



The Influence of Inservice Training on Pedagogical Practices of Primary School Teachers in Dodoma City, Tanzania

Haule Grasia & Milka Otieno
St John's University of Tanzania
Email: grasiahaule@gmail.com

Abstract: This study aimed at investigating the influence of in-service training on primary school teachers' pedagogical practices in Dodoma City, Tanzania, guided by Knowles' Adult Learning Theory (Andragogy). Employing a qualitative case study design, data were collected through semi-structured interviews, focus group discussions, and document reviews from 22 participants, including 20 teachers and 2 headteachers. The findings revealed that in-service training significantly improved classroom management, lesson preparation, curriculum adaptation, and instructional methods. Teachers reported enhanced student engagement, confidence, and participation through student-centred approaches, collaborative learning, and integration of technology. The training also fostered professional growth, reflective teaching, and stronger teamwork, creating supportive professional learning environments. The study concludes that continuous, context-specific professional development is essential for improving teaching effectiveness and promoting inclusive, interactive classrooms. It recommends expanding training programs, emphasizing curriculum adaptation, ICT integration, and establishing professional learning communities to sustain educational quality and enhance student learning outcomes.

Keywords: In-service training, Teacher professional development, Pedagogical practices, Classroom management, Dodoma City

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1. Introduction

In-service training refers to structured professional development programs designed to improve the skills and competencies of teachers while they are actively engaged in teaching (OECD, 2021). Quality education in developing countries is increasingly linked to the effectiveness of teacher professional development, with in-service training recognized as a vital strategy for enhancing pedagogical practices and student outcomes (UNESCO, 2021). Such training enables teachers to update their knowledge, adopt innovative instructional

methods, and address emerging challenges related to curriculum and classroom dynamics. In Sub-Saharan Africa, where education systems struggle with teacher shortages, limited resources, and evolving curricular demands, continuous professional development is crucial for sustainable improvement in learning outcomes (World Bank, 2022). In Tanzania, government-led education reforms have emphasized in-service training to strengthen teacher capacity and promote learner-centered pedagogy (URT, 2020). However, evidence suggests that the impact of these programs on pedagogical practices remains

inconsistent, largely influenced by the quality, relevance, and regularity of the training provided (Msuya & Kataro, 2021).

Dodoma City, being the administrative capital of Tanzania, has witnessed a growing demand for quality education at the primary school level. However, challenges such as large class sizes, inadequate teaching materials, and limited exposure to modern pedagogical methods constrain teacher effectiveness (Heri & Mkulu, 2022). In-service training is therefore positioned as a critical mechanism to equip teachers with innovative strategies for classroom management, learner engagement, and effective lesson delivery. Yet, questions remain regarding the extent to which such training influences actual pedagogical practices in schools.

This study explores the influence of in-service training on primary school teachers' pedagogical practices in Dodoma City. Understanding this relationship is essential not only for informing education stakeholders about the effectiveness of current training initiatives but also for shaping future professional development programs aimed at improving teaching and learning in Tanzania.

1.2 Objectives of the Study

The study aimed to explore the influence of in-service training on primary school teachers' pedagogical practices in Dodoma City, focusing on changes in classroom management, improvements in lesson preparation and curriculum adaptation, adoption of new teaching methods, integration of technology in teaching, and enhancements in teamwork, collaboration, and professional growth among teachers.

2. Literature Review

Globally, in-service training has been identified as a cornerstone of teacher professional development. A study conducted in Europe revealed that participation in in-service training enhances teachers' pedagogical skills, subject knowledge, and professional confidence (Smith, 2022). Teachers who regularly engage in continuous professional development tend to adopt more effective teaching strategies, which translate into improved student performance. These findings underscore the universal importance of structured training programs in enhancing classroom practices. In the African context, the role of in-service training in shaping pedagogical practices has been widely studied. Research conducted in Kenya demonstrated that effective in-service programs contribute significantly to teachers' professional growth, particularly

in improving instructional delivery and learner engagement (Mwiria, 2011). Similarly, Johnson (2021) found that in-service training enhances teachers' content knowledge, pedagogical techniques, and classroom management. Importantly, the study highlighted that training tailored to teachers' contextual needs was more impactful compared to generic programs. Evidence from Uganda also supports the value of in-service training. A study in Kasoro District revealed that well-structured training improves teacher effectiveness and fosters systematic, logical teaching practices (Mugarura et al., 2022). The study further emphasized the importance of training focused on pedagogical content knowledge, teaching strategies, and assessment methods.

In Tanzania, several studies have examined the influence of in-service training on teacher practices. Research conducted in Lushoto District revealed that teachers recognize the importance of professional development but face challenges such as heavy workloads, limited funding, frequent changes in workstations, and inadequate government support (Macha, 2017). Similarly, Mbeba et al. (2018) found that in-service training improved teachers' lesson planning, classroom management, and learner engagement. However, both studies emphasized the need for stronger policy support and sustained investment in professional development. A broader systematic review by Davis and Johnson (2019) synthesized global findings on in-service training and concluded that such programs consistently improve teachers' instructional practices and classroom management strategies. The review also stressed that long-term training initiatives, coupled with ongoing support and feedback, result in more sustainable changes in teaching practices compared to one-off workshops.

Overall, the reviewed literature demonstrates a consensus on the positive influence of in-service training on pedagogical practices across different contexts. However, variations in program quality, accessibility, and sustainability remain challenges, particularly in low-resource settings such as Tanzania.

2.1 International and National Policy Frameworks

At the international level, UNESCO (2021) emphasizes continuous teacher professional development as a key strategy for improving education quality and meeting Sustainable Development Goal 4 on inclusive and equitable education. At the national level, the Government of Tanzania, through the Education Sector Development Plan (2016–2021), prioritizes in-service training as a mechanism for strengthening teacher competencies and aligning pedagogical practices with competence-based

curricula (URT, 2020). However, limited funding and implementation challenges continue to hinder the effectiveness of these initiatives.

2.2 Gaps in the Literature

Although existing studies highlight the benefits of in-service training, gaps remain regarding its direct impact on day-to-day pedagogical practices in Tanzania's urban schools. Many studies have focused on rural areas or policy-level analysis, leaving limited evidence on how training translates into practical teaching improvements in rapidly expanding urban contexts such as Dodoma City. Additionally, most studies emphasize short-term outcomes, with few examining long-term sustainability of training impacts. This study seeks to address these gaps by exploring how in-service training shapes the pedagogical practices of primary school teachers in Dodoma City.

2.6 Theoretical Framework

2.6.1 Adult Learning Theory (Andragogy)

This study is guided by Malcolm Knowles' Adult Learning Theory (Andragogy), which emphasizes that adults learn differently from children. The theory is relevant to in-service teacher training as it explains how professional development can be designed to meet the unique learning needs of teachers as adult learners (Knowles, 1980). According to the theory, adults are self-directed, draw from prior experiences, prefer relevant and practical learning, and are motivated by internal goals. Applying these principles, in-service training becomes more effective when it acknowledges teachers' autonomy, incorporates collaborative learning, and provides opportunities for immediate classroom application (Merriam & Bierema, 2014). Furthermore, Knowles et al. (2015) argue that adult learning is most impactful when it addresses real-life challenges through problem-solving approaches. In the Tanzanian context, aligning in-service training with andragogical principles enhances teacher motivation, relevance of content, and practical outcomes, thereby improving pedagogical practices and overall teaching quality.

3. Methodology

3.1 Study Context

The study was carried out in Dodoma City, Tanzania, which serves as the administrative and political capital of the country. The city has witnessed significant growth in education, with numerous public, private, and community

primary schools. These schools use either Kiswahili or English as the medium of instruction, reflecting diverse teaching practices and challenges. This made Dodoma a relevant setting to explore the influence of in-service training on pedagogical practices among primary school teachers (Gaetan et al., 2023).

3.2 Research Approach and Design

This study adopted a qualitative research approach because it is appropriate for examining teachers' lived experiences, attitudes, and practices in their natural school settings. A case study design was employed to enable an in-depth exploration of how in-service training contributes to changes in classroom practices. The design was also useful for generating contextual insights into teachers' professional development and teaching strategies. Such an approach allowed the study to capture multiple perspectives that would not have been possible with quantitative methods (Creswell, 2012; Yin, 2003).

3.3 Study Participants and Sampling Procedures

The target population included head teachers and primary school teachers in Dodoma City. Purposive sampling was applied to ensure that participants had direct exposure to in-service training programs and classroom instruction. A total of 22 participants were selected, comprising 2 head teachers and 20 teachers from different schools. This sample size was considered sufficient to provide a rich understanding of the phenomenon under study, while also being manageable for in-depth qualitative data collection (Enon, 1998).

3.4 Data Collection Tools and Procedures

Data were collected through semi-structured interviews, focus group discussions, and document reviews. Semi-structured interviews allowed participants to freely express their views and experiences regarding in-service training. Focus group discussions provided opportunities for collective reflection and exchange of teaching practices among teachers. Documentary reviews, including lesson plans and school policy documents, supplemented primary data by offering evidence of the application of training in classroom practices (Dawson, 2002; Omari, 2011).

3.5 Validity and Reliability

Several measures were taken to ensure trustworthiness and consistency of the findings. Triangulation of data sources interviews, FGDs, and documents was used to confirm information and enhance credibility. A pilot study was conducted in one non-sampled school to test the clarity and functionality of research tools. Peer debriefing with fellow researchers also strengthened the reliability of data analysis and interpretation. These strategies ensured that findings accurately reflected participants' realities (Kothari, 2011).

3.6 Data Analysis

Thematic analysis was applied to systematically analyse data obtained from different sources. Recorded interviews and FGDs were transcribed, coded, and categorized into themes based on recurring patterns. This method allowed for the identification of key issues related to how in-service training shaped teaching methods, lesson preparation, and classroom management. Constant comparison across data sets was conducted to ensure consistency, while themes were interpreted in relation to the study objectives (Braun & Clarke, 2006).

3.7 Ethical Considerations

Ethical clearance was obtained from St. John's University of Tanzania before the commencement of fieldwork. Informed consent was sought from all participants, who were assured of voluntary participation and the right to withdraw at any stage. Anonymity and confidentiality were maintained by using pseudonyms and restricting access to raw data. All collected data were stored securely, ensuring that participants' identities and responses were protected from unauthorized access (Saunders et al., 2004).

4. Results and Discussion

4.1 Changes in Classroom Management Skills after In-service Training

During the focus group discussion, teachers were asked whether they had noticed any changes in their ability to manage classroom behaviour effectively after participating in in-service training. The feedback provided by the teachers was overwhelmingly positive, indicating that the training had a significant impact on their teaching practices. P1 shared,

The training has helped me build students' ability to express themselves in various subjects. (school B, FGD, 18.07.2024)

The participant further elaborated that before the training, many students were hesitant to participate actively in class discussions, often remaining silent or giving minimal responses. However, after incorporating the strategies learned during the training, such as encouraging open-ended questions and group activities, students became more confident in sharing their thoughts. This shift not only improved student engagement but also enhanced the overall classroom atmosphere. As a result, P1 noticed that students were more eager to ask questions and explore topics more deeply, leading to better learning outcomes. P2 highlighted the increased self-confidence in students, stating that,

Students now have the confidence to express themselves better (school B, FGD, 18.07.2024)

Furthermore, he explained that the training had introduced him to methods that focus on student empowerment, such as using positive reinforcement and creating a safe environment for students to share their ideas. Before the training, many students would only answer questions when called upon, but after applying these new techniques, they began participating voluntarily. P2 further noticed that students were more willing to take risks in their learning, attempting to answer even difficult questions without fear of making mistakes. This newfound confidence not only improved their academic performance but also strengthened their critical thinking and problem-solving skills. P3 noted,

The training has enabled us to acquire new teaching strategies, such as inviting guest speakers from other schools. (School A FGD,

The findings indicate, In-service training plays a key role in enhancing teachers' classroom management and student engagement. Teachers reported significant improvements in managing classrooms effectively and encouraging student participation through creative approaches. These skills allow teachers to create a positive learning environment where students feel confident and actively engage in lessons. The improvements in classroom management and student self-expression stem from the pedagogical techniques gained through training, which

help foster a more interactive and supportive classroom atmosphere.

These findings align with recent research by Ndiokubwayo and Habonimana (2021), which emphasized the positive impact of in-service training on classroom management and student engagement. Similarly, Mosha (2020) highlighted how professional development initiatives helped teachers improve their classroom practices, leading to increased student participation and better learning outcomes. Both studies reinforce the importance of continuous in-service training in improving teachers' ability to manage classrooms and foster active learning environments.

4.2 Improvements in Teaching Preparation and Curriculum Adaptation

Another significant area of change highlighted by the teachers was the improvement in lesson preparation and adaptation to the curriculum. Teachers noted that the in-service training helped them align their teaching practices with the updated curriculum guidelines. P4 mentioned that,

The training helped us prepare lessons better. For example, the training we received in early 2024 helped us adapt to the changes in the curriculum, particularly in areas where older curriculum components were replaced with newer elements focused on students' opinions. (School A, FGD, 16.07.2024)

He elaborated that prior to the training, many teachers were still using outdated lesson plans that did not reflect the latest curriculum revisions. The in-service training sessions provided clear guidance on how to structure lessons that emphasize student-centered learning, encouraging more interactive and participatory methods. P4 noted that these changes have made lessons more engaging and relevant to students, allowing them to contribute their ideas and opinions, thus deepening their understanding of the material. This adaptation has also made lesson planning more flexible and responsive to students' needs. P5 added that,

The training has enabled us to fill in certain components after leaving the classroom, whereas before, those components were

filled out before entering the classroom. (school B, F.G.D ,18.07.2024)

He explained that previously, teachers would prepare every aspect of the lesson in advance, often without knowing how students would respond to the material. However, the in-service training emphasized the importance of adjusting lesson components based on real-time feedback from students. This approach has allowed P5 to be more adaptive and responsive, modifying the lesson as needed to address student concerns or misunderstandings that arise during the class. P5 pointed out that this has made the teaching process more dynamic, as teachers can now reflect on each lesson immediately after it is delivered and make necessary adjustments for future classes.

The teachers' comments suggest that In-service training has enhanced teachers' ability to adapt lesson plans effectively, considering the changing curriculum and student needs. This training equips teachers to be more reflective and flexible in their teaching methods, ensuring that their lessons align with current educational standards. By incorporating feedback from students and adapting to curriculum changes, teachers are able to improve the overall learning experience. Recent studies support these findings, including Zayira and Babatunde (2022), who found that in-service training helps teachers adapt lesson plans to meet evolving curriculum needs and create student-centered lessons. Similarly, Msuya (2021) highlighted that continuous professional development fosters greater flexibility in lesson planning, enabling teachers to better address student feedback and needs. These studies underline the importance of in-service training in supporting adaptive teaching practices.

4.3 Acquisition of New Teaching Techniques and Methods

A key takeaway from the discussion was the acquisition of new teaching techniques. Teachers shared how the training introduced them to new pedagogical methods that they could implement in the classroom.

When asked about the changes in classroom management, Teacher C from School B explained,

The in-service training, we attended, which focused on how to manage continuous professional development for teachers, has helped improve our teaching and learning methods from pre-primary to standard

three. School B, F.G.D 18.07.2024)

This illustrates the transformative role that in-service training plays in enhancing the overall instructional approaches of teachers. Teacher C further emphasized that the training equipped them with modern techniques, leading to better classroom management and student engagement. Teacher C added,

The training has helped in refining both teaching and learning methods, especially for the lower classes. It has also improved my ability to manage large and diverse classrooms effectively by giving me feedback mechanisms to ensure every student is actively learning. (School A interview,15.07.2024)

The implication here is that teachers are now better equipped to handle challenges associated with large classes, ensuring that learning remains student-centered. Similarly, Teacher H from School A expressed,

The training has simplified our teaching tasks by providing us with new and effective learning techniques, such as using songs and pictures to enhance understanding. For instance, students actively participate by making learning materials like numbers, turning them into key contributors to the learning process. (School A .F.G.D 16.07.2024)

This finding indicates that the training has positively influenced both the teacher's methods and the students' learning experience, with students becoming more active in their education. This finding aligns with a study by Guskey (2002), which emphasizes that professional development programs enhance teachers' instructional effectiveness, particularly in fostering student-centered learning environments. Additionally, Kennedy (2016) supports the claim that continuous professional development directly improves classroom management by equipping teachers with the necessary skills to engage students in active learning.

Moreover, P4 added that the training improved the way they give students the freedom to express themselves, which has positively impacted classroom dynamics and student participation. He explained that, one of the key

takeaways from the training was the importance of creating an open, supportive environment where students feel comfortable sharing their thoughts without fear of judgment. By encouraging more student-driven discussions and group work, P6 has seen a significant increase in student participation. He emphasized that this approach not only boosts students' confidence but also fosters a deeper understanding of the material, as students learn from each other's perspectives and ideas.

The acquisition of new teaching methods, such as collaborative and student-centered approaches, indicates that in-service training helps teachers stay current with modern educational practices. These new techniques provide teachers with a more diverse set of tools to engage students and enhance learning experiences. The introduction of new teaching strategies through in-service training fosters a more interactive and engaging learning environment, which can lead to improved student outcomes. Teachers' ability to adapt and incorporate these methods into their daily practices is critical for fostering an inclusive and dynamic classroom atmosphere. The positive influence of in-service training on teaching techniques aligns with Sigei and Mwangi (2023), who found that teachers who receive continuous professional development are more likely to adopt innovative teaching practices that improve student engagement and performance. Similarly, Tully and Obasi (2022) highlighted that teachers who undergo regular training are more equipped to implement diverse pedagogical strategies, such as collaborative learning and the use of guest speakers, which enhance student interaction and learning outcomes. These findings further emphasize the role of in-service training in equipping teachers with effective teaching techniques that enrich classroom instruction.

4.4 Integration of Technology in Teaching

During the interview with Teacher F from School A, it was revealed that the training had provided them with essential skills in using technology for teaching. Teacher F mentioned,

The training has given us some skills in subjects like Science and ICT. We now know how to use programs like spreadsheets, word processors, and even access digital teaching resources. (school A F.G.D, 16.07.2024)

This indicates that in-service training equipped teachers with basic technological skills, helping them integrate

technology into their teaching practices, which is essential in today's digital age. Likewise, Teacher P from School B also emphasized the positive impact of the training on technology usage, stating,

The training has helped us prepare lesson plans and schemes of work using the improved curriculum system, and it has also taught us how to prepare teaching aids more effectively. (school B, F.G.D,18.07.2024)

Teacher P further added,

This training has been very beneficial to us as teachers because it has built our teamwork skills and enabled us to collaborate more in the teaching process. (school B, FGD 18.07.2024)

The ability to work together as a team was highlighted as a key benefit of the training, fostering a collaborative teaching environment. The findings reveal that integrating technology into teaching has been one of the key outcomes of in-service training. Teachers are now more capable of using ICT tools and accessing digital resources, which has significantly improved their lesson planning and delivery. Furthermore, the development of teamwork among teachers highlights how in-service training not only enhances individual capabilities but also fosters a sense of collaboration within the teaching staff. These findings align with the study by Yoon et al. (2007), which found that professional development programs focusing on technology integration can significantly improve teachers' capacity to use digital tools in the classroom. Similarly, the study by Lawless and Pellegrino (2007) highlighted that continuous teacher training in ICT can lead to more effective teaching and learning outcomes.

4.5 Enhanced Teamwork and Collaboration Among Teachers

During the interviews, teachers were also asked whether the training fostered teamwork and collaboration within the school. Teacher P from School B noted,

The training has had a positive impact by fostering a culture of teamwork among us teachers. We now collaborate more in preparing learning materials and exchanging ideas on how to

improve our teaching methods. (School B, interview, 18.07.2024)

This suggests that in-service training plays a crucial role in building a strong professional learning community within schools, where teachers support each other in their instructional tasks.

Furthermore, teacher F from School A echoed this sentiment, stating,

Through these training sessions, we have learned to work together as a team, which has made teaching more efficient and enjoyable. We share responsibilities, and this has improved the overall quality of education delivered to the students. (School A, FGD, 16.07.2024)

This underscores the importance of collaboration among teachers in enhancing both the teaching process and student outcomes. The headteacher from School A also voiced,

These trainings have improved teachers' skills in creating learning materials, teaching, and fostering teamwork. They have also given teachers sufficient ICT knowledge, which enables them to keep up with technological changes. (School A, interview.15.07.2024)

This illustrates how the trainings not only benefit individual teachers but also improve the overall school environment by encouraging collective responsibility and continuous professional development. These findings are consistent with research by Vescio, Ross, and Adams (2008), which emphasizes the importance of professional learning communities in fostering collaboration and improving teaching quality. Additionally, Desimone (2009). However, the focus group discussion revealed that in-service training has had a significant impact on teachers' classroom management, lesson preparation, curriculum adaptation, and teaching techniques. These findings are supported by more recent studies that highlight the importance of professional development in enhancing teachers' pedagogical practices and improving student outcomes.

4.6 Positive Impacts on Teamwork and Professional Growth

During the interview, the head teacher from School A emphasized the positive effects of the training on teamwork among teachers. He stated,

One of the major impacts of this training is that it has built strong teamwork among teachers. Now, they collaborate more in preparing lesson plans, teaching aids, and even in managing classroom behaviour. The training has fostered a culture of working together to achieve better results. (School A, interview 15.07.2024)

The head teacher highlighted that this collaborative spirit has not only improved the quality of teaching but also enhanced the overall school environment. Furthermore, the head teacher from School B echoed similar sentiments, saying that,

These training programs have been crucial in building the teaching capacity of our staff. Teachers now share knowledge and resources more freely, and this has improved the quality of education in our school.

The head teacher further added that professional growth has been one of the key outcomes of the training, as teachers have gained new skills and confidence in their roles. The findings reveal that in-service training has had a significant impact on fostering teamwork among teachers. The collaborative approach to lesson planning and classroom management has not only improved teaching practices but also created a more supportive and productive work environment for teachers. Professional growth, as a result of the training, has empowered teachers to take on new challenges with confidence and competence. These findings are consistent with a study by Borko (2004), which found that professional development programs that encourage collaboration among teachers lead to improved teaching practices and a stronger sense of community within schools. Similarly, the study by Vescio et al. (2008) emphasized that collaborative professional development fosters both individual and collective teacher growth, resulting in more effective teaching and improved student outcomes.

5. Conclusion and Recommendations

5.1 Conclusion

The study concludes that in-service training significantly enhances teachers' classroom management, lesson preparation, curriculum adaptation, and teaching techniques. Teachers reported improved student engagement, confidence, and participation, facilitated by strategies such as positive reinforcement, collaborative learning, and the integration of technology. The training also fostered professional growth, enabling teachers to adopt modern, student-centered approaches and adapt lesson plans responsively. Additionally, teamwork and collaboration among teachers were strengthened, creating a supportive professional learning environment. These findings underscore that continuous professional development is crucial for improving teaching effectiveness, promoting active learning, and creating inclusive, interactive classrooms where both teachers and students thrive.

5.2 Recommendations

Based on the findings, it is recommended that education authorities continue and expand in-service training programs, ensuring all teachers have access to regular professional development opportunities. Training should emphasize student-centered teaching methods, curriculum adaptation, and technology integration to enhance learning outcomes. Schools should foster professional learning communities to encourage collaboration, knowledge sharing, and team-based lesson planning. Furthermore, monitoring and evaluation systems should be established to track the impact of training on teaching practices and student performance, ensuring continuous improvement and sustainability of educational quality.

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