and mandatory professional development framework (Mwinuka & Farrelly, 2023). In many developed education systems, CPD is a requirement for career progression. Teachers must accumulate a certain number of CPD hours annually to qualify for promotions or salary increments (Hovassapian; Stevenson & Milner, 2023). For example, in South Africa, the South African Council for Educators (SACE) mandates that teachers engage in continuous learning activities to maintain their professional status (Raanhuis, 2022).

In contrast, Tanzania lacks a clear policy requiring teachers to undergo CPD regularly, leading to complacency and a lack of motivation among educators to pursue further professional development (Mcheka & Mislay, 2025). The lack of an effective CPD framework in Tanzania presents a significant barrier to improving the quality of education. Without structured professional development, teachers struggle to keep up with pedagogical advancements, which ultimately affects students' learning experiences and outcomes (Mgaiwa & Milinga, 2024; Mpate, 2025). Additionally, the absence of systematic CPD programs exacerbates existing disparities between urban and rural educators, with those in remote areas often left with little to no access to training. Given the global emphasis on quality education as a driver for socio-economic development, addressing the shortcomings in CPD implementation is crucial for Tanzania's educational progress (Lyamtane, 2024). This review paper is justified by the need to identify and address the structural, financial, and logistical barriers hindering effective CPD in Tanzania. By drawing comparisons with other countries in East and Sub-Saharan Africa, the paper seeks to highlight best practices that can inform policy recommendations for improving CPD frameworks in Tanzania. Therefore, the primary objective of this paper is to critically analyze the challenges facing CPD implementation in Tanzania, explore potential solutions to these barriers, and compare Tanzania's CPD landscape with that of other East and Sub-Saharan African countries. By doing so, this paper aims to provide actionable recommendations for policymakers, educators, and stakeholders to enhance the effectiveness and accessibility of CPD programs in Tanzania.

2. Literature Review

Continuous Professional Development (CPD) is a critical component of teacher education and plays a significant role in improving instructional quality and student learning outcomes (Asmare, 2025). It is designed to ensure that teachers remain competent and current with pedagogical advancements, curriculum changes, and emerging educational technologies (George et al., 2024; Hovassapian). CPD initiatives vary across countries and are influenced by policy frameworks, funding availability, and cultural perceptions of professional development. This literature review examines previous studies on CPD implementation, highlighting best practices and challenges in various regions, with a specific focus on Tanzania. By analyzing global trends and drawing comparisons, this section seeks to provide a comprehensive understanding of how CPD can be effectively integrated into Tanzania's educational landscape.

2.1 Theoretical Perspective on CPD

The conceptual foundation of CPD is grounded in professional learning theories, including Kolb's experiential learning model and Schön's reflective practice framework. Kolb's model emphasizes learning through experience, suggesting that teachers improve their skills by actively engaging in new teaching methodologies and reflecting on their effectiveness (Metallidou, 2008). Masuwai (Masuwai et al., 2024) introduces the concept

of reflective practice, which underscores the importance of continuous self-assessment and professional dialogue among educators to enhance instructional strategies. Research suggests that effective CPD programs incorporate elements of active learning, mentorship, and ongoing assessment to enhance teacher competencies (Lyamtane, 2024). Peer collaboration and participatory approaches have been found to be particularly impactful, as they encourage knowledge-sharing among teachers and foster a culture of collective improvement (George et al., 2024). Studies in Finland and South Korea further emphasize the role of teacher-led CPD, where educators take an active role in designing and evaluating their professional development initiatives (György, 2023). These theoretical insights highlight the need for structured and reflective CPD programs in Tanzania to create a more dynamic and adaptive teaching workforce.

2.2 Implementation of CPD in Tanzania

In Tanzania, CPD programs face numerous challenges, including inadequate funding, lack of policy enforcement, and disparities between urban and rural access to training (Mgaiwa & Milinga, 2024). Although the government has introduced various initiatives, such as the National Framework for Teacher Continuous Professional Development (TCPD), many teachers still struggle to access high-quality training due to financial and logistical constraints. A study by Mcheka and Mislav (Mcheka & Mislav, 2025) highlights that Tanzania lacks a structured, mandatory CPD policy, leading to low participation rates among educators. Without clear incentives, such as promotions or salary increments linked to CPD, teachers often deprioritize professional development activities in favor of immediate classroom responsibilities. Additionally, rural schools face significant disadvantages, as they have fewer CPD centers, limited access to training materials, and lower internet connectivity, restricting online learning opportunities (Said et al.). According to Komba and Mwakabenga (Komba & Mwandanji, 2015), even when training programs are available, they often fail to address the specific challenges that teachers encounter in their local contexts. To improve CPD implementation in Tanzania, policies should focus on making training sessions more accessible, relevant, and incentivized for educators.

2.2.1 Comparative Analysis of CPD Frameworks in Other Countries

Countries such as Kenya and Rwanda have adopted structured CPD frameworks with mandatory participation and government funding, leading to higher teacher engagement (TSC, 2022). In Kenya, the Teachers Service Commission (TSC) has implemented a policy that requires educators to accumulate CPD points, which directly influence their career progression. This system ensures that CPD is taken seriously and remains a continuous process rather than an occasional training exercise (Raanhuis, 2022). Furthermore, the Kenyan government collaborates with private education institutions and NGOs to provide professional development programs, broadening access and improving quality. Similarly, Rwanda has invested heavily in digital CPD solutions, utilizing EdTech platforms to provide remote learning opportunities for teachers (Nkundabakura et al., 2024). The Rwanda Education Board (REB) has introduced structured CPD modules accessible through online platforms, significantly increasing teacher participation rates. In contrast, Tanzania's CPD remains sporadic and inconsistently funded, highlighting the need for a more structured and technology-driven approach. In South Korea and Finland, CPD is integrated into the national education system, with a strong emphasis on teacher-led research and reflective practices. South Korean teachers are required to engage in annual CPD as part of their professional development, while Finland's education system fosters teacher autonomy, allowing educators to design their CPD activities based on their professional needs (György, 2023). These approaches have been credited with improving both teaching quality and student outcomes, demonstrating the effectiveness of a well-structured CPD framework.

2.2.2 The Role of Digital Learning in CPD

Recent studies emphasize the growing role of digital learning in CPD accessibility. Online training programs and mobile-based CPD initiatives have been successfully implemented in countries like Rwanda and Singapore, increasing reach and flexibility for educators (Board., 2019a). Digital CPD allows teachers to access high-quality resources regardless of geographical constraints, making it an essential tool for education systems with dispersed populations. However, in Tanzania, digital CPD adoption remains limited due to poor internet connectivity, inadequate ICT training for teachers, and the high costs of technology (Shekaoneka & Arthur, 2024). Research by TIE (TIE., 2022a) suggests that improving digital literacy and providing affordable or subsidized internet access for teachers could significantly enhance CPD participation. Government and private sector partnerships could also play a crucial role in expanding digital CPD platforms and resources. Moreover, a study by Kweka and Ndibalema (Kweka, 2018) highlights that digital CPD should not only focus on providing access but also on ensuring its relevance and effectiveness. Many online training platforms lack localized content tailored to the specific needs of Tanzanian teachers. To address this, CPD providers should collaborate with educational institutions to develop contextualized training modules that align with the Tanzanian curriculum and pedagogical practices.

Another key factor affecting digital CPD success is teacher engagement and motivation. Research by Nieminen (J. Nieminen, 2020) suggests that digital learning initiatives are more effective when they incorporate interactive elements such as discussion forums, peer collaboration, and real-time feedback mechanisms. Implementing such interactive features in Tanzania's digital CPD platforms could increase participation rates and overall effectiveness. Furthermore, investment in digital infrastructure, such as computer labs and mobile learning hubs in rural areas, could help bridge the digital divide. Countries like Kenya have successfully implemented initiatives that provide teachers with subsidized tablets preloaded with CPD materials (Otieno, 2020). Tanzania could adopt similar approaches to ensure equitable access to digital CPD resources.

2.2.3 Challenges and Barriers to Effective CPD Implementation

Several barriers hinder effective CPD implementation in Tanzania, including: **Financial Constraints:** Limited government funding restricts the availability and quality of CPD programs, leaving many teachers without access to professional development opportunities (Mwinuka & Farrelly, 2023). **Weak Policy Frameworks:** The absence of mandatory CPD policies reduces teacher participation rates and weakens accountability in professional development initiatives (Mgaiwa & Milinga, 2024). **Limited Digital Infrastructure:** Poor internet access and low ICT skills hinder online CPD adoption, preventing many teachers from benefiting from digital learning platforms (Shekaoneka & Arthur, 2024). **Cultural Resistance:** Some educators view CPD as unnecessary, preferring traditional teaching methods over innovative pedagogical approaches (Luyagwa, 2021). Overall, the literature highlights that structured CPD policies, government investment, and digital learning integration are key to improving teacher professional development. Countries with well-established CPD frameworks, such as Kenya, Finland, and Rwanda, provide valuable insights into how Tanzania can enhance its CPD strategies. By establishing a mandatory CPD policy, increasing funding, and leveraging digital learning tools, Tanzania can create a sustainable and effective CPD system that ensures continuous teacher growth and improved education quality. Addressing these challenges will help bridge the professional development gap and equip teachers with the necessary skills to adapt to evolving educational demands.

3. Methodology

3.1 Research Design

This study employs a systematic literature review (SLR) approach to examine the implementation of teachers' Continuous Professional Development (CPD) across different countries. A systematic review enables the collection, synthesis, and critical analysis of existing scholarly research, policy reports, and government documents related to CPD implementation, challenges, and best practices. This design was chosen to ensure a structured and objective review of available evidence, minimizing bias and enhancing the reliability of the findings. The systematic literature review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, ensuring a transparent and replicable methodology. A predefined protocol was used to guide the selection, extraction, and synthesis of literature to ensure consistency in the review process.

3.1.1 Literature Search Strategy

A comprehensive search of academic databases and official reports was conducted to ensure the inclusion of credible sources. The databases consulted include: Google Scholar, Scopus, Web of Science, ResearchGate, Education Resources Information Center (ERIC), Government policy reports and UNESCO/World Bank education documents. A step-by-step search strategy was employed including; 1. Initial search where broad keyword searches were conducted to identify relevant studies; 2. Refinement of search terms by which Boolean operators were used to filter the most relevant sources; 3. Screening process where titles and abstracts were reviewed based on inclusion and exclusion criteria; 4. Full-Text Analysis in which selected studies were read in full to ensure relevance. 5. Backward and Forward Citation Tracking where references from selected papers were reviewed for additional relevant studies.

3.1.2 Inclusion and Exclusion Criteria

To ensure relevance and quality, the study applied the following criteria: 1. **Inclusion Criteria** where studies published in peer-reviewed journals, government reports, or reputable organizations; Research conducted within the last 10–15 years (2010–2025); Studies focused on teachers CPD implementation, challenges, and policy frameworks in different countries; Research that provides empirical data or case studies relevant to teachers' professional development and Studies written in English were selected. 2. **Exclusion Criteria:** Opinion articles and non-peer-reviewed sources, Studies that do not specifically address CPD implementation, Research with outdated policies that no longer apply to modern educational contexts, and Studies lacking clear methodology or empirical data were discarded.

3.1.3 Keywords and Search Terms

The search strategy was guided by the use of specific keywords and Boolean operators to retrieve relevant literature. The key search terms included: "Teachers' Continuous Professional Development (CPD) implementation", "Challenges in teachers' CPD", "Teacher professional development in Africa", "Government policies on CPD", "Impact of CPD on teacher effectiveness" and "Comparative analysis of CPD frameworks".

3.2. Data Analysis Methods

A thematic analysis was conducted to identify recurring themes across the literature. Key themes included: The extent of CPD implementation, Challenges limiting CPD effectiveness, Government actions and policies supporting CPD, Signs of success or failure in CPD programs and best practices from high-performing countries. This analysis followed Braun and Clarke's (Braun, 2006) six-phase framework: 1. Familiarization with data: Reading and re-reading articles to gain an in-depth understanding; 2. Generating initial codes: Identifying key concepts across sources; 3. Searching for themes: Grouping codes into potential themes; 4. Reviewing themes: Refining and validating identified themes; 5. Defining and naming themes: Assigning clear labels to each theme and 6. Writing the findings: Structuring results for clear presentation.

3.2.1 Comparative Analysis

A comparative analysis was conducted to assess how different countries implement CPD programs. This involved: Identifying policy differences in CPD across various regions; Analyzing best practices from countries with successful CPD frameworks; evaluating the gaps in CPD implementation in countries struggling with low adoption rates; examining economic, social, and political factors influencing the effectiveness of CPD.

3.2.2 Content Analysis

Content analysis was used to extract key findings from policy documents, research articles, and reports. This method helped to: Categorize the effectiveness of CPD policies, examine government commitments to CPD, assess trends in teacher engagement in CPD programs, and Identify gaps in current CPD strategies.

3.2.3 Validity and Reliability

To ensure the credibility of the findings, the study employed the following measures: Use of multiple sources: Combining peer-reviewed journal articles, policy reports, and case studies to cross-verify data; Triangulation: Comparing findings from different regions and methodologies to enhance reliability; Expert validation: Findings were cross-checked against reports from international education organizations such as UNESCO and the World Bank; Inter-rater reliability check: Independent reviewers assessed the inclusion and coding of studies to minimize bias.

3.2.4 Ethical Considerations

This study adhered to ethical guidelines in research, including: Proper Citation: All sources used in this review are properly cited to maintain academic integrity. Objective Analysis: Ensuring an unbiased assessment by including studies from various regions and perspectives, Data Protection: No personal or sensitive data was collected, as this study solely relies on secondary data sources and Transparency: Clear documentation of methodology to allow for replication.

3.2.5. Limitations of the Study Methodology

Despite the robustness of the systematic review methodology, certain limitations exist, such as ; Dependence on Secondary Data: The study relies entirely on published literature, which may not capture real-time CPD implementation challenges; Regional Disparities in CPD Research: Some regions, particularly low-income countries, may have limited available research on CPD; Potential Publication Bias: Studies with positive CPD outcomes may be overrepresented in academic literature and Linguistic Constraints: Exclusion of non-English studies may limit insights from non-English-speaking regions. Therefore, this methodology provides a structured approach to reviewing CPD implementation globally. By systematically collecting and analyzing literature, this study offers a comprehensive understanding of the successes and challenges of CPD programs and provides recommendations for improving CPD policies worldwide. The systematic literature review, combined with thematic, comparative, and content analysis, ensures that the study captures both qualitative and quantitative dimensions of CPD effectiveness across different contexts.

4. Results

4.1 CPD Accessibility and Digital advancement by Region in Tanzania

The results of study highlight disparities in digital learning accessibility for CPD across different regions in Tanzania (See Table 1). Dar es Salaam and Arusha lead in internet accessibility and digital CPD adoption, whereas regions like Dodoma and Kigoma lag due to infrastructure limitations. The number of CPD centers correlates with regional digital integration, affecting teachers' ability to access online training. The references substantiate these findings, emphasizing the need for targeted investment in ICT infrastructure to bridge the digital divide in CPD accessibility across Tanzania

4.2 Key Barriers to Effective Implementation of Teachers' Continuous Professional Development (CPD) in Tanzania

Results highlight the major barriers impeding the effective implementation of CPD programs for teachers in Tanzania (see table 1). Key challenges include inadequate funding, weak policy frameworks, poor infrastructure, lack of career-linked incentives, and cultural resistance to CPD initiatives. These barriers limit teacher participation, particularly in rural areas, and hinder efforts to enhance the quality of education through

continuous professional growth. The references provide empirical support for these findings and offer insights into the systemic constraints affecting CPD in Tanzania.

4.3 Strategies for Enhancing the Implementation of Teachers' CPD in Tanzania

The adopted strategies aimed at enhancing CPD implementation in Tanzania include increased government investment, structured policy development, digital learning integration, career-linked incentives, and awareness campaigns (see table 2). Each proposed action is linked to expected outcomes, ensuring that CPD programs become more effective, accessible, and sustainable. The references highlight sources that support these strategies and provide empirical evidence of their potential impact.

4.4 Regional Comparison of Teachers' CPD Implementation Across East African countries

From the comparative analysis of teachers CPD implementation in selected East African countries, the emerged themes include policy frameworks, funding, digital integration, and teacher participation rates (see table 3). Kenya and Rwanda demonstrate structured CPD systems with moderate to high teacher engagement, while Tanzania, Uganda, Ethiopia, and Malawi face challenges related to limited funding and weak policy enforcement. Egypt shows moderate success with structured CPD reforms and increasing digital integration. The inclusion of references provides insight into how different nations approach CPD and the factors influencing their effectiveness.

4.5 Worldwide Evaluation of Teachers' Continuous Professional Development (CPD) Practices

The results provide an international perspective on teachers CPD implementation by comparing structured approaches, government roles, funding mechanisms, and overall effectiveness across various countries (see Table 4). Finland and Singapore stand out with research-based, government-supported CPD programs that ensure continuous teacher growth. South Korea and Canada have well-established CPD policies integrated into teacher career progression. Pakistan, India, Malawi, and Egypt exhibit emerging CPD structures with varying degrees of government involvement and funding constraints. The references highlight the sources that validate these findings and provide benchmarks for best practices.

Discussion

Our study identifies key barriers to effective CPD implementation, including inadequate funding, weak policy frameworks, poor infrastructure, lack of career-linked incentives, and cultural resistance. These findings align with existing research indicating that financial constraints and weak enforcement mechanisms significantly hinder CPD participation in Tanzania (Mgaiwa & Milinga, 2024; Mwinuka & Farrelly, 2023). For instance, research by Barasa (P. L. Barasa, 2021) highlights that donor dependency has created inconsistencies in CPD delivery, making it difficult to establish long-term professional development strategies for teachers. Similar findings have been reported by Said et al. (Said et al.), who indicated that rural teachers face additional financial and logistical challenges, further exacerbating the CPD participation gap. In contrast, studies in Kenya and South Africa show that structured CPD policies backed by government investment led to increased teacher engagement and professional growth (Raanhuis, 2022; Wafula et al., 2024). Addressing these financial and institutional barriers through policy reform and sustainable funding mechanisms is therefore critical for CPD success in Tanzania. The results outline strategies such as increasing government investment, developing structured CPD policies, integrating digital learning, providing incentives, and raising awareness (Table 2). These recommendations are supported by empirical evidence indicating that structured CPD frameworks and incentives improve teacher participation (Mgaiwa & Milinga, 2024; Shukia, 2023). For example, digital learning has been successfully implemented in Rwanda through government-supported EdTech initiatives, increasing accessibility for rural teachers (Board., 2019.; Nkundabakura et al., 2024). However, Tanzania's ICT infrastructure remains underdeveloped, limiting the effectiveness of online CPD platforms (Shekaoneka & Arthur, 2024). Research by Mwinuka & Farrelly (Mwinuka & Farrelly, 2023) further emphasizes that linking CPD participation to career progression, as seen in South Korea and Finland, enhances motivation and engagement among educators (Education., 2019; György, 2023). The integration of these strategies within Tanzania's CPD framework would significantly improve teacher professional development outcomes. This review study compares CPD policies, funding, digital integration, and participation rates across East African countries. The findings indicate that Kenya and Rwanda have structured CPD frameworks with high participation rates, whereas Tanzania, Uganda, Ethiopia, and Malawi struggle with limited funding and weak policy enforcement. Studies show that Kenya's Teachers Service Commission (TSC) has successfully implemented a mandatory CPD policy, ensuring that teachers engage in continuous professional growth (TSC, 2022). In contrast, Tanzania lacks a regulatory framework that mandates CPD participation, leading to inconsistencies in training availability and quality (Mwinuka & Farrelly, 2023). Additionally, Uganda's CPD system, although encouraged by policymakers, suffers

from insufficient government commitment and weak enforcement mechanisms, similar to Tanzania (Taddese & Rao, 2022; URT., 2021.). Given these regional disparities, implementing a structured and well-funded CPD model in Tanzania could yield positive educational outcomes, as seen in Kenya and Rwanda. Our findings highlight the differences in CPD structures across various countries, showing that nations like Finland and Singapore have research-based, government-supported CPD models with high effectiveness as shown in Table 4. Developing countries such as Pakistan, India, Malawi, and Egypt exhibit emerging CPD structures but face funding constraints and policy inconsistencies. Research by Maaranen et al. (Maaranen et al., 2020) indicates that Finland's teacher-led CPD model fosters continuous learning and professional growth, resulting in improved education outcomes. Similarly, Singapore's integration of CPD into career progression has been cited as a key factor in maintaining high teacher motivation and competency (György, 2023). In contrast, Malawi's CPD initiatives remain largely donor-dependent, leading to periodic disruptions and inconsistencies (Msiska, 2015.). These findings suggest that for Tanzania to develop an effective CPD framework, it must ensure stable funding and establish policies that align professional development with career growth.

This study presents disparities in digital CPD adoption across different Tanzanian regions (Table 5). Dar es Salaam and Arusha have higher digital integration due to better infrastructure, while Dodoma and Kigoma lag behind because of limited internet connectivity and resource constraints. Research by Shekaoneka & Arthur (Shekaoneka & Arthur, 2024) highlights that a lack of internet access is a significant barrier to digital CPD in rural Tanzania. In contrast, Kenya has successfully implemented online CPD programs, leveraging partnerships with technology firms to expand digital learning resources for teachers (Otieno & Taddese, 2020). Moreover, a study by the Tanzania Institute of Education (TIE., 2022a) suggests that investment in ICT training and infrastructure development is essential for scaling up digital CPD adoption in Tanzania. Addressing these digital access gaps is crucial for ensuring equitable CPD opportunities across all regions. Overall, the findings of our study align with existing research and are validated through multiple sources, including policy reports and comparative analyses. The study employs triangulation by comparing CPD implementation across different regions and methodologies, enhancing the reliability of the conclusions (George et al., 2024; Mwinuka & Farrelly, 2023). Furthermore, expert validation and cross-referencing with UNESCO and World Bank reports strengthen the credibility of the findings (UNESCO., 2022.). The comparative analysis with other countries also supports the argument that structured policies, stable funding, digital learning integration, and career-linked CPD incentives are essential for improving teacher professional development outcomes in Tanzania. Addressing these key areas will ensure that Tanzanian teachers have access to continuous learning opportunities, ultimately leading to improved education quality and student performance. By implementing these recommendations, Tanzania can enhance the effectiveness of its CPD programs, providing teachers with the necessary skills and resources to meet modern educational challenges.

Conclusion

The implementation of CPD for teachers in Tanzania is critical but challenging. While CPD is recognized as essential for improving teaching effectiveness and student outcomes, barriers such as inadequate funding, weak policy frameworks, lack of incentives, insufficient digital infrastructure, and cultural resistance hinder its full implementation. These challenges contribute to low participation rates, especially in rural areas, affecting education quality. Comparative analysis of CPD frameworks in countries like Kenya, Rwanda, Finland, and Singapore highlight the importance of structured policies, government support, and digital learning integration. These countries have shown that mandatory CPD policies, linking training to career progression, and investing in digital resources can significantly enhance engagement and accessibility. To address the challenges in Tanzania, a multi-faceted approach is necessary. First, increased government funding and reduced reliance on donor aid will ensure sustainable CPD programs. Second, establishing a national CPD policy with clear participation guidelines and career incentives will boost engagement. Third, integrating digital tools into CPD delivery will improve accessibility, particularly in remote regions. Raising awareness about CPD's importance and fostering a culture of continuous learning in schools is also crucial. School leadership must prioritize CPD by providing time, resources, and creating collaborative environments. Strengthening public-private partnerships can further support CPD initiatives by leveraging external expertise. Ultimately, addressing CPD challenges in Tanzania requires policy reform, financial investment, enhanced digital infrastructure, and a cultural shift. By learning from best practices in other countries, Tanzania can develop a robust teacher development system that improves education quality and student achievement. Stakeholders must collaborate to make CPD both accessible and impactful for teachers' growth.

Recommendations for Strengthening CPD in Tanzania

1. Increase Government Investment in Teachers CPD

The Tanzanian government should allocate more funding to CPD programs to ensure sustainability.

- Currently, many programs rely on donor funding, leading to inconsistencies. A dedicated CPD budget would support structured, high-quality training, with resources such as materials, facilitators, and transportation for rural teachers.
2. **Develop a National CPD Policy and Monitoring Framework**
A clear national CPD policy should be created, with goals, standards, and expectations. The policy should include mechanisms for monitoring and evaluating CPD programs, ensuring they meet teacher and student needs. A regulatory body should oversee CPD initiatives, ensuring accountability and quality.
 3. **Link CPD Participation to Career Progression**
CPD should be integrated into career development pathways. Participation should be linked to promotions, salary increments, and professional recognition. This approach, used in countries like South Korea and Finland, would motivate teachers to engage in continuous professional learning.
 4. **Ensure Equitable Access to CPD Opportunities**
Teachers in rural areas face challenges accessing CPD due to infrastructure and financial constraints. To address this, regional CPD hubs should be established to reduce travel, and financial support for transport and accommodation should be provided for teachers attending sessions.
 5. **Strengthen School Leadership Support for CPD**
School leaders play a key role in encouraging CPD participation. Headteachers should be trained to create a culture that values continuous learning by allocating time for CPD, offering financial assistance, and recognizing teachers who engage in professional development.
 6. **Integrate Digital Learning into CPD Delivery**
Digital platforms should be used to offer flexible, cost-effective CPD. Online courses, webinars, and mobile training can increase accessibility, especially for remote teachers. The government should invest in internet access and digital literacy to maximize the benefits of online CPD.
 7. **Promote Peer Learning and Mentorship Programs**
Peer learning and mentorship programs can enhance knowledge-sharing. Senior teachers should mentor junior ones, fostering collaborative learning within schools and encouraging continuous professional growth.
 8. **Conduct Nationwide Awareness Campaigns on CPD Benefits**
Many teachers view CPD as a burden rather than an opportunity for growth. Awareness campaigns should highlight CPD's benefits, such as career advancement and improved teaching effectiveness. These campaigns should reach teachers through radio, TV, and social media.

By implementing these interventions, Tanzania can build a more effective, sustainable CPD system that supports teacher development, improves education quality, and enhances student outcomes. Future research could explore the long-term impact of different CPD models on student learning outcomes and teacher retention. Additionally, studies could investigate the role of technology-based CPD programs in enhancing accessibility and effectiveness, particularly in under-resourced areas. Understanding these dimensions can help optimize CPD approaches for diverse educational contexts.

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Table 1: CPD Accessibility and digital advancement by Region in Tanzania

Region	Internet Accessibility (%)	Number of CPD Centers	Digital CPD Adoption	References
Dar es Salaam	85%	15+	High	(TIE., 2022b)
Arusha	75%	10	Moderate	(Mwinuka & Farrelly, 2023)
Mwanza	65%	8	Moderate	(TIE., 2022b)
Dodoma	50%	6	Low	(URT., 2021)
Kigoma	30%	3	Very Low	(Shekaoneka & Arthur, 2024)

This table represents findings regarding the access of CPD programs in various regions in Tanzania

Table 2: Factors affecting implementation of teachers CPD in Tanzania

Limiting Factor	Description	Source(s)
Inadequate Funding	CPD programs in Tanzania suffer from poor government funding and over-reliance on donor support.	(P. L. Barasa, 2021; Mwinuka & Farrelly, 2023)
Lack of Policy & Frameworks	Absence of clear CPD policy and poor enforcement of existing guidelines.	(Mgaiwa & Milinga, 2024; URT., 2021)
Poor Infrastructure & Resources	Rural areas lack CPD centers, digital tools, and training materials.	(Mwinuka & Farrelly, 2023; TIE., 2022a)
Limited Incentives for Teachers	No structured career progression incentives linked to CPD participation.	(Mgaiwa & Milinga, 2024; William et al., 2025)
Cultural Resistance & Awareness	Traditional teaching methods and low CPD awareness limit adoption.	(Komba, 2019; Luyagwa, 2021)

Table 2 include a summary of existing factors affecting the effective implementation of CPD in Tanzania

Table 3: Strategies for Improving CPD Implementation in Tanzania

Strategy	Proposed Action	Expected Outcome
Increase Government Investment	Allocate higher budget for CPD programs	Improved accessibility and quality of CPD programs
Policy Development	Introduce a national CPD framework with enforcement mechanisms	Standardized and structured CPD opportunities
Digital Learning Integration	Expand e-learning platforms and internet connectivity	Increased CPD accessibility for rural teachers
Incentives & Career Progression	Link CPD participation to salary increments and promotions	Higher teacher motivation and engagement
Awareness Campaigns	Conduct CPD promotion campaigns in schools and communities	Greater teacher participation in CPD programs

Various intervention adopted in Tanzania are highlighted in table three

Table 4: Comparative analysis of CPD implementation in East Africa

Country	CPD Policy Status	Government Funding	Digital Learning Use	Teacher Participation Rate	References
Kenya	Mandatory CPD with career linkage	Well-funded under TSC	Strong online CPD programs	High (80%+)	(Commission., 2017)
Rwanda	Government-supported structured CPD	Moderate funding	Expanding digital CPD access	Moderate (60-70%)	(Board., 2019b)
Egypt	Structured CPD with national oversight	Moderate funding	Developing digital CPD resources	Moderate (55-65%)	(Egypt., 2022)
Tanzania	Fragmented CPD, no mandatory policy	Limited funding, donor-dependent	Low due to infrastructure gaps	Low (30-40%)	(Mwinuka & Farrelly, 2023)
Uganda	CPD encouraged but not enforced	Limited and inconsistent funding	Moderate but not widespread	Low (40-50%)	(URT., 2021)
Ethiopia	CPD linked to career growth but poorly implemented	Low funding	Limited digital integration	Low (30-40%)	(Taddese & Rao, 2022)
Malawi	Irregular CPD programs	Low funding	Poor ICT infrastructure	Low (25-35%)	(Msiska, 2015.)

This table describes implementation status among East African countries in terms of policies, funding, and participation role

Table 5: A Global Comparative Analysis of Teacher CPD implementation

Country	CPD Policy Status	Government Funding	Digital Learning Use	Teacher Participation Rate	References
Kenya	Mandatory CPD with career linkage	Well-funded under TSC	Strong online CPD programs	High (80%+)	(Commission., 2017)
Rwanda	Government-supported structured CPD	Moderate funding	Expanding digital CPD access	Moderate (60-70%)	(Board., 2019b)
Egypt	Structured CPD with national oversight	Moderate funding	Developing digital CPD resources	Moderate (55-65%)	(Egypt., 2022)
Tanzania	Fragmented CPD, no mandatory policy	Limited funding, donor-dependent	Low due to infrastructure gaps	Low (30-40%)	(Mwinuka & Farrelly, 2023)
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Malawi	Irregular CPD programs	Low funding	Poor ICT infrastructure	Low (25-35%)	(Msiska, 2015.)