Professional Development Programmes for Teachers and Educational Managers of the Education Sector in Tanzania: Towards a Holistic Approach

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Abstract

This article examines in-service training (INSET) and teachers' professional development (TPD) as critical tools for improving educational quality in Tanzania through a holistic approach. Unlike stand-alone or singular approaches, a holistic perspective recognises the interconnected elements necessary to enhance teaching practices and achieve high-quality education. While primarily focusing on teachers, the study also highlights the importance of addressing the needs of strategic educators who contribute significantly to improved learning outcomes. These programmes aim to address training gaps, respond to evolving educational demands, and adapt to societal complexities. The methodology involved document analysis, key research findings, consultancy experiences, and professional expertise. The study underscores the importance of balanced PD programmes that enhance subject knowledge, integrate modern pedagogical skills, leverage technology, promote inclusive education, foster collaboration and professional learning communities, and adhere to ethical and professional standards. To be effective, PD programmes must be client-driven, well-planned, adequately financed, and effectively implemented. The study emphasises the need for a holistic model that addresses all critical aspects of professional development. Adopting such a model is recommended to support the country's vision of achieving excellence, relevance, and quality in education across all levels.

Introduction

High-quality and relevant education is a critical driver of socio-economic and technological development worldwide. Central to this endeavour is quality teachers,

who play a pivotal role in delivering such education (Darling-Hammond, 2017; Pesambili, Sayed & Stambach, 2022; UNESCO, 2018). However, in Tanzania, the quality of education in most primary and secondary schools remains substandard, reflected in low pass rates in final examinations. For instance, less than 30% of students achieve Divisions I to III in the Certificate of Secondary Education Examinations, with the majority scoring Division IV or zero (United Republic of Tanzania [URT], 2021). Teachers have been identified as a significant contributing factor to this issue (Mosha, 2012). Furthermore, education stakeholders frequently critique Tanzania's education system for its irrelevance, asserting that it fails to equip graduates with the knowledge, skills, values, and attitudes necessary for formal employment and self-employment in the informal sector (URT, 2023). A primary cause of these challenges can be primarily attributed the inadequacy of pre-service and in-service teacher education programmes (Luwavi, 2022).

Conceptual Framework

The development of adequate, high- quality, and competent educators for the education sector in Tanzania, capable of effectively implementing the new curriculum being ushered into the education system, needs to adopt a comprehensive and holistic approach to map out the needs adequately. This is because many players need to work as a bonded team to realise the ideals contained in the new curricula, which attempt to mesh theory and practice. The purpose of this article, therefore, is twofold. The first is to delineate and elaborate on the important components of the programmes. The second is to explain how they can be realised.
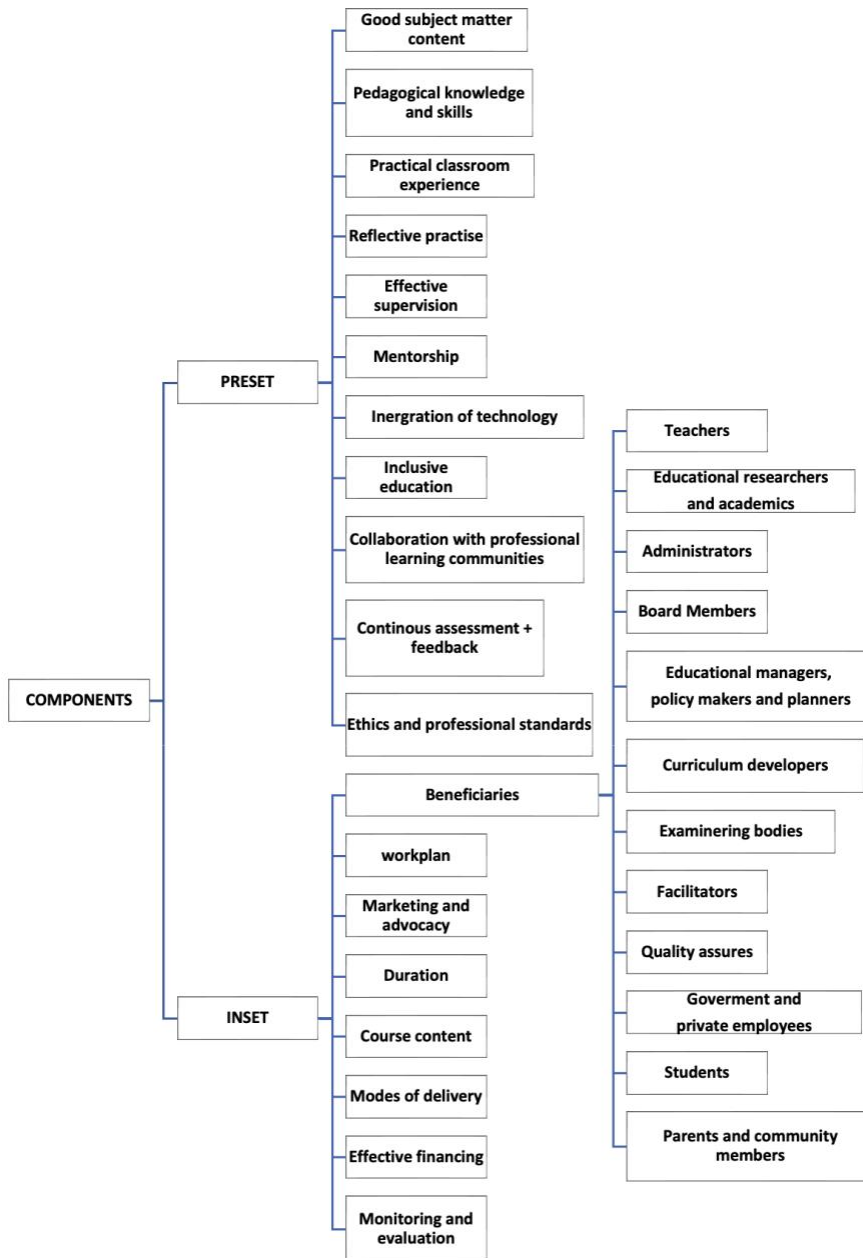
Figure 1: *A comprehensive and holistic model for planning and implementing PDPs*

Methodology

This article is based on two main sources of insight: an extensive review of literature on teacher education in Tanzania and other countries and the writers' extensive experience in the education sector. The authors have worked as educators at primary, secondary, adult, and university levels, equipping them with a deep understanding of

the field. In addition, they have contributed to the development of Tanzania's teacher education master plan and served as the Chief National Consultant in the EQUIPT (2014-2018) National Research Programme on Primary Education. One of the authors was also involved in preparing the Higher Education Master Plan. This extensive experience and knowledge of the sector form the basis for proposing an effective model for future professional development programmes (PDPs) in education.

Despite these efforts, teachers, administrators, quality assurance officers, and examiners in Tanzania still need retooling with up-to-date knowledge, skills, values, and the spirit of hard work and patriotism. The education sector needs to develop and continually update its human capital, enabling both formal and informal employment opportunities. A comprehensive PD programme is required, with a focus on equipping all educational stakeholders with the competencies necessary for success.

This article adopts a holistic approach to in-service training (INSET) for educators, with a particular emphasis on teachers. It outlines the rationale for PD for various education personnel and aims to identify best practices for adoption to improve the quality of education in Tanzania. The literature review highlights qualifications from countries with exceptional teacher education programmes, examining their pre-service and in-service offerings. Specifically, the article explores key issues such as programme duration, course content, delivery methods, evaluation, financing, and work planning, culminating in conclusions based on these findings.

Findings, Analyses and Discussion

The findings, analyses and discussion are presented in the ensuing sections.

Professional development programmes for diverse stakeholders in the education sector

Professional development programmes (PDPs) are activities and processes designed to support the continuous learning, growth, and improvement of individuals involved in educating children (Darling-Hammond et al., 2017; Desimone et al., 2017; Guskey & Yoon, 2009; ILO, 2019; Altbach et al., 2019; World Bank, 2017). These programmes include:

For teachers

INSET programmes for teachers aim to enhance their:

Subject matter knowledge: Many teachers exhibit knowledge gaps in their fields. By attending subject-specific workshops, courses, and conferences and engaging in collaborative activities with colleagues, teachers can deepen their understanding of their subject matter and stay up-to-date with developments in their respective fields.

Pedagogical skills: In the current educational landscape, innovation is crucial. PDPs help improve teaching strategies, instructional methods, and pedagogical approaches such as differentiated instruction, classroom management, assessment techniques, feedback skills, curriculum design, and the integration of technology in teaching and learning. These improvements empower teachers to be more effective in the classroom.

For educational researchers and academics

Given that change is a global phenomenon, PDPs provide educational researchers and academics with the knowledge, skills, and insights necessary to bridge theory and practice. By encouraging educators to investigate their classrooms, experiment with new strategies, collect data, analyse results, and reflect on their findings, PDPs promote a culture of continuous learning and evidence-based practice, driving improvement and innovation in education.

For educational administrators and support staff

Educational administrators, including principals, head teachers, and departmental heads, require targeted PDPs to understand new curricula and facilitate their successful implementation. These PD programmes are designed to help them develop essential leadership skills, managerial competencies, and instructional supervision capabilities.

Administrative staff, including school office administrators, finance officers, and human resource managers, should undergo target PDPs to enhance their skills in managing school administrative processes that facilitate the effective execution of innovative curricula. These programmes focus on areas such as financial management, budgeting, procurement procedures, human resource management, scheduling, record-keeping, and data management.

For *support staff*, particularly IT staff, PD should address areas such as safety protocols, maintenance standards, and transportation management, along with other roles within the school that contribute to the overall smooth operation and effective implementation of the curriculum.

For educational institutions' board members

These policymakers and planners at decentralised levels require regular professional development to enhance their understanding of educational innovations, leadership, governance, policy-making, and strategic planning. PDPs for board members ensure are equipped with the skills necessary to make informed, evidence-based decisions that improve their educational institutions. They are trained in areas such as budgeting,

resource management, curriculum development, staff supervision, legal and ethical responsibilities, and organisational governance. Furthermore, training in fostering professional learning communities is essential. It helps board members promote collaboration among staff, provide opportunities for professional growth, and encourage a culture of continuous development within their institutions.

For curriculum developers

A well-designed curriculum is the foundation of a high-quality education system (Mosha et al., 2008). Professional development (PD) programmes provide curriculum developers with essential opportunities for growth through specialised training, workshops, and seminars that focus on curriculum design, development, implementation, monitoring, and evaluation. These programmes enhance skills in instructional design, assessment strategies, learning theories, and educational technologies while ensuring that developers stay informed about the latest educational trends and innovations. PD programmes also offer training in areas such as needs assessment, formulation of learning outcomes, development of SMART objectives, content sequencing, instructional strategies, and evaluation methods. They equip curriculum developers with new tools, approaches, and techniques to create engaging, relevant, and effective curricula that meet the diverse needs of learners. Additionally, these programmes emphasise continuous quality improvement in curriculum development by introducing quality assurance frameworks, assessment practices, and strategies for ongoing enhancement. Curriculum developers are also trained to evaluate the effectiveness of their curricula, identify areas for improvement, and implement evidence-based changes that lead to better learning outcomes.

For examining bodies

The 2012 Certificate of Secondary School Examination (CSSE) crisis highlighted the critical need for well-prepared assessment processes. The introduction of a new competency-based curriculum (CBC) in 2005/6 required several years of adaptation before assessments were aligned with it. However, when the National Examinations Council of Tanzania (NECTA) introduced CBC-related questions in the CSSE exams prematurely, the curriculum had not been thoroughly integrated into teaching and learning. This resulted in over 80% of candidates failing the exam.

A post-mortem revealed that many teachers, quality assurance officers (QAOs), and school managers lacked the necessary competencies to support the effective implementation of the CBC. Consequently, a traditional examination was used to ensure a normal distribution of student performance. PD programmes for members

of examining boards are therefore essential. These programmes should be mandatory to ensure that those involved in the assessment process possess the highest standards of evaluation, maintaining the integrity and credibility of examinations. Furthermore, they support the improvement of the overall quality and trustworthiness of the assessment process.

For trainers of trainers (ToTs) or facilitators

Change, when not systematically introduced, can be disruptive. Therefore, effective facilitators play a key role in ensuring that change cascades throughout the education system. Change agents, also known as advocates of change, serve as catalysts in the transformation process. As Murray and Davis (2021) and Fullan (2020) suggest, ToTs help organisations, or parts of them, transform by inspiring and influencing others. However, Tanzania has yet to establish a coherent and well-coordinated system for ToTs. These programmes are essential for providing ongoing support and guidance to educators through workshops, training sessions, seminars, and activities aimed at fostering professional growth. ToTs are not only responsible for monitoring the progress and effectiveness of professional development (PD) programmes but also for helping educators integrate new practices into their teaching methodologies and routines. They also collect data, evaluate the impact of training on educators' knowledge and skills, and adjust the programmes as needed. Furthermore, ToTs help develop internal systems, processes, and structures that support continuous professional development and promote a culture of improvement. Regular retooling and specialised training are therefore necessary to ensure that facilitators remain effective and up-to-date with evolving educational practices.

For quality assurance officers, inspectors, and supervisors

Quality assurance officers, previously known as school inspectors or supervisors, play a crucial role in monitoring and maintaining education standards. According to Morrison and Jörg (2020) and Schwarz and Stensaker (2019), they require updated knowledge and skills in quality assurance processes, assessment methodologies, data analysis, and evaluation techniques to stay current with best practices and emerging trends in education. This enables them to effectively monitor and assess the quality and relevance of education across all levels. In addition to learning about quality standards, indicators, and evaluation frameworks, these professionals need improved evaluation and monitoring skills. They must develop the ability to assess teaching effectiveness, curriculum implementation, and overall school performance. Training in data collection, management, and data-driven decision-making is also crucial for helping them use evidence in their quality assurance processes. Exposure to best practices in education—successful

approaches, innovative strategies, and evidence-based interventions—is equally important. These PD programmes offer opportunities for inspectors and supervisors to network with peers, share experiences, and discuss challenges and solutions related to quality assurance. Moreover, such programmes may include certification or recognition that validates their skills and expertise, thus enhancing their career advancement opportunities. Finally, training emphasises *accountability in quality assurance*, focusing on ethical responsibilities, confidentiality, and transparency. It further equips them with the tools needed to hold educational institutions accountable, ensuring that quality standards are met and preserving the credibility and integrity of the quality assurance process.

For government and private employers

Government employers: Government employers are the key employers of our graduates. According to Macleod (2022), the knowledge and skills gained through professional development (PD) programmes can significantly enhance workforce *efficiency* and *productivity*. Well-trained employees are more capable of handling complex tasks, leveraging new technologies, and devising innovative solutions to challenges. These benefits also contribute to *talent retention* and *attraction* by providing employees with growth opportunities, thus making the government sector more appealing to skilled individuals. Furthermore, PD programmes can help retain experienced personnel and reduce turnover rates, minimising the costs associated with recruitment and training new employees. Additionally, these programmes ensure that employees stay informed about evolving policies, innovations, regulations, and compliance requirements, enabling them to effectively implement new guidelines and contribute to improved governance.

Private employers: PD programmes foster *a culture of continuous learning and innovation* within private organisations. Employees who engage in regular PD opportunities are more adaptable to new technologies and better equipped to contribute to the development of innovative solutions. This helps create a workforce capable of providing a *competitive edge* for private employers by delivering superior products and services, exceptional customer experiences, and a prompt response to market changes. A well-trained workforce differentiates private employers from the competition and can attract more customers, including students, in the education sector. Engaged employees are typically more loyal, motivated, and productive, which leads to reduced turnover and greater organisational performance. PD programmes also help private employers *identify and nurture potential leaders*, ensuring smooth succession planning and continuity in key roles.

Indirect beneficiaries

Students: Although students are not direct participants in INSET/PD programmes, they are the ultimate beneficiaries. Enhanced PD programmes directly improve teaching quality, which in turn positively impacts student learning outcomes.

Parents and community members: High-quality PD positively influences teachers' ability to communicate and collaborate with parents and other community members, thereby fostering stronger partnerships between schools and families. This encourages greater parental engagement, support for student learning, and increased community involvement in education.

In a nutshell, by benefiting these diverse stakeholders, PD programmes can substantially improve the overall quality of education. They enhance teaching and learning practices, contributing to better student achievement and the successful implementation of new curricula.

Implementation of INSET/PD programmes

Effective implementation of INSET/PD programmes is essential to realise the benefits. It entails considering several important issues, which include the following:

Mandate and policy support

In the Tanzanian context, the government and the Tanzania Commission for Universities (TCU) must take a proactive role in addressing this issue. The current climate is favourable, given the directive issued by the President of the United Republic of Tanzania on 19 June 2022. The President instructed the two ministries responsible for education—the Ministry of Education, Science, and Technology (MoEST) and the Ministry of Regional Administration and Local Government (MRALG)—to work collaboratively in identifying the root causes of inadequate practical knowledge across all education levels. This directive underscores the urgency of implementing targeted reforms and fostering a unified approach to improving education outcomes.

Marketing and advocacy

These are essential for promoting the value and benefits of professional development (PD) programmes. Effective strategies should focus on raising awareness, engaging stakeholders, and securing support for these initiatives. Simmonds (2017) outlines several key steps:

> i. *Develop a clear value proposition*: Clearly articulate the benefits of PD programmes to various stakeholders, including teachers, school leaders, policymakers, and the wider community. Highlight how these programmes

improve teaching practices, enhance student outcomes, and foster professional growth.

ii. *Tailor communication to audiences*: Use targeted messaging and appropriate channels to reach specific audiences effectively. Employ mediums such as websites, social media platforms, newsletters, and educational conferences to disseminate information about PD programmes and their impact.

iii. *Showcase success stories*: Highlight the positive outcomes of INSET programmes through testimonials, case studies, videos, and data-driven evidence. Demonstrating real-life success fosters trust and engagement.

iv. *Engage key influencers*: Collaborate with education sector influencers, such as teacher unions, education associations, and prominent educators. Encourage them to endorse and advocate for PD initiatives through their networks and platforms.

v. *Collaborate with education institutions*: Partner with universities, colleges, and teacher training institutions to integrate PD programmes into curricula. This enhances credibility, expands reach, and provides opportunities for teachers to earn recognised certifications, credits, or promotions.

vi. *Engage policy-makers*: Advocate for the importance of PD with evidence that aligns with new educational goals, policies, and standards. Demonstrating the alignment reinforces the relevance of these programmes to national education priorities.

vii. *Establish professional learning communities (PLCs)*: Foster peer-to-peer learning among teachers through PLCs. Encourage sharing of best practices, discussions on continuous professional development, and showcasing successful participants in INSET programmes.

viii. *Continuous evaluation*: Regularly assess the effectiveness and impact of PD programmes. Gather participant feedback, monitor outcomes, and apply reflective practices to refine and improve offerings for greater relevance and impact.

Ultimately, advocacy efforts should focus on persuading the Tanzanian government to issue a directive mandating regular professional development and INSET as a crucial quality enhancement measure within the education sector.

Programme duration

The duration of INSET/PD programmes depends on several factors, including set goals, content, and delivery method of the training illustrated by the following examples:

Short workshops or sessions. These are typically brief training sessions that focus on specific topics or skills. They can range from a few hours to one or two days.

Short workshops are useful in introducing new teaching strategies, technology tools, or assessment methods.

Intensive and comprehensive training programmes: these provide in-depth training on specific subjects and can last for a few days and up to a couple of weeks. They also often involve a combination of lectures, hands-on activities, group discussions, and practical applications.

Multi-day or multi-week programmes: these are designed to be conducted over multiple days or weeks for more extensive coverage of content and to facilitate deeper engagement and reflection. They may involve a combination of face-to-face sessions, online modules, and collaborative work.

Ongoing or long-term programmes: these aim to provide continuous professional development over an extended period. These programmes can last several months or even an entire academic year. They may include a series of workshops, coaching sessions, mentoring, and opportunities for reflection and implementation in the classroom.

Modular or flexible programmes: these are structured to allow participants to complete modules at their own pace. They offer flexibility since teachers can choose the modules that align with their needs and availability. Modules can vary in duration, ranging from a few hours to several weeks.

The duration of INSET programmes should, therefore, be carefully determined based on the specific objectives, content complexity, and participants' availability. Additionally, the mode of delivery, whether it is in-person, online, or a hybrid approach, can impact the duration of the programme to strike a balance between providing sufficient time for meaningful learning and accommodating the practical constraints of teachers' schedules.

Course content

Course content in professional development (PD) programmes typically addresses two key areas:

i. *Addressing deficiencies in subject matter or pedagogical skills*: Content can focus on bridging gaps identified in quality assurance officers' reports or through independent needs assessments. This ensures alignment with existing challenges and priorities within the education sector.

ii. *Tailoring to specific needs*: The course content should align with the particular goals, needs, and contexts of teachers and other education professionals. As highlighted in the preceding sections, this ensures that the programmes effectively address the unique challenges and objectives of participants.

By being tailored to the needs of teachers, educators, and strategic human resources across the education sector, PDs can better overcome sector-wide challenges and achieve targeted goals.

Modes of delivery

PDPs can employ various delivery modes to meet the diverse needs of educators, including accommodating those with limited vacation time (Popova et al., 2022). These include:

Traditional delivery modes

This may include but is not limited to the following:

i. *Workshops and seminars*: These face-to-face sessions provide opportunities for educators to convene at a physical location for training. The benefits and methodologies of these traditional modalities have been detailed in earlier sections.

ii. *Case studies*: Educators engage in the analysis of real-life scenarios or problems, fostering active learning, critical reflection, and collaborative problem-solving. This approach enhances decision-making skills and contributes to professional growth by providing practical insights applicable to their work.

iii. *Portfolio preparation*: Educators compile documents, artefacts, and reflections that showcase their professional development journey, achievements, and application of new knowledge and skills. A well-organised and personalised portfolio serves as tangible evidence of growth and provides a platform for ongoing reflection and improvement in teaching practices.

Digital and online learning platforms

These platforms include the following:

i. *Online learning resources*: With the advancement of digital technology, online learning has become a popular mode of delivering PDPs. This mode allows educators to access training materials and resources through web-based platforms. Online learning may include self-paced modules, webinars, virtual classrooms, discussion forums, and multimedia resources (Drent & Meelissen, 2018). It offers flexibility in terms of time and location to enable educators to engage in professional development at their own pace. Novel approaches—zoom—can facilitate the cascading and saturation of all needs of varying stakeholders.

ii.   *Micro-learning*: this involves breaking down professional development content into smaller, bite-sized modules or lessons. These concise and focused learning units allow educators to access and absorb information in short, manageable segments. Micro-learning is often delivered through online platforms, hence making it easily accessible and convenient for busy educators.

iii.   *Virtual conferencing tools:* Platforms like online tools, such as Skype, Zoom, Google Meet, or Microsoft Teams, are widely utilised in PD programmes all over the world due to their accessibility and collaborative features. These tools can facilitate PD in diverse ways:

    a.   *Virtual workshops and seminars*. Zoom can enable the delivery of virtual workshops and seminars for participants in different remote locations in Tanzania to engage in real-time sessions without the barrier of distance. Trainers can present content, facilitate discussions, and conduct interactive activities through Zoom's video and audio features.

    b.   *Interactive presentations.* Similarly, zoom offers screen-sharing capabilities that allow trainers to share their screens and deliver interactive presentations. They can also display slides, videos, documents, or other multimedia resources to ensure participants have visual access to the content under discussion.

    c.   *Breakout rooms* enable trainers to create smaller, interactive group sessions to facilitate collaborative learning, as participants can engage in group discussions, activities, or problem-solving exercises. Trainers can also visit and provide guidance to different breakout rooms.

    d.   *Chat and polling* allow participants to ask questions, share resources, or engage in text-based discussions during the INSET session. Trainers can also use polling features to get instant feedback, gauge understanding, or conduct quick surveys.

    e.   *Recording and playback*. Zoom sessions can be recorded so that participants can revisit the content later. This feature is particularly beneficial for those who may have missed the live session or want to review the material for further understanding or reinforcement.

    f.   *Collaboration and file sharing*. Zoom's platform supports collaborative work and file sharing. Participants can share documents, worksheets, or other resources directly within the Zoom session, hence fostering collaboration and facilitating the completion of group activities or projects, as well as knowledge and skills enrichment.

g. *Question and Answer (Q&A) Sessions and Guest Speakers*. Zoom's interactive features also enable trainers to conduct Q&A sessions for participants to ask questions or seek clarifications. Additionally, guest speakers can be invited to join PD sessions via Zoom to provide valuable insights and expertise.

h. *Professional networking*. Zoom can also help create virtual networking opportunities for participants. In this regard, trainers can facilitate virtual meet-and-greet sessions for educators to connect, share experiences, and build professional relationships.

i. *Ongoing support and coaching.* Zoom provides a platform for trainers to offer ongoing support and coaching to participants beyond the initial PD sessions. The trainers can also schedule follow-up meetings, provide individualised feedback, or conduct virtual coaching sessions to support the implementation of new strategies or address specific needs.

Collaborative and job-embedded professional development

This includes but is not limited to the following:

i. *Coaching and mentoring*: This approach involves one-on-one or small-group interactions between experienced educators (coaches or mentors) and their less experienced colleagues. It focuses on providing individualised support, guidance, and constructive feedback to help educators develop specific skills or address professional challenges.

ii. *Study groups and learning communities*: Educators collaborate on a specific topic or area of interest through regular meetings to discuss relevant research, share resources, exchange ideas, and engage in collaborative learning. These groups can operate at various levels— within schools, across wards or districts, or even online.

iii. *On-the-job training*: This mode integrates PDPs directly into educators' daily work and classroom environments. Addressing specific challenges from their teaching practice enables immediate application of new strategies. On-the-job training often includes coaching, mentoring, or action research to provide real-time support and solutions.

iv. *Action research*: Educators engage in reflective and systematic inquiry into their teaching practices to address specific challenges and improve their effectiveness.

v. *Professional events and networking*: Events such as academic conferences and PD forums bring together educators, researchers, and experts. These gatherings feature keynote presentations from leading voices in the field,

breakout sessions, panel discussions, and opportunities for networking to share knowledge, research findings, and best practices.

University-school-community engagement and partnerships

Many members of the community fault universities today for remaining islands far removed from the realities of everyday life. Despite having been established to serve them, the universities tended to be detached/have no/limited contact with such communities. Elsewhere—the USA, Canada and Japan—university faculty and students have forged close partnerships with schools, communities and industry for a number of reasons:

i. *Provide clinical experiences* for pre-service teachers with the goal of preparing them to work in urban and rural school settings. Such an opportunity would be extremely useful for advisors and other campus partners in Tanzania who work directly with first-year students.

ii. *Provide opportunities* to university faculty to meet with students, teachers, and counsellors at the schools, engaging in two-way, meaningful conversations. Prospective students can meet campus representatives and ask them questions about the realities of university life, whereas university staff learn about expectations from the students'/community perspectives.

iii. Offer university faculty an *opportunity to spend time exploring the neighbourhood and learn more* about the diverse students' backgrounds as well as the need for relevant education to meet the needs of students from diverse communities. Neighbourhoods also provide opportunities for deep learning to address critical problems.

iv. *Partner with communities* to celebrate their culture and other historical and cultural contexts, as well as successes achieved out of partnerships. Also, draw on rich experiences from the actual world to enrich classroom teaching and learning.

v. *Enable students to know that each comes to the university with their own unique story* since such visits enable university faculty to share transformative experiences, in addition to planning to use their new insights to build relationships with students. Hearing first-hand what incoming students experience as they leave their home "nest" can also inform the work of staff so that they can bond with the community by intentionally showing authentic care and providing services holistically and individually.

Modes of evaluation

Both formative and summative evaluation techniques are desirable. When evaluating PD programmes, there is a need to assess their effectiveness and impact on teacher practice and student outcomes. Common modes of evaluating PD

programmes, according to Bower and Singh (2021) and Ingvarson, Meiers, and Beavis (2003), include the following:

i. *Participant feedback:* Gathering feedback from participants is a valuable way of evaluating the immediate reactions and satisfaction levels regarding the PD programme. This can be done through surveys, questionnaires, or structured interviews. Feedback can provide insights into the relevance, clarity, and effectiveness of the training content, delivery methods, and experience.

ii. *Pre – and post-assessments:* Administering pre – and post-assessments facilitates the measuring of changes in teacher knowledge, skills, and attitudes resulting from the PD programme. Comparing pre-training and post-training assessments can help to determine the extent of growth and learning that has occurred from the training.

iii. *Classroom observations:* Conducting classroom observations before and after the PD programme can provide direct evidence of changes in teaching practices. Trained observers or peers can use structured observation protocols to assess the implementation of new strategies, instructional techniques, or approaches discussed during the training.

iv. *Teacher portfolios:* Teachers can also be encouraged to create portfolios and document their implementation of new strategies or interventions learned during the PD programme. These portfolios can include schemes of work and lesson plans, students' work samples, reflections, and evidence of classroom practice changes. Reviewing these portfolios can further provide insights into the application and impact of the training in real classroom settings.

v. *Students' performance data*: Evaluating changes in student performance data can help assess the impact of the PD programme on student outcomes, which can include analysing standardised test scores, formative and summative assessments, or other measures of student achievement before and after the training.

vi. *Long-term follow-up*: Conducting follow-up evaluations after a certain period helps assess the sustainability and long-term impact of the PDs. Long-term evaluations can involve surveys, tracer studies, interviews, or focus groups with participants to determine whether the changes in teaching practices are maintained over time and subsequent improvements in student outcomes.

vii. *Peer review and collaboration:* Encouraging peer review and collaboration among teachers who have participated in the PD programmes can provide opportunities for feedback, sharing of best practices, and fostering ongoing professional growth. Collaborative activities can include lesson study, peer observations, or joint projects, which can contribute to evaluating the effectiveness and dissemination of the training.

viii. *Stakeholder feedback:* Seeking feedback from school administrators, students, and parents can provide a broad view of the impact of the PD programme. Collecting input from various stakeholders can shed light on changes in the learning environment, student engagement, and overall school culture resulting from the professional development initiatives.

The combination of diverse evaluation modes can provide comprehensive data and insights into the effectiveness and impact of professional development (PD) programmes. This approach helps identify strengths and areas needing improvement, ensuring future programme design and implementation are well- informed and impactful. Formative evaluation can establish in advance the levels of understanding of every facilitator and offer advice on how to assist them to perform better at subsequent stages. On the other hand, the summative assessment shall include adding marks earned from an array of activities done prior to the final evaluation.

Effective financing of PD programmes

Effective financing is essential for the successful implementation and sustainability of professional development (PD) programmes. Drawing on recommendations from UNESCO (2021), World Bank (2017), and Fullan and Langworthy (2014), the following strategies can enhance PD funding:

i. *Government support and funding***:** Collaborate with relevant ministries or government departments to secure dedicated budgets for PD initiatives in the education sector.

ii. *Grants and external funding*: Explore opportunities from foundations, non-governmental organisations (NGOs), and international development agencies, such as UNESCO, UNICEF, and the World Bank, that prioritise education and teacher training. Also, ensure that you actively monitor and apply for grants that align with the programme's objectives.

iii. *Collaborative partnerships*: partner with educational institutions, non-profits, and corporate sponsors to pool resources, share costs, and utilise expertise.

iv. *Cost-sharing models*: Implement models where participants, schools, or educational institutions contribute partially through nominal fees or by allocating budgets for PD. Shared funding between schools and the government can also ensure broader participation.

v. *Leveraging existing resources*: Reallocate existing funds earmarked for teacher training or reprioritise resources from less effective initiatives toward professional development.

vi. *Sponsorships and donations*: Engage corporations, local businesses, community organisations, or alumni networks to support PD programmes through sponsorships or donations.

vii. *Blended learning approaches*: Incorporate online platforms and resources, such as Zoom, to reduce travel, accommodation, and material expenses, optimising cost-effectiveness without compromising quality.

viii. *Evaluation and accountability*: Demonstrate the impact and effectiveness of PD initiatives through evidence-based assessment. Sharing measurable outcomes can help attract ongoing funding from stakeholders.

ix. *Sustainability planning*: Develop long-term plans by integrating PD into regular education budgets or partnering with institutions for continuous funding. Explore fee-based models to ensure programme continuity.

x. *Cost-effective delivery models*: Use cascading models or train-the-trainer approaches, where a small group of trainers educates others, minimising facilitation costs. Employ open educational resources and collaborative learning communities to enhance scalability while reducing expenses.

By adopting these strategies, Tanzania's educational institutions, policy-makers, and stakeholders can efficiently and effectively finance PD programmes. Proper funding will ensure the programmes' sustainability and impact, ultimately improving teacher professionalism and educational outcomes. Both the government and private providers must prioritise adequate financing to support ongoing skill enhancement at all levels of the education sector.

Work plan

A good PD work/action plan outlines the goals, strategies, and activities required to implement effective professional development programmes for the education system/sector. Characteristics of a good PD work/action plan (Mosha, 2006) include the following:

i. *Clear and specific goals:* These must be clearly articulated. These goals should be specific, measurable, achievable, relevant, and time-bound (SMART goals). Clear goals help guide the planning process and provide a basis for evaluating the success of the programme.

ii. *Needs assessment*: A thorough needs assessment process ought to be undertaken to identify the specific professional development needs of beneficiaries based on data analysis, their input, and educational priorities. The plan should also be tailored to address the needs identified to ensure the training is relevant and responsive to the specific context.

iii. *Aligned with the broader educational objectives and priorities of the institution or education system.* It should consider the current vision and policies of the institution and the nation's curriculum, teaching standards, and expectations. This alignment ensures that the PD programme contributes to the overall improvement of education quality.

iv. *Sequential and time-bound activities*: The plan should include a clear sequence of activities to be carried out during the PD programme. It should outline a timeline for each activity, specifying the start and end dates, as well as key milestones to ensure that the programme progresses in a structured manner and is amenable to monitoring and accountability.

v. *Varied and engaging learning methods*: These are vital to cater to different learning styles and preferences. After all, engaging and interactive learning methods promote active participation and increase the effectiveness of the training.

vi. *Necessary resource allocation*, including budgetary considerations, should be addressed to implement the PD programme successfully. It should also outline the required funding, staff, materials, technology, time, and other resources needed to deliver the training activities. Adequate resource allocation ensures the smooth execution of the programme.

vii. *Collaboration and engagement*: These should be emphasised by relevant stakeholders and parties in the planning and implementation process. Engaging key stakeholders helps create ownership, fosters a shared vision, and ensures the programme's relevance, support and sustainability.

viii. *Monitoring and evaluation arrangements*: this helps assess the effectiveness and impact of the PD programme. Similarly, it should define indicators, data collection methods, and evaluation processes to measure the progress and outcomes of the training.

ix. *Continuous improvement*: this should include mechanisms for gathering feedback from participants and stakeholders, hence allowing for reflection and adjustment of the programme based on the needs identified and lessons learned. The plan should be flexible and adaptable to evolving educational contexts and changing requirements.

x. *Sustainability and follow-up*: these involve considering the sustainability of the PD programme beyond its initial implementation, as well as outlining follow-up strategies/activities to support ongoing professional development and mechanisms for embedding the training into the regular professional learning framework. Sustainability ensures the programme's long-term impact and relevance.

Incorporating these characteristics into a PD work/action plan can enable educational institutions/sectors to guide effectively the implementation of professional development programmes and enhance the quality of teacher education.

Summary and Conclusion

Staff responsible for implementing the new curriculum range from preschool to university levels (URT, 2023) and require ongoing capacity building. A holistic

approach to PD highlights the importance of addressing interconnected components that together lead to improved practices and the achievement of high-quality education. Singular or stand-alone PD approaches fall short of fostering these interrelationships. PDPs should focus on providing opportunities to elevate knowledge to the required standards, particularly in a world marked by rapid advancements and the obsolescence of knowledge, skills, values, and practices. Teachers, managers, and other education sector personnel must stay informed about these changes to mitigate uncertainty and ensure that they can adapt effectively. The new Tanzania Education and Training Policy, along with updated curricula for schools (URT, 2023), emphasises relevant knowledge and practical skills— goals that can only be met by well- equipped teachers, educational managers, policymakers, planners, curriculum developers, and quality assessors. PDPs should, therefore, be designed to address their needs and empower them to fulfil their mandates effectively.

To ensure this transformation, a shift away from traditional practices is necessary. This shift requires securing a mandate from the government for the introduction of comprehensive programs. Furthermore, careful planning is critical, alongside the development of effective marketing and advocacy strategies. Key considerations for success also include determining the duration of the program, which should align with course content and allow adequate time for effective delivery. Additionally, implementing robust evaluation methods, feedback mechanisms, and remediation plans is essential to monitor and improve outcomes. In many cases, even well-designed programmes fail due to inadequate financing. Both the government and private providers must allocate sufficient funds in their annual budgets to ensure the success and sustainability of PD initiatives. Regularising PD programs will ensure that the desired learning outcomes are achieved at all educational levels. In conclusion, a robust teacher education system must integrate well-balanced and carefully coordinated pre-service and in-service teacher education components to address the evolving needs of the education sector effectively.

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