**Original Research Article**

**Teachers’ Continuous Professional Development Strategies in Public Primary Schools in Morogoro Municipality, Tanzania: Constraints and the Way Forward**

**ABSTRACT:** *This study focused on Teachers’ Continuous Professional Development (TCPD) Strategies in Morogoro Municipality, Tanzania Public Primary Schools. The study employed a pragmatic philosophy with a convergent research design under a mixed research approach rooted in the Andragogy Learning Theory, to examine the constraints and way forward for the effective execution of TCPD strategies. The study’s data were collected from two hundred and eight (208) informants, where 12 heads of schools were selected using a purposive sampling technique. In contrast, 196 teachers were selected using a stratified sampling technique. Descriptive statistics were applied to analyze quantitative data, and thematic analysis techniques were used to examine qualitative information. The study identified inadequate funding for the program and limited collaboration among implementers. The suggested solutions included technology adoption and adjusting the school schedule to incorporate TCPD learning activities as the main obstacles faced by teachers in implementing TCPD strategies. Nevertheless, the study established that teachers, as the main TCPD implementers, were not motivated due to the prevailing program’s obstacles; hence, the program's effectiveness is diminished. The study established strategies to foster TCPD strategies, including the utilization of ICT, collaboration, and professional development for teachers. This study concluded that numerous obstacles are disturbing TCPD implementation, and the promising opportunities to mitigate these challenges are clear. Additionally, the study recommended that the Ministry of Education, Science, and Technology review existing policy to favor TCPD strategies implementation, and the recommendations for action were made to the head of schools to adjust the timetable to include TCPD sessions, and to the teachers to actively engage with the program for better pedagogical outcomes. Finally, the recommendations were provided to further study the long-term impact of TCPD on students' learning outcomes, technology-based efficacy in overcoming time constraints, and teacher motivation in maintaining the program.*

KEYWORDS:Teachers' Continuous Professional Development, Public Primary Schools, mitigate constraints, and pedagogical

1. **Introduction**

Teachers' Continuing Professional Development (TCPD) is more recognized as a crucial part of improving students' learning outcomes and teaching quality in today's dynamic world of learning. TCPD empowers teachers to respond to changing students' needs, technological growth, and curriculum innovations. Globally, TCPD is associated with enhanced student-focused pedagogical practices, for classroom design, and effective lesson preparation (Amponsah et al., 2023). However, investing in TCPD's impact and durability is indispensable for countries like Tanzania, where primary education is the cornerstone of national growth.

Also, for teachers to benefit from up-to-date pedagogical learning and expertise, TCPD incorporates systematic, collaborative, and reflective activities in addition to training sessions, where peer learning, imagination, and adaptability to curriculum changes are all encouraged (URT, 2020). From Sewornu (2022) research, there is ongoing training that enhances the professional development of teachers and enhances the engagement of the students with practical activities. This is particularly required in public primary schools, where there is more pressure on teachers to implement a Competency-Based Curriculum (CBC) and deal with reforms in education.

The government of Tanzania has shown commitment to TCPD in diverse programmatic and policy initiatives such as the National Framework for Teachers' Continuous Professional Development (NF-TCPD) in the 2000s, the Education and Training Policy (ETP) of 1995, and the Primary Education Development Program (PEDP) (Kannonyele, 2023). They seek to ensure professional growth in support of changing curriculum requirements and regularizing in-service training of teachers.

In addition, through the facilitation of teacher teamwork, in-service training, and utilization of information and communication technology (ICT) in teaching instruction, the Education Sector Development Plan (ESDP) 2016/17–2020/21 and revised ETP 2014 have reinforced the role of TCPD in realizing quality education (URT, 2020). To this end, the government started Communities of Learning (CoLs) wherein the teachers from the schools and clusters meet periodically to engage in reflective practice and shared learning (Chachage & Thakrar, 2023). Peer support and school-based improvement are prioritized here in this decentralized form that contextualizes TCPD and makes it accessible. While Tanzanian urban schools like Morogoro Municipality have implemented such national TCPD plans, some issues have been recurring, hindering the full implementation of TCPD programs in public primary schools.

According to Mutangira et al. (2024), these obstacles include inadequate funding, a shortage of training resources, inconsistent program scheduling, limited program follow-up, lack of incentives for teachers, high student-teacher ratios, inadequate administrative support, and a lack of ICT infrastructure. This evidence informs the strategies to mitigate the existing challenges.

Likewise, the scattered and disjointed character of grassroots TCPD efforts is further highlighted by the Joint Education Sector Review (JESR) of 2017 and the National Baseline Assessment for the 3Rs of 2014 (Lafferty et al., 2024). The fact that most of these activities are one-off, ad hoc events with little or no follow-up weakens the ability to support long-term teaching improvement. Although they are key to delivering the competency-based curriculum, teachers in Morogoro Municipality, like in much of Tanzania, tend to lack chances for ongoing professional development.

In addition, the new learning strategies that emphasize critical thinking, creativity, and problem-solving skills are also needed against the current trend towards competency-based education and the restoration by the National Examinations Council of Tanzania (NECTA) of national examinations.

To equip teachers with the pedagogical resources required to meet such expectations, effective TCPD is essential (Chachage & Thakrar, 2023). Conversely, teachers may be unable to interpret curriculum reforms into better teaching practices if current hindrances are not removed and intensive systemic support is not given. Finally, there is a need to evaluate the existing TCPD schemes for public primary schools in Morogoro Municipality, determine the challenges facing effective implementation, and recommend viable and sustainable solutions. Resolving these challenges renders teachers more effective and improves student learning outcomes in line with global standards and national education goals.

**2.0 Statement of the Problem**

Teachers' Continuous Professional Development (TCPD) of teachers is an essential tool in the struggle for everyone to have access to quality education through the preservation of teachers being professionally competent to adapt to curriculum reforms, especially regarding the implementation of the competency-based 2023 curriculum in Tanzania. Tanzania has implemented different strategies to facilitate TCPD functionality among teachers. These include the Education and Training Policy (ETP) 2014, National Framework for TCPD, and Education Sector Development Plan (ESDP), in which Communities of Learning (CoLs) and the use of ICT are encouraged to improve teaching practices (Mutangira et al., 2024; URT, 2020).

Today, the TCPD faces numerous obstacles to its implementation processes. Specific obstacles were inherent with the program are restricted budget for TCPD, teachers' time constraints in carrying out the program, inadequate professional development for teachers, lack of monitoring and evaluation mechanisms, and lack of essential infrastructure (Mwinuka & Farrelly, 2023). As such, teacher pedagogical skills, such as interactive and student-centered styles between teachers, are withheld. The background places in the limelight how to bridge such glaring impediments to effective TCPD practice among teachers. Ultimately, the purpose of this study is to examine the strategies being employed for TCPD in public primary schools of Morogoro Municipality, the fundamental challenges facing teachers in embedding the program, and to suggest the best ways of addressing the current challenges and ensuring the effectiveness and sustainability of the program.

The mitigation processes to obstacles involve training policymakers, education stakeholders, and school administrators to enhance the design, support, and sustainability of adapted TCPD activities for the local environment.

**3.0 Research Question**

1. To investigate the constraints faced by teachers in implementing TCPD strategies
2. To establish the strategies to mitigate constraints faced by teachers in implementing TCPD strategies

**4.0 Theoretical Framework**

The study was guided by Andragogy Learning Theory (ALT) championed by Malcolm Knowles in 1968 in Germany, and the main arguments are centered on major learning dimensions such as intrinsic motivation, problem-centered orientation, self-direction in learning, and the use of previous teaching experience (Herzog, 2024). ALT's strengths are revealed in its ability to adapt to a range of learning contexts, address adult learners' needs, and empower learners through a sense of independence and relevance (Segoe, 2023). ALS, by contrast, is criticized for being too broad, as not all adults match its general assumptions. Lastly, the ALT is relevant to TCPD strategies, leading to improved teaching practices and student attainment in public primary schools, particularly in Tanzania.

**5.0 Review of Empirical Studies**

The general objective of this study was to explore the obstacles teachers face in implementing TCPD strategies.

* 1. **The constraints faced by teachers in implementing TCPD strategies**

Referring to scrutinized empirical research in different settings, teachers face several obstacles in implementing TCPD measures, with remarkable differences based on the circumstances of each country. Time limits and restricted budgets were found to be outstanding hurdles to implementing TCPD, according to the studies conducted by Lafferty et al. (2024) within Australia. This is to say that, where schools are self-funded, teachers tend to find it difficult to set off the demanding workload against development possibilities. Similarly, studies conducted by Barbara (2023) and Williams (2023) in Scotland and Slovenia indicated that teachers' delayed adoption of TCPD approaches was caused by insufficient exposure and understanding. These results indicate that for teachers to understand and use TCPD principles, there must be continuous training and reinforcement for teachers.

Moreover, the study by Nwokeocha et al. (2023) in Guinea and the Gambia revealed inadequate facilities and in-service training for instructors to make the most of TCPD strategies. This means that schools lacked a few specialist development workshops and the bare essentials, which impacted professional development. Additionally, Haruna (2022) indicated that the lack of professional trainers and government-led teacher motivation against the program further disrupted TCPD effectiveness. While offering useful information, those works reviewed utilized library-based methods, which did not take advantage of gathering data in real-time from education stakeholders. The activities of TCPD were also hampered by political unrest and a shortage of funds in Central Africa to guarantee the sustainability of its operations (Merry et al., 2023). This implies that, without peace, no TCPD can operate. Therefore, political unrest is not a problem in Tanzania because there is peace throughout the nation. Similarly, studies in Uganda and Kenya exhibit the same issues of poor problems related to inconsistency in training programs and inadequate monitoring systems in implementing TCPD (Mwesigye et al., 2024; Onyango, 2023).

This implies no TCPD development as compromised by ineffective professional development and plans for monitoring and evaluation. However, the two research studies under study had gaps in delimitation by being conducted in secondary schools, which lacked clarity in the specificity of problems at the primary school level. Finally, Mwinuka and Farrelly (2023) in Tanzania concluded that inadequate professional development programs, inadequate infrastructure, and inadequate monitoring systems were restraining factors to implementing TCPD approaches. The findings highlight the necessity for systemic reforms to facilitate the effective application of TCPD.

* 1. **The strategies to mitigate constraints faced by teachers in implementing TCPD strategies**

Several strategies have been put into practice to help address challenges teachers face during the implementation of TCPD strategies. Wynn et al. (2023) found in their research that Teachers in Australia developed collaborative professional learning communities to exchange experiences and resources to help address challenges faced in TCPD strategies. This implies the strategy helps schools deal with limited resources and resistance to change; peer support is encouraged by this strategy. Nevertheless, qualitative methodology was used in research, and the narrow breadth of data limited the research from capturing an entire perspective of problem-solving results. Similarly, Muriithi (2023) in America and Dahri et al. (2024) in India recommended the use of a blended learning approach, blending on-campus seminars with web-based study modules, quoting digital platforms like online learning as overcoming time limitations and geographical challenges in applying TCPD strategies for teachers. This implies that the strategy aims to make TCPD sessions flexible, paced, and timely available to all teachers. Despite containing insightful information, the reviewed studies revealed a gap in being conducted in other educational institutions rather than primary schools, which may lack relevance to this study in Tanzania.

Furthermore, to make the program sustainable, the learner-centered practices have been promoted in Namibia by including local material into TCPD, making the training contextually relevant for rural and urban teachers (Theron, 2023). This implies that the strategies give more autonomy to learning in teaching and learning processes in classroom settings. However, the reviewed study was conducted in secondary schools, leaving out information from primary school settings. Mentoring and coaching are also common in Nigeria, as more experienced teachers assist less experienced ones (Umar, 2023). This implies that the method aids in bridging the gap between theoretical understanding and effective teaching skills. Similarly, despite local resource limitations, cooperation with foreign organizations has enhanced possibilities to implement high-quality TCPD programs in Gabon (Please et al., 2024). Although these partnerships have succeeded, the reviewed study lacked real-time participant input and depended on library research.

Moreover, the CoL associated with TCPD initiatives in Rwanda addresses issues like high staff turnover and limited finances by involving local education stakeholders in the training process (Kwok, 2022). This implies that the approach improves the program’s sustainability and local ownership. However, the study excluded dynamics at the primary school level and solely examined secondary schools. Likewise, school administrators in Uganda focus on context-specific professional learning by designing TCPD sessions suited to teachers' real-world requirements (Steven, 2023). This illustrates how TCPD is more successful when created to meet the real-world difficulties that teachers face in the classroom. Also, Akpem et al. (2021) in Ghana highlighted the necessity of addressing contextual restrictions and strengthening TCPD implementation for enhanced education quality through effective teacher professional development. This implies that for TCPD to be truly effective, there must be deliberate efforts to overcome existing constraints and to strengthen the implementation of Teachers’ Continuous Professional Development strategies.

Finally, teachers in Tanzania have incorporated TCPD into school culture and established peer learning networks, promoting frequent professional contacts and continuous skill improvement (Majani, 2023). This implies that the approach aligns TCPD school practices and principles while encouraging cooperation and ongoing learning. However, the reviewed study is questioned, as the methodology mostly relied on library sources and lacked field-based data, providing little insight into how these peer networks operate.

**6.0 Methodology**

The research used the convergent design under a mixed research approach based on a pragmatic research philosophy to gather quantitative and qualitative data from respondents. Studying philosophy provides a set of assumptions, beliefs, and principles that guide research (Steven, 2023). The pragmatic philosophy of research is centered on utilitarian application of research findings and a flexible, problem-solving philosophy that underscores real-world relevance and efficiency to give a research framework sensitive to the contemporary practical world (Kwok, 2022).

**Table 1: Sampling Frame**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Target Population** | **Sample size (n)** | **Percentage**  **%** | **Sampling technique** |
| Head of Schools | 75 | 12 | 15 | Purposive sampling |
| Teachers | 1955 | 196 | 10 | Stratified random sampling |
| **TOTAL** | **2030** | **208** |  |  |

**Source:** Researcher 2025

The target population under study involved 75 public primary schools, 75 head of schools, and 1955 teachers from Morogoro Municipality. Lakens (2022) suggests that a sample size of 10 to 30 percent is sufficient to represent the entire population under study. The sample size was 208 participants, with 12 head teachers (HoS) and 196 teachers participating in the study. Thus, a target population contains all those people who participate in a study, and a sample is a part of the population (Willie, 2024). Sampling is a practicable procedure by which data can be collected within a short duration and at a cheaper cost compared to attempting to access all the population members (Theron, 2023). Sampling for this research was realized from the study population using the purposive sampling method in identifying 12 head of schools by considering the titled positions, and 196 teachers using the stratified sampling method about the class teaching levels. The description of data collection instruments included meeting with the director of postgraduate studies at the respective university to ask permission to conduct the study. Quantitative data were collected through questionnaires from 196 teachers, and interview guides were used to collect qualitative data from 12 HoSs.

Validity and reliability of data collection instruments were considered. The research was piloted before actual data gathering to test the validity and reliability of research instruments because it is regarded as practical and ideal (Muasya & Mulwa, 2023). Test-retest was utilized to determine the reliability of the quantitative data collection instruments, and pilot data collection and analysis for the qualitative data collection instruments created for this research ensured tool validity. Description of data analysis methods included quantitative analysis using the Statistical Package for the Social Sciences (SPSS) version 20 to analyze questionnaire items. The analysis was displayed by calculating statistical units of the frequencies and percentages to indicate each item's responses. Qualitative analysis, however, employed thematic analysis derived from interview guides to identify patterns and themes related to eradicating curriculum gaps in public primary schools of Morogoro Municipality.

**7.0 Result and Discussions**

**7.1 The constraints faced by teachers in implementing TCPD strategies**

The study's first specific objective investigated the constraints teachers face in implementing TCPD strategies. The results are presented in Table 2

**Table 2: The constraints faced by teachers in implementing TCPD strategies (n=196)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **STATEMENTS** | **RESPONSES (F & %)** | | | | | | | | | |  | |  | |
| **SD** | | **D** | | **U** | | **A** | | **SA** | | | **MEAN** | |
| **F** | **%** | **F** | **%** | **F** | **%** | **F** | **%** | **F** | **%** | |
| Inadequate funding restricts the capability to implement effective TCPD strategies. | 0 | 0 | 0 | 0 | 1 | 0.5 | 71 | 36.2 | 124 | 63.3 | | 4.63 | |
| Limited funding support from education stakeholders affects TCPD's sustainability. | 35 | 17.9 | 31 | 15.8 | 12 | 6.1 | 59 | 30.1 | 59 | 30.1 | | 3.39 | |
| There is a lack of collaboration between schools and education authorities in planning TCPD. | 74 | 37.8 | 41 | 20.9 | 8 | 4.1 | 39 | 19.9 | 34 | 17.3 | | 2.58 | |
| Resistance from teachers to participate in TCPD programs hinders implementation. | 90 | 45.9 | 47 | 24 | 14 | 7.1 | 25 | 12.8 | 20 | 10.2 | | 2.17 | |
| Restricted access to external trainers affects TCPD implementation. | 45 | 23 | 37 | 18.9 | 15 | 7.7 | 48 | 24.5 | 51 | 26 | | 3.12 | |
| The school struggles to provide incentives for teachers participating in TCPD activities. | 82 | 41.8 | 34 | 17.3 | 16 | 8.2 | 32 | 16.3 | 32 | 16.3 | | 2.48 | |
| Deficiency of teaching and learning materials limits the effectiveness of TCPD initiatives. | 44 | 22.4 | 36 | 18.4 | 8 | 4.1 | 54 | 27.6 | 54 | 27.6 | | 3.19 | |
| Inadequate infrastructure affects the quality of TCPD sessions. | 32 | 16.3 | 34 | 17.3 | 0 | 0 | 82 | 41.9 | 48 | 24.5 | | 3.28 | |
| Balancing TCPD activities with the school’s academic calendar is a significant challenge. | 16 | 8.2 | 20 | 10.2 | 13 | 6.6 | 45 | 23 | 102 | 52.1 | | 2.48 | |
| Monitoring the effectiveness of TCPD activities is a challenge due to limited time. | 29 | 14.8 | 21 | 10.6 | 15 | 7.7 | 24 | 12.2 | 107 | 54.7 | | 2.42 | |

**Key:** 1. SD – Strongly Disagree 2. D – Disagree 3. U – Undecided 4. A - Agree 5. SA – Strongly Agree, F – Frequency, % - Percentage

**Source: Field Data 2025**

Concerning Table 2, the data show that the majority of teachers, 124 (63.3%), strongly agreed at a mean score of 4.63 that inadequate funding restricts the capability to implement TCPD strategies effectively. Similarly, from Table 2, many respondents, 59 (30.1%), agreed, and 59 (30.1%) at a mean score point of 3.39, that Limited funding support from education stakeholders affects TCPD sustainability. This implies that a lack of funding for the program impedes TCPD strategies. This is in line with the study by Lafferty et al. (2024), emphasizing that limited funding to the TCPD affects the whole process of implementation strategies. This implies that extensive funding investment in implementing TCPD strategies is essential to sustain classroom lesson delivery. To supplement explanations about limited funding for TCPD strategies implementations, one HoS claimed that: *“Many activities to implement TCPD strategies depend on funds, and in reality, there is no budget for this program allocated in schools”* (Interview, HoS A, 18th March 2025). This indicates that schools lack funds to facilitate TCPD strategies. The situation hinders the promotion of skills for students due to the partially implemented strategies.

Furthermore, data from Table 2 indicate that many respondents, 74 (37.8%), strongly disagreed, and 41 (20.9%) disagreed at a score mean of 2.58, that there was a lack of collaboration between schools and education authorities in planning TCPD. Likewise, from Table 2, statistics show that many respondents, 90 (45.9%), strongly disagreed, and 47 (24%) disagreed with the statement that resistance from teachers to participate in TCPD programs hinders implementation, at a mean score of 2.17. This implies that, although the TCPD program faces several challenges, collaboration and regular participation of teachers in the program are still maintained. Nevertheless, the study by Barbara (2023) indicates that collaboration and the readiness of teachers to participate in the TCPD strategies' implementations equip teachers with updated pedagogy. This implies that teachers are encouraged to participate in the program due to professional benefits. To comment on effective teachers’ participation in the TCPD, one teacher in FGD said that: *“We always collaborate among ourselves to improvise teaching aids and practice new teaching techniques such as think-pair-share and flipped classrooms to accommodate large classrooms”* (FGD, Teacher D, 21st March 2025). This implies that teachers are ready to participate in the program collaboratively to implement TCPD strategies.

Moreover, data in Table 2 reveal mixed opinions whereby the majority of respondents, 45 (23%), strongly disagreed. In comparison, 48 (24.5%) agreed, and 51 (26%) strongly agreed at a mean score of 3.12 that there were restrictions to access to external trainers that affect TCPD implementation. Similarly, information from Table 2 demonstrates that the majority of respondents, 82 (41.8%), at a mean score of 2.48, strongly disagreed that schools struggle to motivate teachers involved in TCPD activities. This implies that TCPD implementation for teachers lacks motivational incentives for teachers who participate in the program. This situation may result in demoralized conditions for teachers that can lead to performing TCPD strategies implementation. This finding is relevant to the study by Nwokeocha et al. (2023), which states that the implementation of effective TCPD strategies is associated with motivation for teachers as cornerstone implementers of the program. This finding is further aligned by the Andragogy Learning Theory (ALD), which acknowledges that adult learners, as referred to as the teachers, are moved by the motivation elements inherent in the learning program. To witness the lack of teachers’ motivation during TCPD’s sessions, one teacher in FGD stated that: *“When we participate in TCPD training, we are not provided with either food or travel fares to go to the training, but we are ordered to participate in the training”* (FGD, Teacher B, 18th March, 2025). This indicates the program has no outstanding accommodation services for teachers as motivation. This may result in lowering the process of TCPD strategies implementations.

Furthermore, Table 2 shows that many respondents, 54 (27.6%), agreed, and 54 (27.6%) strongly agreed that deficiency of teaching and learning materials limits the effectiveness of TCPD initiatives, while scoring a mean of 3.19 points. Similarly, the statement about inadequate infrastructure affecting the quality of TCPD sessions was voted by the majority of respondents, whereby 82 respondents (41.9%) agreed with the statement, with a mean score of 3.28. The implication is that TCPD faces material adequacy that limits the implementation of effective strategies. Several scholars relevantly expressed this finding about material insufficient that the situation hampers the implementation of TCPD strategies (Haruna, 2022; Merry et al., 2023; Mwinuka & Farrelly, 2023; Onyango, 2023; and Williams, 2023). The implication related to this scholarly finding is that material inadequacy is inevitable; however, the situation can be rescued by early professional development interventions for teachers. Harmoniously, one HoS to explain material shortages to implement TPCD strategies expressed that: *“A shortage of implementation equipment, such as computers, projectors, faces TCPD. Also, the infrastructure for conducting the program is not in good condition, such as the venue lacking electricity and other important services”* (Interview, HoS C, 20th March 2025). This implies that TCPD is largely affected by the lack of good services to the participants. As a result, the situation may diminish the program strategy implementation process.

From Table 2, the data show that many respondents, 102 (52.1%), strongly agreed at a mean score of 2.48 that balancing TCPD activities with the school’s academic calendar is a significant challenge. Additionally, statistics from Table 2 indicate that the majority of respondents, 107 (54.7%), strongly agreed that monitoring the effectiveness of TCPD activities is challenging due to limited time, with a mean score of 2.42. This implies that the implementation of TCPD strategies is restricted by the shortage of time allocated for the program’s sessions. In addressing the time shortage allocated for the TCPD, one teacher during FGD explained that: “*TCPD has no specific schedule at school, and when we implement it, we are forced to disrupt other classroom sessions, causing difficulty in compensating for the lost class time for students"* (FGD, Teacher E, 24th March, 2025). This implies that TCPD strategies are poorly integrated into education policy for effective implementation. In aligning this finding with the time shortage set apart to implement TCPD strategies, the study by Mwesigye et al. (2024) highlighted the importance of ample time to implement the program’s activities with the projection to enhance the quality of effective classroom lesson delivery. This informs a SMART style consideration when implementing TCPD strategies.

**7.2 The strategies to mitigate constraints faced by teachers in implementing TCPD**

The second specific objective of this study dealt with identifying the strategies to mitigate the challenges faced by teachers in implementing TCPD strategies.

**Table 3: The** **strategies to mitigate constraints faced by teachers in implementing TCPD strategies (n=196)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| STATEMENTS | RESPONSES (F & %) | | | | | | | | | | MEAN |
| SD | | D | | U | | A | | SA | |
| F | % | F | % | F | % | F | % | F | % |
| Heads of schools prioritize the allocation of available resources for TCPD activities. | 20 | 10.2 | 41 | 20.9 | 16 | 8.2 | 75 | 38.3 | 44 | 22.4 | 3.42 |
| External stakeholders are involved in providing material support for TCPD. | 70 | 35.7 | 47 | 24 | 21 | 10.7 | 28 | 14.3 | 30 | 15.3 | 2.49 |
| Cost-effective TCPD approaches are used to address resource limitations. | 21 | 10.7 | 44 | 22.4 | 31 | 15.8 | 73 | 37.2 | 27 | 13.8 | 3.21 |
| The school organizes additional funding through partnerships and grants to support TCPD programs. | 66 | 33.7 | 63 | 32.1 | 15 | 7.7 | 28 | 14.3 | 24 | 12.2 | 2.39 |
| Partnerships with education authorities are reinforced to ensure better planning of TCPD strategies. | 43 | 21.9 | 33 | 16.8 | 21 | 10.7 | 64 | 32.7 | 35 | 17.9 | 3.08 |
| Technology-based TCPD platforms are employed to diminish the cost of training programs. | 40 | 20.4 | 30 | 15.3 | 20 | 10.2 | 62 | 31.6 | 44 | 22.4 | 3.20 |
| Flexible scheduling is implemented to integrate TCPD activities into the school timetable. | 22 | 11.2 | 27 | 13.8 | 17 | 8.7 | 76 | 38.8 | 54 | 27.6 | 3.58 |
| TCPD activities are aligned with teachers’ professional needs to ensure relevance. | 12 | 6.1 | 19 | 9.7 | 13 | 6.6 | 88 | 44.9 | 64 | 32.7 | 3.88 |
| Teachers are motivated through recognition for active participation in TCPD programs. | 32 | 16.3 | 28 | 14.3 | 13 | 6.6 | 80 | 40.8 | 43 | 21.9 | 3.38 |
| Consistent evaluation of TCPD programs is conducted to categorize areas for improvement. | 27 | 13.8 | 24 | 12.2 | 15 | 7.7 | 82 | 41.8 | 48 | 24.5 | 3.51 |

**Key:** 1. SD – Strongly Disagree 2. D – Disagree 3. U – Undecided 4. A - Agree 5. SA – Strongly Agree, F – Frequency, % - Percentage

**Source: Field Data 2025**

Data from Table 3 demonstrate that 75 (38.3%) respondents agreed with the statement that heads of schools prioritize the allocation of available resources for TCPD activities. In comparison, 44 (22.4%) strongly agreed with the same statement at a mean score of 3.42. Likewise, information from Table 3 indicates that 70 (35.7%) strongly disagreed, and 47 (24%) disagreed at a mean score of 2.49 that external stakeholders are involved to provide material support for TCPD. Moreover, statistics from Table 3 show that most respondents, 73 (37.2%), agreed that cost-effective TCPD approaches are used to address resource limitations, while 44 (22.4%) of respondents remained undecided at a mean score of 3.21. Finally, data from Table 3 reveal that many respondents, 66 (33.7%), strongly disagreed, and 63 (32.1%) disagreed with the statement about schools organizing additional funding through partnerships and grants to support TCPD programs at a mean score of 2.39. This implies a need to make effective resource allocation, improve external TCPD stakeholders’ involvement, and raise funds to implement the program’s strategies. To highlight the collaboration strategies in implementing TCPD, one HoS commented, "*Teachers within my school collaborate to improvise teaching and learning aids. Sometimes 2 representative parents from each class join hands in improvising these teaching aids”* (Interview, HoS F, 24th March, 2025). This implies that TCPD is collaboratively implemented at the school level by different school stakeholders. This finding from HoS is aligned with Barbara (2023), who states that the effectiveness of TCPD is actualized through collaborative implementation as a means to mitigate challenging conditions to the program. This infers that teachers and other members of society practice TCPD to internalize and take ownership of the program.

Additionally, data from Table 3 indicate that respondents had mixed opinions about partnerships with education authorities are reinforced to ensure better planning of TCPD strategies as a strategy to solve the existing challenges to TCPD implementation, whereby, 64 (32.7%) agreed with the statement, while 43 (21.9%) strongly disagreed with the statements with a score mean of 3.08. Likewise, statistics from Table 3 demonstrate that many respondents, 62 (31.6%), agreed, and 44 (22.4%) strongly agreed at a mean score of 3.20, with the statement that technology-based TCPD platforms are employed to diminish the cost of training programs. Moreover, with references from Table 3, many respondents, 76 (38.8%), agreed, and 54 (27.6%) strongly agreed at a mean score of 3.58 that flexible scheduling is implemented to integrate TCPD activities into the school timetable. The respondents infer that with ample flexible time, collaborative implementation, and technology adoption in the program, the possibilities to diminish obstacles teachers face in TCPD activities are increased. In agreeing with these strategies as a method to lessen the effects of the existing challenges to TCPD implementation among teachers, one HoS responded that: *“We believe that if the schedule is well prepared, technology is properly used, and the implementation is done in collaboration, then many challenges of the teacher in implementing TCPD will be greatly reduced*” (Interview, HoS K, 27th March, 2025). This implies that, with multi-level participation in the program, many challenges may be reduced to pave the way to the smooth implementation of the program. In supporting the idea about mitigating the prevailing TCPD implementation challenges, the study by Panjaitan et al. (2024) suggests that many challenges are reduced by encouraging teacher collaboration, in-house training, and the integration of information and communication technology (ICT). This implies that, apart from being impacted by challenges, TCPD still has an opportunity to be improved, innovated, and successfully implemented.

Furthermore, information from Table 3 shows that the statement about TCPD activities alignment with teachers’ professional needs to ensure relevance got a score mean of 3.88, corresponding to 88 (44.9%) agreements, and 64 (32.7%) strongly agreements from respondents. Similarly, facts from Table 3 confirm that most respondents, 88 (44.9%), agreed, and 64 (32.7%) strongly agreed with the statement at a mean score of 3.88 that teachers are motivated through recognition for active participation in TCPD programs. Finally, the Table 3 statistics reveal that many respondents, 82 (41.8%), agreed, and 48 (24.5%) strongly agreed with the statement that consistent evaluation of TCPD programs is conducted to categorize areas for improvement at a mean score of 3.51. This implies that, although various obstacles face TCPD, early identification of teachers’ needs, careful alignment of the program to the teachers’ pedagogical needs, and the intentional motivation of teachers may result in active participation of teachers in the program and guarantee long-term sustainability of TCPD strategies' implementation. One HoS suggested an easy way to mitigate the existing challenges by saying: *“Teachers need TCPD to be compatible with their pedagogical needs, professional problems to be solved early, also to have a plan to motivate teachers who participate in the program*” (Interview, HoS G, 25th March, 2025). This implies that where teachers' needs are placed in TCPD, teachers' motivation is provided, which means recognition of participation, the program is guaranteed in effectiveness and sustainability. This is the conclusion that can be drawn by Haruna (2022) when she observed that TCPD, alongside other variables, is provided with the teachers' motivation and easy facilitation of skilled trainers. This implies that where there is teacher motivation and easy facilitation of skilled trainers, TCPD is run without any challenges.

**8.0 CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY**

This sub-section of the study presented the conclusions drawn from the findings, recommendations, and suggestions for further research.

**8.1 Conclusions**

From the findings, the study concluded that implementing Teacher Continuous Professional Development (TCPD) strategies faces complicated challenges. With evidence from the study's findings, the major challenges are: inadequate financing, limited cooperation between schools and education authorities, and teacher resistance to participating in TCPD programs. The challenges impinge on the process of implementing the TCPD strategies. As a result, classroom delivery of lessons is substandard and hinders the students' acquisition of relevant skills. The study, from the findings, concluded that the successful implementation of TCPD strategies is achievable through targeted and unified mitigation efforts despite the prevailing constraints.

As justified from the findings, these mitigation strategies include prioritization of head of schools' resource allocation, the accommodation of flexible scheduling in school timetables, the adoption of low-cost and technology-facilitated TCPD platforms, the use of external stakeholders, and aligning TCPD activities with teachers' professional needs to enhance relevance and participation. Lastly, with confidence from the findings, these mitigation factors are essential in rendering TCPD a responsive and efficient professional development model for teachers.

**8.2 RECOMMENDATIONS**

**8.2.1 Recommendations for policy review**

Based on the conclusion, the study recommends that the Ministry of Education, Science, and Technology should review a sustainable national framework to support TCPD implementation in schools. With evidence from the conclusion, priority areas of TCPD include allocating dedicated budgets for teacher training and ensuring the timely disbursement of funds to schools. The rationale for this recommendation is tied to the effectiveness of TCPD strategies in promoting relevant competencies among students, as reflected in teachers’ pedagogical abilities in delivering lessons to students in classroom settings.

**8.2.2 Recommendations for action**

Based on the conclusion, the study recommends that heads of schools prioritize allocating available school resources to facilitate TCPD implementation. The reason is that heads of schools must come up with flexible timetables that will accommodate TCPD activities without interfering with academic learning. As a result, the schools can develop a culture of appreciation by awarding and acknowledging those teachers who show dedication and commitment to professional development, thus improving teacher morale and encouraging continued participation in TCPD.

Finally,based on the conclusion of the study, recommendations are made to teachers to actively engage in TCPD activities as vital components of professional growth and classroom effectiveness. The motive behind this recommendation is to encourage teachers to participate consistently in training sessions, apply new pedagogical strategies, and take initiative in peer collaboration through sharing best practices, co-teaching, and supporting each other in instructional improvements – the program is assured in active operation and sustainability.

**8.2.3 Recommendations for further research**

According to the conclusion, the research advises that future research needs to be carried out to investigate the long-term effects of TCPD intervention on students' learning achievements and academic performance. As this research was mostly concerned with TCPD challenges and mitigation measures, there is still a gap in how teachers' involvement in TCPD leads to enhanced classroom practice and student performance.

Moreover, based on the study's conclusion, recommendations are proposed for future research to investigate the effectiveness of technology-based TCPD platforms, particularly in rural and under-resourced schools. The reason is that such research could assess how digital tools can be used to overcome access and cost barriers and influence teachers’ engagement and skill development.

Consent and Ethical Approval

Ethical considerations in this study included obtaining informed consent from all the study’s participants before collecting data, giving confidence and anonymity when reporting and storing data, following ethics, and getting authorization from Jordan University College (JUCo) ethical review board.

**DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

We Alice Makunganya and Onesmo Amos hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

**COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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