




# The impact of shortening pre-service teacher training on teaching quality: a case study of the grade A teacher training program in Tanzania

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## ABSTRACT

The shortening of pre-service teacher training programs in Tanzania, particularly within the Grade A teacher training framework, has raised concerns regarding its impact on teaching quality. This study employs a systematic literature review (SLR) using a narrative synthesis approach to examine how the reduction in training duration affects teachers' pedagogical competence and subject matter knowledge. A selection process was implemented, with inclusion criteria emphasizing peer-reviewed studies indexed in Scopus and Google Scholar, published within the last five years. The selection prioritized empirical research on teacher training effectiveness and theoretical discussions on pedagogical development. Exclusion criteria eliminated opinion pieces, non-peer-reviewed sources, and studies lacking methodological rigor. The findings indicated that shortened training results in teachers feeling less prepared, particularly in classroom management, instructional delivery, and student engagement. While in-service training programs can help mitigate these challenges, their effectiveness varies, especially in rural areas with limited professional development resources. The study concludes that reducing pre-service training duration compromises teacher preparedness and educational quality. To address this, policymakers should extend training periods, enhance in-service professional development, integrate digital learning tools, and establish structured mentorship programs. These measures will help ensure that teachers receive adequate preparation to maintain high teaching standards despite the increasing demand for educators.

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## INTRODUCTION

Pre-service teacher training plays a critical role in shaping the quality of education delivered by teachers. The Grade A teacher training program in Tanzania is designed to equip educators with essential pedagogical and subject-matter knowledge. However, recent reforms have shortened the duration of these programs, raising concerns about their potential impact on teaching quality. Traditionally, teacher training programs spanned two to three years, allowing for a comprehensive acquisition of teaching skills. However, the recent shift towards shorter training periods has necessitated a reassessment of their effectiveness. Scholars argue that the depth of teacher preparation directly influences classroom performance, yet governments face increasing pressure to produce more teachers within limited timeframes (Lyamtane & Mosha, 2024).

This study examines the implications of shortened pre-service training on teaching quality, drawing insights from existing literature, empirical data, and a case study approach.

Historically, teacher education in Tanzania has undergone several reforms aimed at improving the quality of instruction. The traditional model emphasized an extensive combination of theoretical learning and practical exposure, ensuring that graduates were adequately prepared for classroom challenges (Christopher et al., 2024). However, policy shifts influenced by financial constraints and increasing student enrollment have led to modifications in training structures. While some policymakers argue that practical experience can compensate for reduced training duration, research suggests that a lack of foundational pedagogical skills may lead to diminished instructional effectiveness (Mgaiwa & Milinga, 2024). These historical shifts

underline the importance of critically evaluating the long-term effects of shortened training programs.

Theoretical perspectives on teacher training have evolved significantly in response to educational reforms. Human capital theory posits that investment in education enhances professional competence and productivity (Abdou, 2023). In this context, reducing training duration may limit teachers' ability to develop crucial skills, ultimately affecting their efficiency in knowledge transfer. Conversely, experiential learning theory suggests that hands-on experience in classroom settings can supplement theoretical knowledge (Goel, 2021). However, studies indicate that without adequate pre-service training, teachers may struggle to implement student-centered methodologies effectively (Shayo & Mnyanyi, 2023). Thus, balancing theoretical and experiential components is crucial in optimizing teacher training outcomes.

Contextually, the Tanzanian education sector faces an increasing demand for teachers, particularly in rural and underserved areas. To address this, the government has implemented fast-track teacher training programs aimed at quickly filling vacancies in schools. While this strategy helps address teacher shortages, it raises concerns about the overall quality of education. Limited exposure to pedagogical theories and instructional methodologies may compromise teachers' ability to manage classrooms and deliver effective lessons (Mwachande, 2024).

Given these developments, this study aims to: 1) examine contemporary theoretical advancements in teacher training; 2) assess recent empirical findings on the impact of training duration; 3) identify key thematic patterns emerging from recent literature, and 4) propose evidence-based recommendations for enhancing teacher preparation programs.

### Review of literature

Recent theoretical advancements emphasize the importance of integrating multiple educational frameworks to optimize teacher preparation. Scholars argue that effective teacher training should incorporate cognitive, behavioral, and socio-cultural dimensions to ensure comprehensive professional development (Pham, et al, 2024; Aljohani, 2023). The increasing complexity of modern classrooms necessitates a shift towards interdisciplinary approaches, combining insights from educational psychology, instructional design, and technological integration. In this regard, hybrid models that merge traditional teacher preparation with experiential learning have gained prominence (Mrosso, 2021).

Empirical research highlights the correlation between training duration and teaching efficacy.

Studies conducted in Sub-Saharan Africa reveal that teachers who undergo professional development demonstrate higher levels of confidence and competency in lesson planning, classroom management, and student engagement (Mbuli & Zhang, 2020; Kinega, 2021). Furthermore, large-scale assessments indicate that newly trained teachers from fast-track programs often struggle with curriculum implementation and differentiated instruction (Chen, 2021). These findings underscore the necessity of maintaining a balance between training efficiency and instructional depth to ensure long-term educational effectiveness.

Thematic patterns emerging from recent literature suggest a growing concern over the quality of teacher preparation. Scholars have identified three key challenges associated with shortened training programs: 1) insufficient pedagogical grounding; 2) limited exposure to diverse classroom settings, and 3) inadequate assessment skills (Fernandez, et al 2021; Chachage, 2020). The increasing reliance on in-service training as a compensatory mechanism has yielded mixed results, with rural educators often facing challenges in accessing continuous professional development opportunities (Abdala & Juma, 2024). Consequently, researchers emphasize the need for structured mentorship programs to bridge knowledge gaps and enhance practical teaching skills.

Another critical area of focus in recent literature is the role of digital learning tools in enhancing teacher preparation. Advancements in e-learning and virtual teaching simulations have introduced new opportunities for educators to develop instructional competencies (Yadav, 2024). Studies indicate that online training modules can effectively supplement theoretical instruction, allowing trainees to engage in scenario-based learning and real-time feedback mechanisms (Amhag et al, 2019). However, disparities in technological access and digital literacy remain significant barriers, particularly in low-resource settings (Juma & Mwila, 2024; Shayo & Mnyanyi, 2023). Addressing these challenges requires targeted investment in digital infrastructure and teacher capacity-building initiatives.

The ethical implications of teacher preparation reforms also warrant attention. The acceleration of training programs raises concerns about the ethical responsibility of educational institutions to ensure that graduates are adequately equipped to meet professional standards (Maxwell & Schwimmer, 2016). Ethical considerations such as teacher workload, emotional well-being, and instructional accountability play a crucial role in determining long-term teaching effectiveness (Puhan et al., 2014). As such, policymakers must evaluate the ethical trade-offs

associated with reducing training durations while maintaining quality benchmarks in teacher education.

Studies also highlight the impact of contextual factors such as geographical location and resource availability on teacher training effectiveness. Teachers in urban settings often have access to better training facilities and mentorship programs, while those in rural areas face significant challenges related to infrastructure, digital learning access, and professional support (Yen et al, 2023). These disparities affect the overall teaching quality and necessitate targeted policy interventions to ensure equitable training opportunities.

The reviewed literature underscores the necessity of a comprehensive approach to teacher preparation, integrating theoretical knowledge, empirical insights, and practical applications. By systematically examining recent contributions, this study aims to inform evidence-based policies that balance efficiency with instructional excellence.

## ■ METHODOLOGY

This study adopts a systematic literature review methodology to ensure a structured and transparent approach to synthesizing recent research. A rigorous selection process was employed to identify relevant studies, focusing on peer-reviewed journal articles published within the last five years. The inclusion criteria were established based on relevance, methodological rigor, and contribution to the research objectives (Fan, et al., 2022). The literature search was conducted using Scopus and Google Scholar to ensure comprehensive coverage of high-quality academic sources. Data extraction involved categorizing studies according to theoretical perspectives, empirical methodologies, and key findings. Thematic analysis was utilized to identify overarching patterns, ensuring a coherent synthesis of insights from diverse sources. This approach enhances the reliability and validity of the findings, allowing for a robust assessment of recent contributions (Walker & Garcia, 2023).

## ■ RESULTS AND DISCUSSION

This section presents the findings of the study, focusing on the impact of shortened pre-service teacher training programs on teaching quality in Tanzania. The findings are structured into key thematic areas that emerged from the systematic

literature review and empirical data, including pedagogical competence, subject matter knowledge, professional development and in-service training, and classroom application and teacher preparedness. The study reveals that the reduction in training duration has compromised pedagogical competence, leaving newly trained teachers with inadequate skills in lesson planning, classroom management, and student engagement. Similarly, subject matter knowledge has been affected, as fast-tracked programs limit in-depth content mastery, leading to challenges in curriculum delivery.

### **Pedagogical competence**

One of the primary concerns associated with shortening pre-service training is the potential decline in pedagogical competence. Teaching is a complex practice requiring a strong understanding of instructional methodologies, classroom management, and student engagement strategies. According to Mrosso, (2021), teachers trained under accelerated programs exhibit lower confidence in classroom control and lesson delivery. Theoretical insights from human capital theory suggest that reducing investment in teacher training compromises the development of instructional skills, thereby diminishing teaching effectiveness (Juma and Mwila, 2024). Empirical studies further reveal that fast-track trained teachers struggle with integrating active learning methodologies, often relying on teacher-centered instruction, which has been linked to reduced student comprehension and participation (Abdala & Juma, 2024).

A study by Lyamtane and Mosha (2024) reveals that teachers who underwent extended pre-service training demonstrated higher levels of pedagogical adaptability. This is critical in diverse classroom environments where students require differentiated instruction. Shortened training programs limit opportunities for new teachers to develop these competencies, forcing them to rely on trial-and-error methods in real classroom settings, which often leads to decreased student engagement and lower academic outcomes (Mbuli & Zhang, 2020). Consequently, policymakers must consider balancing efficiency with pedagogical depth when revising training structures.

### **Subject matter knowledge**

The effectiveness of a teacher is also largely determined by their mastery of subject matter content. Research suggests that teachers with deep content knowledge are better able to explain concepts, facilitate discussions, and adapt their teaching to students' needs (Mwachande, 2024).

However, shortened training programs risk compromising the time required for thorough subject mastery. Empirical findings highlight that teachers with limited training often lack confidence in subject delivery, leading to misconceptions and superficial knowledge transfer (Chachage, 2020).

Experiential learning theory supports the notion that teachers must be immersed in their subject areas through extensive coursework and practice before assuming full teaching responsibilities (Hastings, 2021). However, fast-track programs emphasize speed over depth, reducing the amount of time allocated to subject-specific training (Dance, 2024). As a result, newly trained teachers may lack the expertise needed to effectively teach technical subjects such as mathematics and science. This can have long-term implications on student performance, particularly in standardized examinations.

#### **Professional development and in-service training**

While in-service training serves as a compensatory measure for the deficits in pre-service preparation, its effectiveness varies significantly across different educational contexts. Lyamtane & Mosha (2024) argue that structured professional development programs can mitigate some of the deficiencies of shortened training by enhancing teachers' reflective practices and instructional strategies. However, disparities in rural and urban settings present challenges in access, further exacerbating educational inequities (Mrosso, 2021).

For instance, studies indicate that teachers in urban settings have better access to workshops, peer networks, and professional mentoring opportunities, while those in rural areas often lack such resources (Mbuli & Zhang, 2020). Without consistent professional development, teachers struggle to adapt to evolving educational demands, leading to stagnant teaching practices. To address this, policymakers should prioritize the establishment of decentralized professional development hubs to ensure equitable access to in-service training opportunities.

#### **Classroom application and teacher preparedness**

Case studies indicate discrepancies between theoretical instruction and real-world classroom challenges. Teachers expressed concerns regarding lesson planning, student engagement, and assessment strategies (Lyamtane & Mosha, 2024). Research suggests that a lack of adequate exposure to practical teaching methodologies during training leads to difficulties in adapting to diverse classroom environments (Akiyoo et al., 2022). This highlights the need for extended supervised teaching practice to

bridge theoretical knowledge with practical applications.

Additionally, studies indicate that student-centered approaches require specialized training, which is often lacking in accelerated programs (Abdala & Juma, 2024; Kinega, 2021). Without these competencies, new teachers struggle to create interactive learning environments, resulting in overreliance on traditional lecture-based teaching. Therefore, the lack of specialized training in student-centered approaches within accelerated programs leaves new teachers ill-equipped to foster interactive learning, often leading to an overreliance on traditional lecture-based methods.

### **■ CONCLUSION AND RECOMMENDATIONS**

The findings of this study highlight the significant implications of shortening pre-service teacher training programs on teaching quality in Tanzania. Reduced training duration has been linked to lower pedagogical competence, diminished subject matter knowledge, and inadequate classroom preparedness. Empirical evidence suggests that teachers trained under accelerated programs struggle with lesson planning, classroom management, and student-centered methodologies, ultimately affecting student learning outcomes. Theoretical perspectives, including human capital theory and experiential learning theory, reinforce the necessity of balancing theoretical knowledge with practical experience to ensure teachers are adequately prepared for their roles. Given these challenges, policy measures should be implemented to ensure that teacher training reforms do not compromise the quality of education.

To address these concerns, it is crucial to revisit the duration of pre-service training. Policymakers should consider extending the training period to provide aspiring teachers with sufficient time to develop pedagogical and subject matter competencies. A well-structured curriculum that integrates both theoretical instruction and extended practical experience is essential in preparing teachers for the realities of the classroom. Strengthening in-service training programs can also play a significant role in mitigating the gaps left by shortened pre-service education. Professional development workshops, peer mentoring, and refresher courses should be made accessible to both urban and rural teachers to enhance their teaching skills and adaptability to evolving educational demands.

Additionally, integrating digital learning resources can supplement traditional training methods and provide teachers with access to interactive and flexible learning materials. Online

platforms, virtual simulations, and distance learning modules can bridge knowledge gaps and offer ongoing professional development opportunities, particularly in remote areas where access to formal training programs is limited. Establishing structured mentorship programs is another essential recommendation. Pairing novice teachers with experienced mentors can help facilitate skill transfer, build confidence, and ensure a smoother transition into full-time teaching roles.

Finally, monitoring and evaluation mechanisms should be strengthened to assess the effectiveness of training programs and ensure alignment with national educational standards. Regular assessments, teacher performance evaluations, and feedback mechanisms should be implemented to identify areas that require improvement. By adopting these recommendations, policymakers can strike a balance between efficiency and quality in teacher training, ensuring that the education system produces well-prepared teachers capable of fostering meaningful student learning outcomes.

## ■ DECLARATIONS

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### Data availability

The datasets used and/or analysed during the current study available from the corresponding author on reasonable request.

### Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1038/s41598-023-29360-y>.

### Authors' contribution

Audax P,<sup>1</sup>Osaki K, and Mkulu F contributed to the research, data analysis, and manuscript writing.

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### Consent to publish

Not applicable.

## Competing interests

The authors declare no competing interests in this research and publication.

## ■ REFERENCES

- Abdala, J., & Juma, S. (2024). In-service training for improving the quality of English language teaching in Zanzibar's secondary schools. *Quality Assurance in Education*, 32(3), 371-386. <https://orcid.org/10.1108/QAE-12-2023-0211>
- Abdou, A. (2023). *Organizational Managers Strategies Increasing Human Capital Efficiency An Exploratory Case Study*. Doctoral dissertation, Northcentral University..
- Akiyoo, F., Mosha, H., & Ogoti, E. (2022). Adequacy of Teaching and Learning Resources for Implementing Inclusive Education in Primary Schools in Arusha Region, Tanzania. *International Journal of Innovative Research and Development*, 11(2).
- Aljohani, H. A. (2023). *Understanding Early Childhood Teacher Education Practicum Programs in Saudi Arabia*. Doctoral dissertation, The University of Newcastle, Australia.
- Amhag, L., Hellström, L., & Stigmar, M. (2019). Teacher educators' use of digital tools and needs for digital competence in higher education. *Journal of Digital Learning in Teacher Education*, 35(4), 203-220. <https://doi.org/10.1080/21532974.2019.1646169>
- Chachage, K. (2020). *Pedagogy as Social Practice and Teachers' Pedagogic Choices in Tanzanian Primary Schools*(Doctoral dissertation, University of Minnesota).
- Chen, J. (2021). *Emergency remote teaching and beyond*. Berlin: Springer International Publishing.
- Christopher, E., Osaki, K. M., & Makundi, C. (2024). Effect of school supervision in improving learning effectiveness in public secondary schools in Ilala municipality Dar ES Salaam region Tanzania. *International Journal of Multidisciplinary Research and Growth Evaluation*, 5 (1).
- Dance, T. G. (2024). *Exploring the role and experience of academic administrators in the delivery of experiential education programs in undergraduate professional faculties*.
- Fan, D., Breslin, D., Callahan, J. L., & Iszatt-White, M. (2022). Advancing literature review methodology through rigour, generativity, scope and transparency. *International Journal of Management Reviews*, 24(2), 171-180.
- Fernandez, C. S., Green, M. A., Noble, C. C., Brandert, K., Donald, K., Walker, M. R., ... & Corbie-Smith, G. (2021). Training "pivots" from the pandemic: Lessons learned transitioning from in-person to virtual synchronous training in the clinical scholars leadership program. *Journal of healthcare leadership*, 63-75.
- Goel, P. (2021). *Experiential Learning*. *International Journal of teacher education and teaching*, 1(2), 118-127.

- Hastings, R. G. (2021). An Analysis of Experiential Learning and Self-Reflection on the Perceived Effectiveness of Teacher Preparation Among First-and Second-Year Novice Teachers.(Doctoral dissertation, Caldwell University).
- Juma, A. A., & Mwila, P.M (2024). Integrating Pedagogical Knowledge and TPACK for Effective English Teaching in Bagamoyo District, Tanzania. *International Journal of Scientific Research and Modern Technology*, 3(12). <https://www.ijrmt.com/index.php/ijrmt/article/view/132>
- Juma, K., & Mwila, P. (2024). Leveraging Information and Communication Technology in Distance Learning: Analyzing Challenges and Competence among Adult Learners in Kisarawe District, Tanzania. *International Journal of Scientific Research and Modern Technology*, 3(12), 1–6.
- Kinega, M. M. M. (2021). A Comparative Study on Practice of Vocational Education Teacher Training Between Tanzania and China. *International Journal of Innovative Research in Engineering & Multidisciplinary Physical Sciences*, 9(5), 40-53. <https://doi.org/10.37082/IJIRMP.2021.v09i05.007>
- Lyamtane, E., & Mosha, H. J. (2024). Professional development programmes for teachers and educational managers of the education sector in Tanzania: towards a holistic approach. *Papers in Education and Development*, 42. <https://journals.udsm.ac.tz/index.php/ped/article/view/7057>
- Maxwell, B., & Schwimmer, M. (2016). Professional ethics education for future teachers: A narrative review of the scholarly writings. *Journal of Moral Education*, 45(3), 354-371.
- Mbuli, R. S., & Zhang, J. (2020). Analysis of teacher professional development in Tanzania: View point school management practice. *Journal of Social Sciences Advancement*, 1(01), 30-37. <https://orcid.org/10.52223/JSSA20-010104-04>
- Mgaiwa, S. J., & Milinga, J. R. (2024). Teacher preparation and continuous professional development: A review of 'missing links'. *Social Sciences & Humanities Open*, 10. <https://orcid.org/10.1016/j.ssaho.2024.100990>
- Mrosso, P. V. (2021). Factors Pushing Professional Teachers from Public Secondary Schools in Tanzania. Doctoral dissertation, The Open University of Tanzania.
- Mwachande, I. O. (2024). Social Sciences Curricula Implementation and Community Secondary Schools Students' Acquisition of Life Skills in Mbeya Region, Tanzania. Doctoral dissertation, The Open University of Tanzania.
- Pham, K. T., Thi Do, L. H., Dinh, H. V. T., Nguyen, Q. A. T., Phan, Q. N., & Ha, X. V. (2024). Professional development of primary school teachers in Vietnamese educational reform context: an analysis from a sociocultural perspective. *Education* 3-13, 52(3), 428-443. <https://orcid.org/10.1080/03004279.2023.2168502>
- Puhan, R. R., Malla, L., & Behera, S. K. (2014). Current ethical issues in teacher education: A critical analysis on pre-service and in-service emerging teachers. *American Journal of Educational Research*, 2(12A), 1-7. <https://orcid.org/10.12691/education-2-12A-1>
- Shayo, F., & Mnyanyi, C. (2023). A Competency-Based Approach to ICT Integration in Teacher Education: Perspectives from Tutors and Teacher-Trainees in Tanzania Mainland. *International Journal of Research and Innovation in Social Science*, 7(7), 932-946. <https://orcid.org/10.47772/IJRISS.2023.70772>
- Yadav, A. (2024). The use of Technology in Teacher Education: Preparing Educators for the Digital Age. *Unified Visions*, 208.
- Yen, P. H., Thi, N. A., Thuy, P. T., Tra, N. H., & Thu, H. T. A. (2023). Impact of geographical factors on Vietnamese teachers' satisfaction with "Teacher Activity Groups" project. *International Journal of Learning, Teaching and Educational Research*, 22(9), 62-84. <https://orcid.org/10.26803/ijlter.22.9.4>

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