

Cost Structures and Teachers' Engagement in Tanzania's Continuous Professional Development: Evidence from Secondary Schools in Ilala Municipality

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Abstract

Understanding the inherent costs of teachers' continuing professional development (CPD) is essential for making well-informed decisions to ensure the effectiveness and sustainability of programmes that meet international quality education standards. Grounded in Human Capital Theory (HCT), this study employed a convergent mixed-methods design to explore the cost structures and teachers' engagement in continuing professional development (CPD) within Ilala secondary schools in Tanzania. The findings revealed that the cost structures involved in teachers' CPD include direct, indirect, and hidden costs. Most of these costs are borne by individual teachers and, to a lesser extent, by their schools, with minimal external or government funding. The study confirmed an indirect relationship between these cost structures and teachers' engagement. It shows that the higher the cost burden, the less the teachers' engagement with CPD. The study concludes that unless all CPD cost structures are systematically addressed through sustainable support mechanisms, teachers' participation and long-term effectiveness will remain significantly constrained.

Keywords: Teachers' Continuous Professional Development, CPD Cost, Cost analysis, Human Capital Theory

1.0 Introduction

Continuing professional development is the process of sharpening teachers' competences by updating their knowledge and skills in pedagogy, technology, and subject matter for quality education (Ambon et al., 2024; Mufti, 2024). The education sector is among the most evolving sectors due to ever-changing technologies (Fletcher & Zuccollo, 2020; Ventista & Brown, 2023). Hence, teachers need to engage in lifelong learning through short- and long-term programmes such as seminars, workshops, conferences, collaborative research, coaching, and mentorship, because initial educational qualifications cannot guarantee their entire working lives.

International policies such as Sustainable Development Goal (SDG) 4.c, the Incheon Declaration (UNESCO, 2015) and the African Union's Continental Education Strategy for Africa both emphasise teachers' CPD to increase the supply of qualified teachers (United Nations, 2015). However, they highlight the need for financial investment in these CPD programmes. Because delivering meaningful professional development requires both direct costs (training fees, materials, trainers, venues) and indirect costs (transport, accommodation, substitute teachers, and opportunity costs).

Countries around the world have adopted various mechanisms to support the costs of teachers' CPD. For instance, developed nations such as the U.S., Finland, Singapore, and China allocate federal and state grants for CPD to national budgets and policies (Li et al., 2023; Wang, 2019). Across African countries, governments, NGOs, and donors fund CPD. Particularly in South Africa, funding is institutionalised through statutory bodies such as SACE and SETAs (Motsie, 2023; Mwila et al., 2022).

Tanzania's Ministry of Education (MoEST) has initiated efforts to support teachers' CPD by partnering with institutions such as HLIs, TIE, NGOs, and other development partners to organise CPD programmes. Nevertheless, the level of funding remains inadequate and uneven across regions. Recent evidence confirms that high costs continue to constrain teachers' engagement in professional development activities globally, including in low-income contexts such as Tanzania (Barrett, 2020). Financing of CPD in Tanzania remains inconsistent and heavily dependent on individual or donor

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contributions rather than predictable public funding. Furthermore, reports from the subsequent studies (Mwinuka & Farrelly, 2023) indicated fragmented donor support, limited government allocations, and the absence of a systematic cost-analysis framework. These situations weaken teachers' equitable access to CPD (Mwinuka & Farrelly, 2023).

However, despite the strong emphasis on teachers' participation in various CPD programmes, there remains insufficient empirical research on the full financial structure and its implications for teachers' engagement in Tanzania. Limited knowledge of CPD finances limits policy decisions about its effectiveness and sustainability. Much research has investigated the training needs, implementation challenges, and policy frameworks (Kihwele & Mgata, 2022) but has largely overlooked the financial dimension. Therefore, little is still known about the influence of costs and financing models on teachers' willingness and ability to engage in CPD. Without clear evidence on the actual costs and financing mechanisms of CPD, efforts to achieve equitable, sustainable, and high-quality professional development for teachers risk remaining ineffective and misaligned with national and global education targets. This study fills that gap by assessing cost structures and teacher engagement in CPD, drawing on evidence from Tanzanian Secondary Schools.

1.1 Purpose of the study

To examine the relationship between cost structure and teachers' engagement in continuing professional development among teachers in secondary schools in Tanzania.

1.2 Objectives of the Study

- i. To examine the costs associated with CPD for teachers in secondary schools in Tanzania
- ii. To investigate the relationship between cost burden and teachers' engagement in CPD

1.3 Research Questions

- i. What costs are associated with CPD for secondary teachers in secondary schools in Tanzania?
- ii. What is the relationship between the overall cost burden and teachers' level of engagement in CPD in Tanzania?

2.0 Literature review

2.1 Theoretical Framework on Financial Aspects of Teachers' CPD

2.1.1 Human Capital Theory (HCT)

The study adopts the human capital theory developed by Gary Becker (1964). The theory explains that investment in education and an individual's skills lead to increased production and higher returns in the economy. As applied to this study, the education and training of teachers constitute an investment. This involves paying direct and indirect costs. The expectation is higher production after they improve knowledge and skills through CPD. However, in making any investment, cost analysis is unavoidable for its effectiveness. Still, in CPD investment, teachers weigh the cost versus expectations. High costs can discourage participation, while subsidised or shared costs can encourage engagement. So, this theory helps the study to demonstrate the implications of cost and costing in teachers' CPD engagement. However, Human Capital Theory explains the importance of investing in teachers, but it overlooks the financial barriers that hinder participation, which this study explores through a financial model.

2.1.2 Financial Model of Teachers' CPD in Tanzania

The financing model in this study served as an eclectic approach to complement the HCT above. It refers to how the costs of CPD are covered, distributed, and sustained among stakeholders (government, donors, institutions, and teachers). It defines who pays, how much, and how sustainable the funding is. In this study, the model examines the allocation of financial resources and its implications for reducing teachers' financial burdens in CPD engagement.

The model explains that there is no single way to distribute the cost and consequently, teachers' level of engagement. In a government-funded model, the state covers training expenses, reducing

teachers' financial burden, though limited public allocations in developing countries often undermine sustainability (European Commission/EACEA/Eurydice, 2017). The donor-supported model fills funding gaps through international agencies, but over-reliance on external partners makes programmes short-lived (Mwila et al., 2022). Under the institutional model, schools, unions, or colleges finance CPD for their staff, though disparities arise between resource-rich and under-resourced institutions (Roux, 2018). In contrast, the self-financed model limits teachers' participation in CPD because it requires them to cover the full costs of the program, which only a few can afford (Komba & Mwakabenga, 2019). A more balanced shared-responsibility model, where costs are distributed among government, institutions, donors, and teachers, is considered the most sustainable, as it reduces inequities while fostering ownership (Li et al., 2023). These models highlight that the structure and analysis of CPD costs directly influence teachers' ability and willingness to participate, a central focus of this study. The table below illustrates the strengths, weaknesses, and sustainability of each financing model.

Table 1. Comparison of Financial Models for Financing Teachers' Continuous Professional Development (CPD)

Financial	Primary source	Funding	key strengths	Key weaknesses	Sustainability
Government-funded	National or local government budgets		Promotes equitable access and reduces the financial burden on teachers	Constrained by limited public budgets and competing national priorities	Medium
Donor-supported	International development partners and non-governmental organisations (NGOs)		Addresses funding gaps and supports innovation in CPD delivery	Highly dependent on external funding and often limited to short-term projects	Low
Institution	Schools, teacher unions, or higher education institutions		Enhances institutional ownership and enables context-specific professional development	Resource availability varies considerably across institutions	Medium
Self-financed	Teachers' personal income or savings		Provides immediate access to CPD opportunities without waiting for external support	Creates financial barriers for low-income teachers and may widen inequalities	Low
Shared responsibility	Government, development partners, institutions, and teachers		Distributes financial responsibility, promotes equity, and enhances long-term sustainability	Requires effective coordination, clear accountability mechanisms, and stakeholder commitment	High

Source: Author's synthesis based on literature review

Based on this comparison, the self-financed and donor-supported models are the least sustainable, whereas the shared-responsibility model offers greater potential for equitable, long-term financing. In Tanzania, however, CPD financing remains fragmented, with heavy reliance on teacher contributions and donor support, underscoring the need for a systemic, cost-effective financing framework (Mwinuka & Farrelly, 2023; National Audit Office of Tanzania, 2018).

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2.2 Global Perspectives on Teachers' CPD Costs

In wealthy nations such as the US, CPD is perceived as a major investment that must be costed systematically. Title II-A rules also make clear that federal funds can cover stipends, substitutes, materials, and travel (U.S. Department of Education, 2025). The US government spends about \$18,000 per teacher per year, including opportunity costs, according to TNTP's multi-district study estimate (Jacob & McGovern, 2015). Likewise, in the UK, CPD prioritises high-quality, sustained PD mechanisms (coaching, rehearsal, feedback) within tight budgets; fees are less of a barrier than protected time/cover (EEF, 2021). Analysis shows that teachers' CPD costs about £506 per teacher annually (Teacher Development Trust, 2025). The costing is done in various ways depending on the context. For example, the US often uses the ingredients approach, which identifies and prices all resources: teacher time, substitute/cover time, coaching, materials, facilities, and overheads so that options can be compared. In the UK, central programmes, the "Golden Thread" of the ECF and NPQ scholarships, have reduced or removed course-fee costs for many teachers since 2021, shifting school budgets more toward time and cover; planning therefore weighs whether scholarship-backed NPQs meet local needs versus other CPD that still requires cash outlay (Department for Education (DfE), 2025a, 2025b). In the US, districts also plan CPD using federal Title II-A funds, which explicitly allow spending on course fees, stipends, coaching, and substitute coverage (U.S. Department of Education, 2025; New York State Education Department, 2025).

2.3 Developing Countries' Perspectives on Teachers' CPD Costs

Many developing countries consider CPD costs very important. Nations like Indonesia have adopted a decentralisation system in which the Bantuan Operasional Sekolah (BOS) grants and the network of teacher working groups, such as Kelompok Kerja Guru (KKG) and Musyawarah Guru Mata Pelajaran (MGMP), comprise the total costs. These initiatives facilitate analysis of a cost framework that aligns CPD program intensity and coverage and enables equitable resource allocation. India likewise emphasises the financing of teachers' CPD, particularly in the National Education Policy (NEP) 2020. The Samagra Shiksha scheme, which directly aligns with NEP, operates many programs under fixed financial norms, including ceilings for training, materials, and other expenditures, thereby promoting uniformity and accountability across states. The government of Kenya uses a mixed approach that combines unit costing and cost-sharing models. Therefore, the affordability analyses inform both government provisioning and teacher contributions, determining the buy-in and long-term sustainability. In Uganda, CPD financing depends on donor-supported programs such as VVOB and UNICEF to cover facilitation and training fees. However, studies show that teachers in Uganda incur many indirect costs, such as transport and meals, which significantly reduce their full participation in CPD (Hardman et al., 2019; UNESCO, 2021). Malawi opted for a decentralised system for financing CPD, with school-based clusters initiated and supported by School Improvement Grants provided by educational stakeholders. However, evidence shows that insufficient funding for materials and logistics shifts costs to teachers, thereby limiting sustainability. These examples highlight that across many developing countries, financial burdens on teachers remain a critical barrier to equitable and sustainable CPD.

2.4 Tanzania Perspectives on Teachers' CPD Costs

Tanzania, like other nations, emphasises that teachers engage in CPD programs through the Continuous Training Programs for In-service Teachers initiative, famously known as "*Mafunzo Endelevu kwa Walimu Kazini*" (MEWAKA). MEWAKA emphasises school-based, peer-collaborative CPD through Communities of Learning (CoLs) and digital resources delivered via a centralised Learning Management System (LMS). Funding for these programs and others is provided by development donors, such as the World Bank (World Bank, 2023). Additionally, Tanzania has shifted from traditional in-service training to a semi-distance-learning CPD model. Costs such as learning materials, accommodation, and food for face-to-face sessions are covered by the government, while teachers bear the cost of transport to teacher centres (UNESCO, 2015). However, systemic limitations persist due to limited funds, weak policy frameworks, and inconsistent institutional support (Iddy, 2018; Komba & Mwakabenga, 2019). This indicates the need for holistic and sustainable investments in CPD infrastructure.

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2.5 Impact of Financial Constraints on Access to and Participation in CPD programs

Scholars demonstrate various financial implications in implementing teachers' CPD programs. Some of them include inadequate training opportunities, poor infrastructure, and inadequate learning materials (UNESCO, 2023). Insufficient funding makes it difficult for ambitious teachers to finance their professional development. Through the lens of Human Capital Theory (HCT), when teachers bear high out-of-pocket expenses for transport, meals, or accommodation, the personal cost often outweighs the expected professional or economic benefit, leading to low participation and poor knowledge transfer (Becker, 1964; Barrett, 2020). These situations have contributed to the discouragement of the majority, especially those with low income.

3.0 Research Methodology

3.1 Research Design

The study adopted a convergent mixed-methods research design. Qualitative methods were used to collect data on the types of CPD teachers incur. In contrast, quantitative methods were used to investigate the relationship between the cost burden and teachers' level of engagement in the programs. This design facilitated the researcher's flexibility in data collection, analysis, and data presentation (Creswell, 2006). However, the collection and data analysis were conducted separately, followed by validation of data from two methods. At the end, the results were interpreted. Data from teachers (schools) were collected through questionnaires, and data from municipal directors and HLIs were collected through interviews.

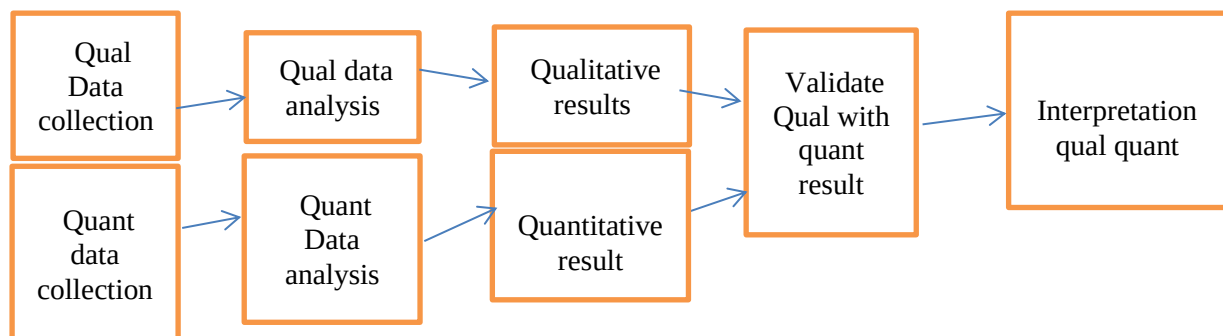


Figure 1. Forms of data collection, analysis and interpretative processes

The figure indicates equal priority between the two data collections and analysis. Following the validation stage, where the results were converged for comparison and synthesis to produce comprehensive insights. Integration occurred at the data interpretation stage, where quantitative findings were compared and triangulated with qualitative themes. This approach ensured that the statistical evidence was supported by lived experiences, yielding richer and more valid conclusions.

3.2 Data Collection Methods

The study used Questionnaires, interviews and documentary reviews to collect data. Combining methods results in better evidence. For that reason, documentary reviews, interviews, and questionnaires were used in this study to validate evidence from different sources concerning how teachers' CPD is financed in Tanzania. Each method has its weaknesses and strengths. Hence, they need to be mixed to supplement each other.

3.3 Data Processing and Data Analysis Strategies

Quantitative data obtained through questionnaires were coded and analysed using the Statistical Package for Social Sciences (SPSS) version 26. Descriptive statistics, such as frequencies and percentages, were computed to summarise the cost components (direct, indirect, and hidden) and teachers' participation levels in CPD programs. To determine the relationships between cost variables and participation levels, Pearson correlation analysis was conducted. Where appropriate, independent-samples t-tests were used

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to compare cost burdens by gender and school location. The results were presented using tables for clarity and comparison. (Daryanto, 2020; Pallant, 2020).

Qualitative interview data were analysed using thematic analysis, following Creswell's (2006) framework. The process included data transcription, translation, coding, categorisation, and theme development based on the study objectives. Two experts checked inter-coder agreement by independently coding. The inter-coder agreement was checked by two experts to ensure reliability; it was coding a portion of the transcripts, achieving an 85% agreement rate. Divergent codes were discussed until consensus was reached. This procedure enhanced the credibility, dependability, and confirmability of the qualitative findings.

3.4 Study Population, Sample Size and Sampling Procedures

3.4.1 Population of the Study

The study explores the financial dimension of teachers' CPD in secondary schools. The population is all secondary teachers, heads of schools and district education officers in Ilala municipality.

3.4.2 Sampling strategies

The study used a purposive random sampling strategy to select teachers because the number of potential participants was large, as most teachers met the criteria to participate in the study (Creswell & Creswell, 2018). Participants from higher learning institutions (HLIs), heads of schools, and MEOs were selected through purposive sampling based on their roles in planning and conducting teachers' CPD.

3.4.3 Sample Size

Table 2. Sample size

Institution	Reasons	Number of participants
HLIs	They conduct training for teachers	1
MEO	They design and decide on teachers' CPD	2
Heads of schools	They plan, make decisions and give permission to teachers to take CPD	3
Secondary schoolteachers	Are the beneficiaries of the CPD programs	97
Total		103

This number of participants was finally determined by data saturation, whereby information from the data sources was repeated; nothing new was reported. The total sample size of 103 participants comprised 97 teachers and 6 administrators. The larger proportion of teachers was justified because they represent the main implementers and beneficiaries of CPD programs and are directly affected by the financial implications of participation. Administrators, including heads of schools and education officers, were fewer in number because their role was primarily to provide policy and management perspectives rather than personal experiences.

3.5 Validity and Reliability of the Study

The study's validity was established by piloting the questionnaire and interview guide in a comparable setting and refining them based on expert feedback to confirm content and construct validity. Reliability was maintained through ethical compliance, consistent documentation and standardised data collection. Quantitative data were verified for accuracy, while qualitative data were systematically coded, supported by verbatim quotations to preserve participants' voices.

Contextual, detailed information was provided to enhance the applicability and transferability of teachers' cost experiences and professional development structures, enabling readers to relate findings to similar educational settings. Furthermore, the study used multiple data sources to maintain objectivity and confirmability. The triangulation of multiple data sources and member checking to validate participants' views strengthened the study's credibility, dependability, and overall trustworthiness.

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3.6 Ethical Consideration

The study considered information consent and confidentiality in its processes; therefore, permission was obtained before data collection to collect data in respective areas. Moreover, all participants were informed about the purpose of the study, the time required to participate, and their right to participate voluntarily.

4.0 Results and Discussion

This section discusses the findings in depth, linking them to the theoretical model and the literature on the costs and costing analysis of teachers' continuing professional development in Tanzania. The analysis is divided into subsections that address three sub-questions.

4.1 Costs of Secondary Teachers CPD in Tanzania

The first question was what the costs associated with teachers' CPD programs in Tanzania are. The study findings show that teachers' CPD is subject to various costs, which influence their participation. These costs are categorised into three groups: direct, indirect, and hidden, as follows.

4.1.1 Direct Costs of Secondary Teachers in CPD in Tanzania

Direct costs were the most visible and frequently reported by teachers, school, and municipal education officers. They included facilitator fees (35-45%), learning materials (10%), accommodation and transport (20-30%), meals (10-15%), and trainer fees (10-20%). These costs are consistently explicitly accounted for in teachers' or official expenditure records.

Table 3. Direct costs in teachers CPD

Cost component	Share of direct cost (%)	Evidence source
Training fees	35-45%	Teachers,
Transport & accommodation	20-30%	Teachers
Meals	10-15%	Teachers
Learning resources	10%	Teachers
Trainers' facilitation	10-20%	Program providers

Source: Field Data (Ilala)

4.1.2 Training Fees and Participation CPD Costs

Most teachers reported that direct training fees accounted for the largest share of CPD expenditure. In some programs, fees contributed between 35-45% of the total direct costs, though this proportion varied depending on whether the program was government-sponsored, donor-funded, or privately organised.

Teachers emphasised that fees are a fundamental cost in engaging in CPD. Usually, payment is required either in full or at least half, depending on the program provider's policies. One of the major TCPD agencies, the Agency for the Development of Educational Management, confirmed this pattern. This finding was corroborated by one of the major providers of Teacher Continuous Professional Development (TCPD), the Agency for the Development of Educational Management (ADEM). An interview with a tutor said:

“Teachers enrolling in CPD programmes pay registration and application fees alongside tuition fees. At least half of the cost is due at the time of admission in the first year. In the second year, fees increase because students undertake field practice, which adds supervision costs.”
(Interview with HLI Tutor, 11 September 2025)

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Similarly, another teacher highlighted the cumulative financial burden associated with programme fees:

“Even after paying tuition fees, there are additional expenses such as registration fees, examination fees, and field practice contributions. When all these costs are combined, the programme becomes very expensive for ordinary teachers” (Teacher 15, Focus Group Discussion, 11 September 2025)

Furthermore, questionnaire findings indicated that most teachers relied on personal financial resources to support their CPD participation. Specifically, 78% of respondents reported that they self-financed their professional development, demonstrating the substantial financial responsibility borne by teachers in pursuing continuing education

The findings indicate that training fees are a dominant and consistent component of CPD expenditure for secondary school teachers in Tanzania. This finding aligns with other previous research that fees and other direct charges are basic in CPD (Komba & Mwakabenga, 2019; Mwinuka & Farrelly, 2023). Teachers who engage in potential CPD programs must ensure they are well-financed to cover the costs of successful applications, registration, and access to other services, such as supervision of field practice. UNESCO (2021) observes that the high costs of professional development limit equitable access to professional development for teachers worldwide, particularly in low-income settings. Therefore, teachers need financial support to facilitate their engagement in these programs.

Reliance on teacher-self-funded mechanisms critically limited their access and undermined the role of sustainable government funding for CPD in Tanzania. Sometimes, dependence on donor funds reduces guarantees of these programs. Teachers remain heavily dependent on personal family contributions, which may affect program sustainability and teachers’ motivation to engage in continuous learning. Thus, the study approves that training fees strongly influence teachers’ participation in CPD. Reducing or restructuring fees through cost-sharing models, government subsidies, or school-based training approaches could make CPD more accessible, equitable, and sustainable.

4.1.3 Transport and Accommodation

The findings revealed that transport and accommodation constituted significant direct costs associated with teachers' participation in CPD programmes, particularly for those travelling from semi-urban and rural areas to centralised training venues. In many cases, transport expenses accounted for approximately 20–30% of the total direct costs. However, these expenses varied depending on the distance between teachers' places of residence or work and the training institution. Teachers who live near the training venue generally incur lower transport costs but often spend more on accommodation. Conversely, teachers who commute daily incurred higher transport costs. In some instances, participants incurred both transport and accommodation costs simultaneously, substantially increasing the overall financial burden of CPD participation. One participant explained:

“Travelling to the training venue every week was costly because I had to pay transport fares throughout the programme. At one point, I decided to rent a room near the college because daily transport had become even more expensive” (Teacher 12, Focus Group Discussion, 21 September 2025)

Similarly, another teacher highlighted the financial challenges associated with attending training away from home:

“When the programme is offered outside my district, I have to budget for both accommodation and transport. These expenses sometimes exceed what I spend on learning materials” (Teacher 6, Focus Group Discussion, 11 September 2025)

The significance of these costs was further confirmed by the head of a secondary school, who observed:

“In Dar es Salaam, transport and accommodation consume a large proportion of teachers' training budgets. Daily transport fares alone can amount to nearly half of the tuition fees, particularly for teachers living far from the city centre” (Interview with Head of Secondary School, Ilala Municipality, 3 August 20, 2025)

The data suggests that settlement and transportation costs consume a disproportionately high share of CPD budgets, particularly when programs are centralised in urban areas. Teachers from both sides of the city, for example from Chanika, highlighted that the daily cost of transport could reach up to half of the training fees, while renting rooms in the city added a financial burden. This finding reflects broader patterns noted in the literature: location and mode of delivery strongly influence CPD affordability. Urban-based programs may provide better facilities and access to trainers, but they increase expenses for participants travelling from afar. According to Komba and Mwakabenga (2019), teachers in rural Tanzania are disproportionately disadvantaged by such cost structures, as they face higher transport and accommodation costs than their urban counterparts. Similarly, UNESCO (2021) emphasises that the geographical centralisation of training contributes to inequities in teacher professional development opportunities in many low-income countries. Overall, these findings suggest that a shift toward school-based, cluster-based, or blended (online/face-to-face) CPD models could reduce transport and settlement expenditures, making CPD more cost-effective and equitable across regions.

4.1.4 Meals and Refreshments

Daily allowances for meals and refreshments were consistently included in CPD budgets. According to the findings, this item accounted for around 10-15% of the total direct costs. In addition, it was noted that, among educational administrators in some schools, teachers considered meal allowances an incentive, enhancing their willingness to attend the CPD program. One of the MEOs said:

“When conducting teachers' training like workshops or seminars, meals and beverages must be well provided for their effectiveness and success. Making meals and refreshments draw attention from the discomfort of hunger and others” (Interview with MEO Ilala Dar es Salaam 14 June 2025)

Furthermore, during the interview, one head of school highlighted that food and refreshments are a potential cost in the costing of CPD. Because it influences teachers' performance in the programs, it was noted:

“Although meals may appear to be an obvious daily need, it requires proper planning of the budget so that teachers remain engaged, comfortable, and able to concentrate throughout the training sessions” (Interview with Hos from Ilala Municipality 14 June 2025)

This evidential statement shows that financing meals in teachers' CPD serves as a form of motivation and incentive. Evidence from professional development programs in sub-Saharan Africa shows that providing meals and refreshments significantly improves teacher attendance and reduces dropout rates during long training sessions (UNESCO, 2021). Conversely, programs that neglect to budget for meals often experience reduced participation and negative perceptions among teachers, as already-strained personal or family budgets absorb the cost of meals. This underscores that meals are both a welfare cost and a hidden driver of CPD success. While training fees, transport, and accommodation may dominate budget discussions, including meal costs helps ensure equity, particularly for teachers from low-income backgrounds. As Mwinuka and Farrelly (2023) argue, small but recurring items like food and refreshments significantly influence the sustainability and acceptability of CPD programmes.

However, the findings from the teachers' questionnaires indicate that meal and refreshment costs, especially in long-term CPD, were borne by teachers themselves, as shown in the figure 2 below, where

one indicates disagreement while five means strongly agreeing, as follows:

I spend money on meals or food during training/meeting/seminar concerning my professional events.

100 responses

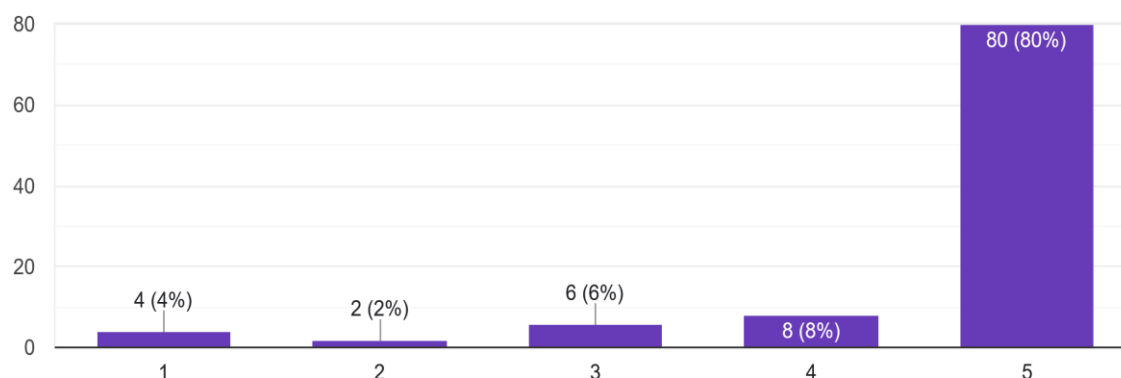


Figure 2. Number of teachers responding to self-finance in food during CPD

Source: Questionnaire data collected from secondary teachers, Ilala June 2025

4.1.5 Learning Materials and Stationery

Another TCPD cost was learning resources such as manuals, handouts, stationery, and digital materials. According to the findings, this category consumed an average of 10% of direct CPD budgets. In donor-supported programmes, these resources were often subsidised or provided free of charge, whereas in locally funded sessions, teachers bore the burden of purchasing them.

This finding is consistent with studies showing that teaching and learning materials account for a notable share of CPD costs, especially in resource-constrained contexts. UNESCO (2021) emphasises that manuals, handouts, and ICT-related tools are indispensable for teacher learning yet are often underfunded in national CPD budgets. Similarly, Hardman et al. (2019) observed that in Tanzanian teacher training, the absence or scarcity of adequate learning materials limited the effectiveness of CPD programs. Furthermore, Mwinuka and Farrelly (2023) note that while donor-funded programs tend to absorb the costs of learning resources, locally organised initiatives transfer these expenses to teachers and schools, thereby increasing financial pressure and reducing the long-term impact of professional development.

Overall, the direct cost structure shows a pattern of inequity, heavy reliance on teacher contributions, and limited government subsidy. These findings call for more sustainable financing mechanisms such as school-based CPD, cluster training, and ICT-supported models, which can reduce transport and meal costs while maintaining quality.

4.1.6 Indirect Costs of Secondary Teachers CPD in Tanzania

Apart from the direct costs, the study revealed significant indirect costs incurred by teachers and schools when participating in CPD. These most prominent costs included opportunity costs, administrative expenses, and school-level adjustments and sacrifices to rescue the situation after a teacher joined CPD. They are less visible in terms of budget, but they are also important.

Table 4. Indirect costs of teachers CPD

Indirect Category	Cost	Examples	Who Pays?	Impact
Opportunity Costs		Lost teaching hours; substitutes hired	Schools/Teachers	Reduced instructional time; extra payments
Administrative Expenses		Processing payments; reporting; logistics	Schools	Strain on school budgets
School-Level Adjustments		Relief timetables; coordination	Schools	Increases hidden institutional costs

Source: Field Data (Ilala, June 2025)

4.1.7 Opportunity Costs

Teachers reported losing valuable classroom teaching hours while attending CPD workshops. In some schools, head teachers had to hire temporary substitutes or redistribute teaching loads among remaining staff, creating indirect financial and instructional burdens. These opportunity costs were rarely budgeted but had clear effects on teaching and learning. This finding is frequently repeated by school heads across all regions. One of the heads of school said:

“Developing skills of teachers is very important, but the problem is to get a substitute for covering teachers’ sessions... And the main challenge is in science subjects because there are few teachers”.
(Interview with head of school from Ilala, 11 June 2025)

This voice indicates that the government has not well established the costs of replacing teachers who take long leave to pursue further studies. So, the burden was left to the school. The problem was noticed in science subjects where there is a shortage of teachers in most schools, making it difficult to find substitutes or arrange alternative lesson coverage. As a result, additional costs arise from the need to compensate substitute teachers or organise make-up sessions, yet these costs are rarely factored into official school budgets. Consequently, while CPD is recognised as important, the hidden financial and logistical burden of covering lessons during training creates a significant barrier to its effective implementation. These costs are invisible, but they significantly influence teachers’ engagement in CPD (Levin, 2019).

4.1.8 Administrative Expenses

The findings reveal that administrative duties increase during the preparation and conduct of teachers’ CPD. The requirements for completing the programs make other staff much busier at the school level and much more so at the district level. Examples of activities include organising logistics, processing payments, and producing reports for CPD participation. These restless activities are not well counted, but they place significant pressure, especially on limited school budgets:

“The process of allowing secondary school teachers to pursue further studies involves several steps. First, the names of teachers willing to join CPD programs are collected. Afterwards, the candidates are discussed and assessed in meetings to determine whether they qualify based on the established policies and regulations. Once the eligible teachers are identified, acceptance letters are prepared, and the corresponding study budgets are developed to support their training” (Interview with MEO from Ilala Municipality 3 July, 2025)

Implicitly, the teacher’s CPD is not a simple activity. Administrators consume a lot of time and effort to achieve it. Devoted efforts also influence the implementation of CPD, though people may not be aware of it. In practice, most school budgets are limited and often overlook hidden costs such as substitutes or lost teaching time (Villegas-Reimers, 2003). In Tanzania, formal budgeting structures exist but remain underfunded, creating reliance on donor agencies or teacher contributions (Komba & Mwakabenga, 2019; Mwinuka & Farrelly, 2023). The main concern remains about its sustainability.

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4.1.9 School-level Adjustments

It was found that some schools incur costs of arranging relief timetables, printing extra teaching notes, and coordinating with district officials. These activities represent indirect and hidden costs that place additional strain on already limited school resources. However, these costs are rarely captured in official budgets. The literature confirms that indirect costs, such as administrative time, printing, and coordination, are often overlooked in CPD planning, yet they can significantly affect the sustainability and equity of programs (UNESCO, 2016). In Tanzania, where school budgets are already constrained, these hidden expenditures reduce funds available for core teaching and learning needs, highlighting the importance of comprehensive cost analysis in CPD financing (Komba & Mwakabenga, 2019; Mwinuka & Farrelly, 2023).

4.1.10 Hidden Cost of Secondary Teachers CPD

The findings also uncovered hidden costs apart from direct and indirect costs. These are not formally recognised in programme budgets and may not be on teachers' minds before joining the CPD. These costs are shouldered by teachers, and sometimes by their families or community. These costs include gender costs, personal contributions and others as presented in Table 5.

Table 5. Hidden costs of teachers CPD

Cost	Examples	Who pays?	Implications
Personal contributions	Extra transport, meals, materials	Teachers	Reduces household income
informal contributions	Refreshments, venue arrangements	Teachers/Schools	Essential but undocumented expenses

Source: Field Data (Ilala, 2025)

4.1.11 Personal Contributions and Family Sacrifices

It was found that, apart from teachers, other relatives and family members also incur CPD costs. Teachers frequently used personal savings to cover shortages in transport, meals, or materials. In many cases, these payments reduced the resources available for their households, especially for female teachers balancing domestic responsibilities:

“Sometimes I must use money meant for my children’s school needs to pay for transport or meals during training. It is a sacrifice, but if I do not attend, I might miss future opportunities” (Female secondary school teacher, Dar es Salaam, 2025)

This evidential statement demonstrates that teachers' CPD sometimes imposes burdens of cost and sacrifice that extend beyond the candidate teacher. Family members may also incur costs due to their presence concerns. Moreover, the report shows that teachers in Ilala secondary schools use their personal savings to cover shortages in CPD expenses, such as study materials, which, in many cases, reduces household resources available for essential needs. Female teachers highlighted the challenge of balancing these expenses with domestic responsibilities, revealing a gendered dimension of hidden costs. The findings echo previous empirical literature, which reported that the cost of CPD is not limited to formal budgets but also includes personal and household contributions (UNESCO, 2016). In contexts such as Tanzania, where teachers' salaries are modest, such personal sacrifices demonstrate both educators' commitment and systemic gaps in CPD financing models (Komba & Mwakabenga, 2019; Mwinuka & Farrelly, 2023).

4.1.12 Gendered Costs

Due to socially assigned duties, female teachers were reported to be burdened with home responsibilities that hinder their professional development. For example, paying for a nurse to care for children while

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they attended multi-day CPD programs away from home. Some even pay their relatives or neighbours to supervise children, adding to the hidden costs of participation:

“For female gender attending training, there is a need for a lot of preparations, especially when they have a small child. For example, there must be extra costs for paying another person to take care of the baby” (Secondary school teacher, Ilala Municipality, July 2025)

In other words, female teachers incur additional costs compared to male teachers when engaging in CPD. This shows that gender roles have implications for female professional development, limiting their access and affordability. Given that, in Tanzania, women constitute a considerable proportion of the teaching workforce, neglecting these costs risks reinforcing the gender gap in professional development. There must be a strategic policy that recognises gender-responsive financing of CPD, for example, by considering childcare support, flexible training arrangements, or locally based programs (Komba & Mwakabenga, 2019; Mwinuka & Farrelly, 2023).

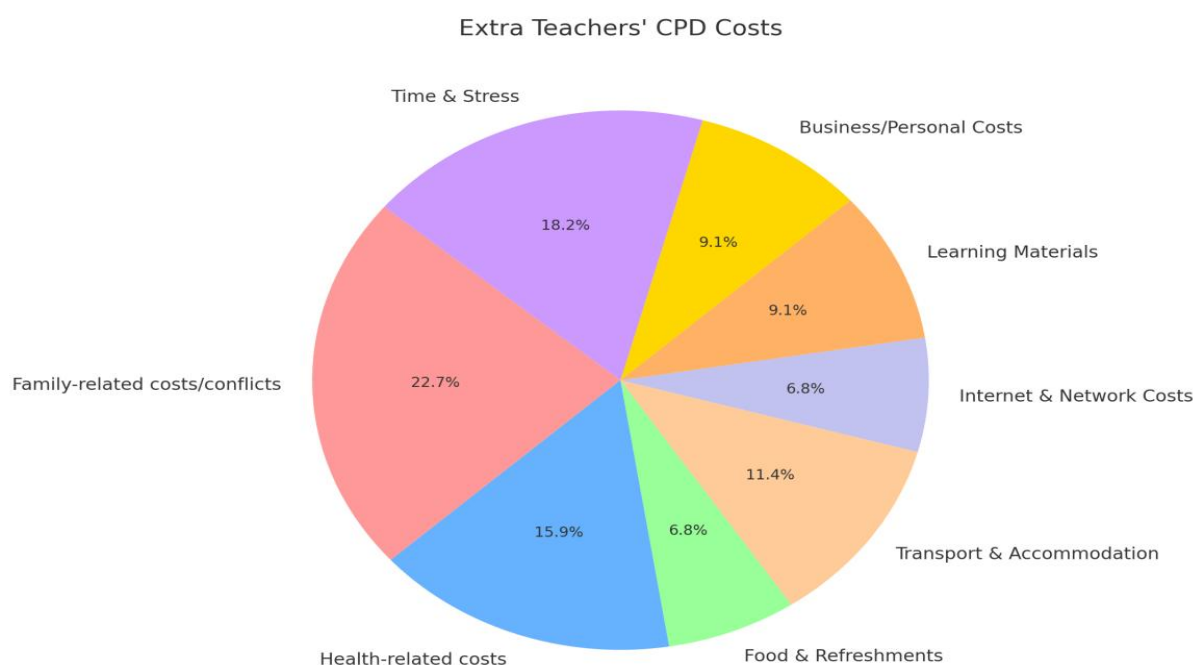


Figure 3. Extra teaching costs in teachers' CPD

Source: Field Data (Ilala, June 2025)

To conclude the subsection, the analysis shows that the indirect and hidden costs compound the burden of direct costs, making CPD financially challenging for many teachers. It is necessary to recognise these costs when establishing teachers' CPD policies and supports to achieve the expected outcome. Without explicit recognition of these categories, policies may underestimate the true financial implications of teacher professional development. Therefore, a more comprehensive costing framework that includes administrative expenses, opportunity costs, and family-related hidden costs is necessary to ensure equitable and sustainable CPD in Tanzania.

4.2 Cost Burden and Teachers' Level of Engagement in CPD

The study examined the relationship between cost burden and teachers' participation in CPD by using SPSS (version 26) and a Pearson correlation analysis. Table 6 shows the results.

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Table 6. Correlation between CPD Costs and Teachers' Engagement

Variables	Mean	SD	r	p-value	Interpretation
Total CPD Cost Burden	3.78	0.89	-0.46**	0.001	Significant negative correlation
Teachers' Level of Engagement in CPD	4.10	0.72			

($p < 0.01$)

The analysis indicates a statistically significant negative correlation ($r = -0.46$, $p < 0.01$) between the total CPD cost burden and teachers' level of engagement. The study confirmed that, based on the data provided, as the cost burden on teachers increases, their participation in CPD programs declines. This finding means that financial constraints remain a foremost deterrent to teachers' active engagement in professional development, particularly in self-funded programs or those with limited institutional support.

The study findings further echo the assumptions of Human Capital Theory, as articulated by Becker (1964), which emphasises that individuals make rational choices regarding education by comparing costs and future returns. Motsie (2023) observed that when teachers bear CPD costs, participation levels decline significantly because the government benefits more from CPD than individual teachers do. Therefore, cost-minimisation strategies such as government subsidies, digitally based CPD, or locally organised peer mentoring are essential to promote and sustain teacher CPD participation and equity. Furthermore, the study confirms that apart from the financial influence on teachers' CPD engagement, other costs such as family conflict, fatigue, and family separation, which fall under indirect costs, act as potential barriers to CPD. The figure below summarises the responses

What are the main cost challenges you face in participating in CPD

60 responses

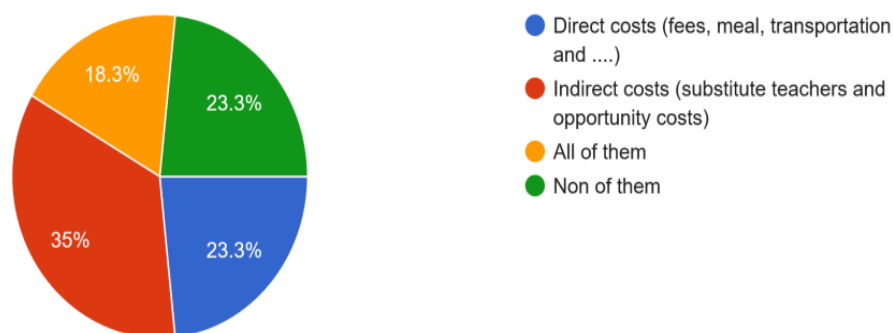


Figure 4. Cost challenges related to CPD participation

Source: Field Data (Ilala June-July, 2025)

The study findings demonstrate that indirect costs account for about 38%, while direct costs account for 23%. Implicitly, the burden moved from financial costs to hidden sacrifices like time, family, life, and teaching quality as a key factor that reduces teacher motivation to engage in CPD and to ensure classroom effectiveness, and overall sustainability of CPD programs. High indirect costs imply the need for flexible models such as school-based CPD, blended or online training, or scheduling CPD during school holidays to reduce disruptions.

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5.0 Conclusion and Recommendations

5.1 Conclusion of the Study Findings

The study concludes that unless both direct and indirect (hidden) costs of CPD are addressed systematically through sustainable support mechanisms, teachers' engagement in CPD will remain significantly constrained. The systematic approaches to addressing the challenges will mitigate the risk of excluding large numbers of teachers, especially those from rural and semi-rural areas and those with family responsibilities. Immediate interventions must be initiated by the government, including subsidies, donor support, online/blended delivery models, and school-based CPD, to reduce financial and non-financial burdens. Also, it is important to strengthen cost analysis in CPD to ensure resources are allocated fairly and effectively.

5.2 Study Recommendations

- i. The government should ensure that there are well-established cost-analysis guidelines that require CPD programmes to identify and minimise direct, indirect, and hidden costs in Tanzania.
- ii. The government, through the Ministry of Education, should integrate CPD costs into national education budgets to reduce teachers' personal financial burden.
- iii. There should be School-Based CPD Models such as peer mentoring, cluster-based workshops, and professional learning communities to cut down on transport and accommodation costs.
- iv. Strengthening online learning programmes and the use of IT-based platforms (online learning) to deliver CPD flexibly should be considered in order to reduce both time and financial costs.
- v. Scheduling Flexibility: CPD sessions during school holidays or non-teaching hours are important to reduce disruption to classroom instruction and family life.

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