

Teacher Continuous Professional Development in Tanzania: Lessons Learnt

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Abbreviations and acronyms

CoL	Community of learning
CPD	Continuous Professional Development
DPG	Donor Partner Group
DLI	Disbursement-linked indicator
EPforR	Education Programme for Results
FCDO	Foreign, Commonwealth and Development Office
GPE	Global Partnership for Education
KPI	Key Performance Indicator
LGA	Local Government Authority
LMS	Learning management system
MELA	Monitoring, Evaluation, Learning and Adapting
MOEST	Ministry of Education, Science, and Technology
MOeVT	Ministry of Education and Vocational Training (Zanzibar)
PO-RALG	President's Office Regional Administration and Local Government offices
TCDP	Teacher continuous professional development
TA	Technical assistance
TIE	Tanzania Institute for Education
TNA	Teacher needs assessment

1. Introduction

The UK Foreign, Commonwealth and Development Office (FCDO) is investing in education in Tanzania through various programmes and initiatives,¹ including the multilateral Education Programme for Results (EPforR) programme.

EPforR was established as a pay-for-performance scheme that disburses funds to the Government of Tanzania's education sector. The disbursements are conditional on the achievement of key results critical for improving education outcomes, and these are mutually agreed upon at the beginning of the year in the form of disbursement-linked indicators (DLIs).

Due to exceptional circumstances, including the Covid-19 pandemic (↑[Adam et al., 2021](#)), the successor to EPforR, EPforR II, was delayed. As a result, to sustain EPforR II, FCDO awarded EdTech Hub an accountable grant to support the Government of Tanzania during this 'bridging period'² until its flagship education programme ([Shule Bora](#))³ began implementation.

The focus of the accountable grant was to support the Government of Tanzania to achieve results against specific DLIs agreed for the EPforR Bridging Year — in particular, DLI 1.1. This incentivised the Government of Tanzania to prepare to operationalise the National Framework for Teacher Continuous Professional Development (↑[Ministry of Education, Science and Technology, 2020](#)).

Through a collaborative and responsive approach of adaptive technical assistance (TA), the EdTech Hub team supported Government of Tanzania partners in developing and implementing a technology-enhanced, school-based, national teacher continuous professional development (TCPD) system. This national programme shifts TCPD from discreet workshops to cost-effective, ongoing, school-based programmes. It is among the first of its kind at a national level, particularly in low- and middle-income country contexts.

Edtech Hub specifically designed its systems and processes towards operationalising the accountable grant as an effective, adaptive project. The DLIs entailed preparation of seven deliverables, encompassing policy guidelines, preparation of TCPD materials, and a learning management

¹ Including, but not limited to, programmes such as the Girls Education Challenge, Research on Improving Systems of Education, EPforR, and the Education Quality Improvement Programme — Tanzania.

² The accountable grant covers the period 14 July 2021 to 31 March 2022.

³ Shule Bora is a 5-year (2022–2027), national education programme to improve the quality of pre-primary and primary schools in Tanzania, funded by FCDO.

See <https://devtracker.fcdo.gov.uk/projects/GB-1-205254/summary> Retrieved 3 August 2023

system (LMS) for TCPD, as well as practical tools for implementation and monitoring TCPD, namely:

1. Deliverable 1a: National Baseline Teacher Needs Assessment Report
2. Deliverable 1b: Local Government Authority (LGA) Teacher Needs Assessment Guidebook
3. Deliverable 2a: Summary Report on the Use of Digital Technology for TCPD
4. Deliverable 2b: List of planned TCPD modules (for the next three years)
5. Deliverable 3: Curriculum mapping table of (existing) supplementary TCPD materials and summary report
6. Deliverable 4a: National Plan for Teachers' Continuous Professional Development, including a costing plan and report
7. Deliverable 4b: LGA Teacher Continuous Professional Development Guide.

The deliverables formed the national TCPD plans and are informing several significant reform initiatives in the basic education sector in Tanzania⁴ that seek to improve the quality of teaching and learning. These include FCDO's Shule Bora, the World Bank's [SEQUIP](#) and [BOOST](#)⁵ plans, as well as aligning with the Global Partnership for Education (GPE) teaching and learning support programme known as [GPE LANES II](#).⁶

Numerous stakeholders, including two ministries, government institutes, development partners, the EPforR Independent Verification Team, a community-based organisation partner, schools, and teachers had important roles in developing the TCPD system. In supporting the Government of Tanzania to design effective, relevant, and feasible plans, policies, and support

⁴ In Tanzania, 'basic education' refers to education from pre-primary and up to and including Form IV (secondary).

⁵ See <https://projects.worldbank.org/en/projects-operations/project-detail/P170480> for SEQUIP, the Secondary Education Quality Improvement Programme, (2020–2026) and <https://projects.worldbank.org/en/projects-operations/project-detail/P169380> for the BOOST Primary Student Learning Project (2022–2026), retrieved 3 August 2023. Both are funded by the World Bank and implemented by the Ministry of Education, Science and Technology (MOEST) in collaboration with the President's Office — Regional and Local Governance (PO-RALG). The programmes aim to improve equitable access to quality learning in basic education.

⁶ See <https://www.globalpartnership.org/content/program-document-tanzania-2018> retrieved 3 August 2023. GPE LANES II (2018–2022) is a programme implemented by MOEST in collaboration with PO-RALG through an Education Sector Improvement Grant from the Global Partnership for Education (GPE) to support literacy and numeracy education.

materials, the EdTech Hub TA team worked closely with three key stakeholders:

1. Ministry of Education, Science and Technology (MoEST), which is responsible for policy and quality assurance
2. President's Office — Regional and Local Governance (PO-RALG), which is responsible for the administration of basic education services
3. Tanzania Institute of Education (TIE), which is responsible for pre-primary and all basic and teacher education (certificate and diploma levels) curricula and materials.

This report shares the experience and learning from the activities carried out under the accountable grant from July 2021 to March 2022. In particular, it consolidates reflection on the various outputs generated alongside two 'pause and learn' sessions held in October 2021 and January 2022. The report begins with an overview of the TA activities implemented. It then describes nine lessons learnt that could help inform current and future thinking on the design, delivery, and funding of TCPD programming in Tanzania.

The TCPD reflected in this report is specific to Tanzania's teaching and learning environment. While we recognise that environments can vary widely, even between countries with similar goals and objectives, the report also seeks to contribute to any current and future analyses that collate features of effective TCPD from around the world.

1.1. Overview of the TCPD workstream

Using an adaptive TA delivery model⁷ and sandbox approach,⁸ EdTech Hub worked with TIE, MOEST, PO-RALG, and other government education bodies to deliver TA across three activities agreed with the FCDO. These are outlined below.

1.1.1. Technical assistance for TCPD design and implementation

The TCPD specialists in the TA team worked directly across MOEST, PO-RALG, and TIE to support the development of the seven deliverables outlined in the

⁷ The TA provided was adaptive in that the focus of user studies and specific tasks of TA team members were agreed upon with government counterparts on a rolling basis rather than predetermined. Timelines were continually adjusted to accommodate government processes and rate of implementation.

⁸ A sandbox is a testing environment for EdTech interventions to allow partners to test how they might adapt all parts of an intervention in a system (people, provision, product, practices, policy, and place) before growing it.

DLIs of the bridging period. This included supporting the design of embedded teacher needs assessment processes, costing TCPD activities, mapping existing TCPD materials, and developing or adapting implementation tools (e.g., monitoring and tracking forms, including developing or adapting materials for communities of learning (CoLs).

1.1.2. User research

In collaboration with TIE and a community-based organisation that works with schools, the TA team established a sandbox to test the proposed government TCPD plans and policies. Three sprints, or rapid research and analysis cycles, were conducted between September 2021 and March 2022.

User studies were also conducted in parallel with the TCPD design sprints to inform the LMS design. The user studies focused on detailed feedback regarding the use of technology and the LMS interface.

1.1.3. LMS design and deployment

One part of the TA team worked directly with TIE to enhance and customise a Moodle-based LMS to support the TCPD implementation based on teacher needs in Tanzania. This included preparing a prototype LMS for testing via web browser and mobile application (app), including a sample digital version of a TCPD module. The LMS team also supported TIE, MOEST, and PO-RALG in developing the *Summary Report on the Use of Digital Technology for TCPD* (deliverable 2A).

2. What did we do?

This section summarises the activities undertaken across the three workstreams.

2.1. TCPD technical assistance

The TCPD TA team worked alongside government partners to produce and complete the seven deliverables (see [Section 1](#) above) and then to prepare for the implementation of the plans.

2.1.1. Development of TCPD plans

A key element in the process was agreement on the overall vision and approach to be used for TCPD. Rooted in the National Framework for TCPD ([Ministry of Education, Science and Technology, 2020](#)), known by its Swahili acronym MEWAKA, and the TCPD Roadmap ([Cambridge Education, 2021](#)), the model at the centre of the programme was shaped by evidence of best practices for TCPD, as well as Deliverable 1A: the National Baseline Teacher Needs Assessment (2021). This synthesised a comprehensive review of government reports, studies, and project evaluations on pre-primary and primary teachers' needs over the past five years. There was consensus around taking a school-based, CoLs approach to be managed and supervised at local government authority (LGA) level with flexibility for tech-enhanced or non-tech implementation. This allowed the TIE and TA team coordinators to ensure coherence and compatibility across the various pieces being developed.

TIE leadership identified a core group of staff members to work with the TA team to expedite the preparation of the various reports, guidelines, and plans entailed in the deliverables. This group took an iterative approach whereby individuals or pairs took the lead on a deliverable, conducting document reviews and consultations and producing the first draft. Teams then reviewed each other's drafts through regular virtual and in-person check-ins and collaborative editing and comments via Google Docs. When required, further consultations were conducted to gather and verify details in the plans with relevant stakeholders, including focal persons from each ministry. Retreats were held where all the focal persons from relevant institutions, including school and LGA level, could workshop complete drafts of the deliverables before submission to the Independent Verification Team. The TA team also supported the government in responding to Independent Verification Team questions during the verification exercise.

2.1.2. Preparation for implementation

Once the deliverables were submitted and approved, the TA team supported the Government to continue refining and strengthening the TCPD plans for implementation. For example, there was a week-long workshop for key Government personnel to develop the implementation guides in Swahili, including:

- School / Teacher Resource Centre TCPD implementation guide
- LGA TCPD supervision guide
- Teacher needs assessment implementation guide.

These guides would be used in the orientation workshops to train and familiarise TCPD stakeholders with the plans. In addition to being in Swahili, these guides included more practical guidance on implementing the TCPD plans and were more user-friendly for the stakeholders to engage with.

Based on the Independent Verification Team report, sandbox findings, and feedback from the initial orientation workshops, the TA team helped update and copy-edit the deliverables. The team also helped organise and prepare for a technical review workshop and presentation of the plans to the senior management team across the ministries. Summary infographics and slides of the plans were also prepared to help widen understanding and increase familiarity with the plans across the government, TCPD implementers, and development partners to encourage harmonisation of TCPD efforts across the country.

In addition to the TCPD plans, implementation guides and summaries, the TA team supported the development of various TCPD materials needed for implementation, including the orientation training materials, exploration of coaching materials, and the initial CoLs units. The TA team worked on developing a sample CoL unit to discuss the unit's structure with TIE. As a result, four initial units were drafted based on the sample unit structure.

2.1.3. Utafiti Elimu event

During preparation for the implementation phase, in its role as a 'hub' and connector of different stakeholders, EdTech Hub co-hosted the Utafiti Elimu Tanzania event. This three-day conference brought together government officials, TCPD implementers, researchers, teachers, and donor partners from Tanzania and the East Africa region to discuss how best to use EdTech to improve learning outcomes. The event provided a critical space for coordination and harmonisation on many factors, including TCPD. The TCPD

thematic session highlighted recommendations for the implementation of TCPD and for further research (see [Annex 3](#)).

2.2. User research

User research comprised two approaches: sandbox sprints and user testing of the LMS. A sprint is a short, defined study or test of an innovation that informs changes and new ideas, allowing teams to iterate and learn in rapid succession. Three sprints were conducted by a team consisting of TIE, EdTech Hub, and a non-governmental organisation partner as a part of user research informing the development of MEWAKA. In addition, the LMS team conducted two rounds of user testing to explore the best configurations for teacher access to the LMS.

2.2.1. Sandbox sprints

The EdTech Hub sandbox team worked with TIE and a community-based organisation to conduct three sprints, each testing different assumptions or aspects of the TCPD plans. As detailed below, the findings from each sprint were used by the ministries, TIE, and the TA team to improve the draft guidelines, tools, materials, and the LMS prototype.

During Sprint 1, at the initial inception of the design and planning stage, the implementing team collected and analysed data to understand teachers' experiences and views of professional development. Data collection took place in two rural districts, Ukerewe and Kigoma Rural. Fifty-eight teachers participated through questionnaires and focus group discussions. Individual interviews were conducted with six head teachers, five District Education Officers, and two Ward Education Officers. The Sprint 1 study focused on the following questions:

- Are teachers interested and eager to engage in TCPD?
- How have teachers experienced TCPD?
- How do they feel TCPD should be structured?
- Do teachers find the LMS relevant for TCPD?

Findings from Sprint 1 validated teachers' appetite for TCPD and highlighted key issues that were then addressed in the design of the TCPD plan and guides. These included ensuring time for TCPD was built into school timetables and clarifying the selection of TCPD Peer Facilitators to ensure teacher buy-in and respect for the new modality of peer-led CoLs.

Sprint 2 sought to answer the following question: *How might implementers best structure TCPD CoLs to ensure they are effective and meet the needs of teachers?*

The team sought to answer this question by studying two existing (previously implemented) CoL models in Tanzania, namely those established through the [EQUIP-Tanzania](#)⁹ and [Tusome Pamoja](#)¹⁰ programmes. The idea was to understand the key elements of these models to inform the design and implementation of the Government's own CoL model. Elements of the CoLs which were investigated included:

- Community of learning coordinator (analogous to the proposed 'Peer Facilitator' role in the current TCPD model) recruitment, preparation, and responsibilities
- Community of learning session implementation characteristics
- Teacher engagement and feedback on CoL sessions.

A total of 73 teachers in three districts (Mpwapa, Bariadi, and Kilosa) were consulted through questionnaires. Additionally, individual interviews were conducted with 28 local officials, including head teachers, CoL coordinators, quality assurers, District Education Officers (academic and special education) and Ward Education Officers. Recommendations from Sprint 2, which informed further programme design, included:

- Ensuring the recruitment process for Peer Facilitators is transparent and selected individuals are well-supported.
- Teachers should feel ownership of CoLs as their space to reflect, learn, and grow.
- Community of learning materials and training should be designed to bridge theory and practice.

Sprint 3 was conducted after the deliverables and plans had been approved by the Government and EPforR II partners, and rollout was beginning. The sandbox teams attended Government of Tanzania LGA training conducted in

⁹ See <https://www.camb-ed.com/intdev/article/559/changing-the-tempo> retrieved 3 August 2023. EQUIP-T was a UKAid-funded programme from 2014 to 2019, which supported the Government of Tanzania to improve the quality of learning outcomes in primary schools, particularly for girls.

¹⁰ See https://2017-2020.usaid.gov/sites/default/files/documents/1860/2018-10-29_Tusome_Pamoja.pdf retrieved 3 August 2023. Tusome Pamoja (Let's Read Together) [Tanzania] was a USAID project from 2016 to 2021, which supported the Government of Tanzania to improve student outcomes in reading in the early primary grades.

two regions — Morogoro and Mwanza — to elicit participant feedback on the TCPD strategy presented.

The regional, district, and ward level Education Officers and Zonal School Quality Assurance Officers who attended provided positive feedback on the group learning opportunities and the variety of strategies modelled by the national facilitators. Important insights to improve programme implementation were also gathered from these participants. These included suggestions for using existing, periodic meetings at ward, district, and regional levels to review the implementation of concepts learnt in TCPD training. They also suggested instituting processes to request additional resources from LGAs to ensure CoLs and TCPD activities are adequately supported.

2.2.2. LMS user studies

To build the LMS to meet the needs of TCPD activities and teachers in the context of primary schools in Tanzania, it was vital to embed real-world feedback loops from teachers and other users into the processes from the beginning. The first user study was conducted by the LMS team and TIE alongside Sprint 1 of the sandbox.

A questionnaire, interviews, and document reviews were held in 6 rural schools involving 81 teachers, 3 LGA Education Officers, and 6 head teachers to elicit their experiences in participating in technology-enhanced TCPD programmes and their access to and use of digital technology. The findings from the first user study enabled the development of the LMS prototype, which was made available via a desktop version and mobile app.

Once the LMS prototype was ready, the second user study aimed to test the prototype to validate functionalities and to identify any usability flaws to ensure the system met teachers' needs. The second user study was conducted using the LMS prototype on a web browser and mobile app. Before the study was conducted in schools, a pilot was conducted with 22 students taking undergraduate programmes at the College of Information and Communication Technologies at the University of Dar es Salaam: 9 students were asked to download the mobile app, and 13 were asked to register and access the module via the web browser. Students were observed accessing the LMS app and / or web browser, registering on the system, and navigating the module. Focus group discussions with selected students followed.

The study adopted a qualitative design involving observation tools and focus group discussions involving 117 teachers in 15 schools and was undertaken in three regions: Arusha, Kigoma, and Mwanza. Specifically, the second user testing aimed to address the following questions:

- How well does the design and usability of the LMS Prototype respond to teachers' needs?
- How does the web version compare with the mobile app?
- How can the LMS be accessible offline using flash disks on teachers' computers?

The findings from the second user study led to several improvements in the web-based and app versions of the LMS (see [Section 3](#) below).

2.3. LMS design

The LMS technical team developed and continues to enhance and customise a Moodle-based LMS to support the TCPD implementation based on teachers' needs in Tanzania ([Maro et al., 2023](#); [Kondoro et al., 2023](#)). The team customised the system, uploaded the mapped materials for TCPD to make them easily accessible to teachers and education officers, and translated the system into Swahili. They also developed a sample self-learning module and CoL unit, which were used in user research studies to test the design, usability, and accessibility of the system.

The TCPD LMS was customised from the core Moodle platform to suit the needs of teachers in TCPD activities. The system was made available as a prototype in a testing environment while plans to migrate to the actual domain were underway. The system is available in Swahili and English, thus enabling teachers to choose the language that suits the context of the module to be studied. As mobile devices are the most widespread, the system was redesigned for interaction and engagement across a variety of portable devices to ensure that the majority of teachers have access to the materials. The LMS team also supported TIE in exploring possibilities for server hosting and zero-rating internet access for teachers, aiming to make the LMS content available for use without teachers incurring any costs related to data transfer.

3. What we learnt

This section provides an overview of lessons learnt through various phases of the project and the implications for project design.

Lesson 1: Most teachers are interested in engaging in TCPD

Teachers showed an appetite for professional learning. In the first and second sandbox sprints, most teachers surveyed expressed an interest in TCPD, primarily to improve their subject knowledge and teaching abilities. Although staff from some schools were split on whether they preferred in-school TCPD or more conventional workshop / clustered approaches, many expressed great interest in learning together in CoL sessions.

Implications for design

Enough teachers showed motivation to attend CoLs to make school-based communities a viable option for all teachers to engage in TCPD regularly. Additional opportunities for cluster, district, national, or digital workshops and conferences could occasionally be offered to allow for fresh ideas, teacher contact with experts, peer learning, networking, and resource sharing across different contexts.

Application in the Tanzanian TCPD model

All teachers are expected to access TCPD through school-based CoLs, and additional opportunities are provided through various other means. These include self-learning modules (online and distance learning), cluster-based CoLs focusing on a specific subject or common objective, workshops on new curricular initiatives, and various courses and seminars offered by local teacher colleges and universities.

Lesson 2: Teachers may find it challenging to engage in TCPD during the existing school schedule

In schools where the EQUIP-T and Tusome Pamoja programmes had introduced CoLs, the timing of CoL sessions was reported as a major barrier to engagement. When not teaching in class, teachers' schedules are often packed with preparation, marking, and weekly supervision duties. In most schools, CoLs were implemented weekly or bi-weekly, though consistency varied.

Implications for design

Allowing schools to determine when CoL sessions best fit into their weekly schedules allows for flexibility to meet differing school contexts. Policy considerations such as adjustments to the school schedule to allow for an early release or late start for students once a week may be more effective in the long run than using a class or lunch period for TCPD. These would allow teachers to focus on TCPD without worrying about making up lost class time or forgoing personal break time.

Application in the Tanzanian TCPD model

In the *TCPD Guidelines for Tanzania*, school leaders are mandated to identify and designate time for CoL sessions in the weekly school timetable. Through ongoing design-based implementation research, the Government of Tanzania is investigating the effectiveness of holding CoLs weekly or bi-weekly.

Lesson 3: Peer Facilitators expected to lead CoLs need more support

The CoL model at the centre of the TCPD design relies on teachers acting as Peer Facilitators to prepare and lead sessions. In the schools that had piloted CoLs, the selection of Peer Facilitators tended to be decentralised and was generally the responsibility of local government officials. School and cluster-level facilitators in the pilot programmes had received training on sharing knowledge from subject-area modules, focusing less on their role as facilitators.

Surveys, focus group discussions with teachers, and observations of CoL sessions in these schools revealed that Peer Facilitators face potential challenges. These included difficulty moving away from a traditional format of lecture followed by discussion and, in some cases, scepticism from peers about their level of expertise. Additional challenges included getting all teachers to attend CoL sessions, time for preparation of sessions, and contention around allowances for TCPD. Another key finding was that a transparent process of selecting Peer Facilitators is critical to ensure buy-in from other teachers.

Peer Facilitators play a pivotal role in the new TCPD model as they set the agenda, tone, and activities for all CoL meetings. At the same time, the CoL form of collaborative and interactive learning is quite different from the previous TCPD experiences of most teachers and education officers in this context. Even when the best possible candidates are transparently selected to be Peer Facilitators and these Peer Facilitators are considered champions or expert teachers in their subjects, it does not necessarily mean that they are

prepared to lead collaborative, competence-based, adult learning among their peers.

Implications for design

The selection process for Peer Facilitators should be based on explicit criteria and transparent processes.

Emphasis should be placed on developing Peer Facilitators' facilitation skills. In addition, ongoing coaching or mentoring may be needed to follow up the initial orientation of facilitators to assist in developing the new skills and habits required for leading collaborative learning among peers. Providing semi-structured or structured CoL materials with suggested activities and facilitation tips could support new facilitators, particularly when in-person coaching is not feasible. Moreover, in addition to monitoring and evaluation processes that track if CoLs meet and teachers participate as planned, supportive quality assurance processes and / or explicit coaching and mentoring could provide feedback to further guide Peer Facilitators in effectively leading TCPD.

Application in the Tanzanian TCPD model

TIE developed a Peer Facilitators' manual, video guide, and workshop for initial Peer Facilitator training. The training encourages and provides Peer Facilitators with strategies for collaborative learning and tools to gather feedback from teacher participants in their CoLs. A cluster-level CoL specifically for Peer Facilitators is also part of the implementation plans. In addition, school visits by School Quality Assurers, Education Officers, and, where possible, teacher college tutors provide further feedback and support to Peer Facilitators. Coaching and mentoring have been highlighted as an area for further development. As implementation of the TCPD programme evolves, the number of teachers who act as Peer Facilitators continues to expand.

Lesson 4: The need for coordination and harmonisation among stakeholders

One of the main areas of support emerging from the adaptive TA was the need for coordination and harmonisation between different government agencies and various TCPD implementers and development partners. From November 2021 to March 2022, the EdTech Hub TA team facilitated several meetings with these stakeholders to ensure coordination and harmonisation of the TCPD plans.

Implications for design

Building responsibility for organising regular forums for coordination and harmonisation into the roles of the relevant institute or department could ensure more consistent meetings and information sharing among TCPD implementers, both within and across government institutions as well as non-governmental implementers. In addition, developing mechanisms such as a TCPD implementer's database could support the logistical aspects of coordination and provide an overview of stakeholders in the TCPD sector.

Application in the Tanzanian TCPD model

Coordination meetings held during the accountable grant were successful in:

- Collecting TCPD materials in editable format for TIE to have at their disposal to use and adapt for further CoL units and materials.
- Developing a map of TCPD implementers based on the areas in which each programme operates.
- Aligning with the GPE LANES II programme to utilise their funding for nationwide orientation workshops for national facilitators, educational leaders, school leaders, and Peer Facilitators.
- Widening the familiarity and understanding of the national TCPD plans across the government and the TCPD implementers and development partners. This wider familiarity will help harmonise TCPD activities across the country.
- Ensuring the plans stayed on track and pressing questions were consistently raised with government partners to work towards successful implementation.

Lesson 5: Building a shared understanding among all implementers is key

Differing understandings among principal stakeholders (TIE, ministry officials, the TA team, and the development partners funding EPforR) had to be addressed along the way. This included building a common understanding of approach and shared terminology for various roles, modalities, materials, and activities in the TCPD programme.

Some technical aspects for which a shared understanding was negotiated during the design process included:

- The desired approach to CoL: Understanding the differences between structured, semi-structured, and unstructured CoL sessions and materials and agreeing on the most suitable for the context.
- Differences between an e-Library and an LMS and the range of possibilities for learning an LMS could offer.
- Who would need training and orientation workshops, and who would conduct them at various levels (regional, district, ward, school), and the types of workshops required. The model assumes a high level of understanding and capacity by all the officers who support and supervise school-based CoL. If their understanding or buy-in is low, there is a risk of CoLs either not being prioritised or not being used effectively. Hence, there is an understanding that an orientation process needs more than dissemination of guidelines and directives evolved.

Coordination across teams is often tricky, especially when teams are based in different entities and institutions, so practical steps adopted by the EdTech Hub TA team included keeping consistent records of decisions; having an in-person presence; building and maintaining relationships; regularly bringing EdTech Hub and Government teams together to review TCPD progress against plans; and getting the support of key directors and coordinators to push forward TCPD implementation activities.

Implications for design

Being attentive to terminology used in planning and documentation is critical, as is having explicit discussions about ideas, terms, or approaches where stakeholders may have differing conceptions. Including a glossary of terms in guidelines and manuals could address this.

Application in the Tanzanian TCPD model

Discussion and debates on approaches occurred throughout the design process. The national, LGA, and school guidelines each have a glossary for reference on the agreed meaning of key terms.

Lesson 6: Ensure access to digital TCPD resources is affordable

A significant finding from the user studies with high risk for hindering the use of the LMS was that the cost of internet bundles is too expensive for most teachers.

Implications for design

In order to allow teachers access to digital resources, country regulations and public-private partnerships can be leveraged to create possibilities for zero-rating and / or cost reduction for teachers / schools.

Application in the Tanzanian TCPD model

The TA team supported TIE and the ministries to explore and navigate the negotiation of zero-rating for teachers. One mobile network operator agreed and zero-rated both the e-library and LMS, and negotiations with other service providers to do likewise are ongoing.

Lesson 7: Digital TCPD resources need to be tailored to teachers and their contexts

Through the user studies, several key lessons were learnt to improve the use and usability of the LMS for teachers. In the context of this project, the critical lessons listed below had implications affecting the LMS design.

7a. Many teachers do not access email regularly and tend to forget their email credentials

Implications for design

If logins require email addresses, teachers may struggle to access the online resources, reducing the use of the LMS.

Application in the Tanzanian TCPD model

The LMS prototype system was changed from using email to register and log in to using a phone number as a username and token-based authentication¹¹ instead of a password.

7b. Most teachers accessed online material through a smartphone

While the user study indicated many schools have a tablet which was provided by another project, there is a need to check the condition of school tablets for both compatibility and condition. Many teachers preferred to use their own device, most often a mobile phone, to access the LMS.

¹¹ Token-based authentication is a protocol that, in this context, provides users a unique access token that acts as a password.

Implications for design

For the development of the digital modules, the content should be short, considering that teachers will use smartphones to access such materials, which means small screens and bite-size text.

Application in the Tanzanian TCPD model

The sample CoL modules and other selected materials were developed in a web-based format, with videos compressed to smaller file sizes, to ensure that they are accessible via mobile devices with low bandwidth. Additionally, the planned CoL modules are being developed in a web-based format.

7c. Teachers preferred videos over text

Implications for design

Materials developers need to move towards multimedia, enhanced content development such as the inclusion of video, animations, simulations, and audio where necessary rather than relying solely on text-based content.

Application in the Tanzanian TCPD model

In Tanzania, TIE has started by creating video guides summarising the key points from the TCPD supervision guidelines and the Peer Facilitators' manual. In addition, more video clips, demonstrations, and sample lessons have been developed to augment TCPD materials.

7d. The use of the mobile app was preferred for offline access to the LMS, but memory size of smartphones poses a challenge

In the user research studies, offline accessibility of the developed content on the LMS was tested. Many teachers preferred the mobile app over the web browser, but they could not download the app as their smartphones did not have enough memory. In addition, some of those who managed to install the mobile app struggled to access PDF-based content due to low memory.

Implications for design

While offline access to materials is one way to cut down on the volume and cost of internet connections, the capacity and memory size of users' devices must be considered in the design, size, and format of materials.

Application in the Tanzanian TCPD Model

The zero-rating of the LMS was solicited to ensure that teachers could have access to the LMS via a web browser without incurring internet costs. This would allow teachers to access materials online without relying on the memory space of their devices. In addition, web-based content was developed rather than uploading PDF-based content onto the LMS. Teacher Resource Centres are also used as access points where teachers can get downloaded and printed versions of TCPD materials.

Lesson 8: Sustainable and timely funding is required to prepare all the TCPD elements for implementation

The preparation of the TCPD plans and guidelines was not a one-off activity. On the contrary, it initiated an ongoing cycle of implementation, needs assessment, further materials development, and implementation. Thus, a sustainable funding source for TCPD activities is required through renewed donor support, local sources, or a combination of funds. Furthermore, schools require a small yet consistent amount of funding to provide the materials needed for activities in CoL sessions, such as transport expenses for teachers attending cluster-based CoLs and, ideally, basic refreshments to increase teacher motivation to participate.

Implications for design

Costing TCPD activities at each level (national, LGA, school) is a vital component of programme design. Each level (national, LGA, school) needs a recurrent budget for this TCPD model.

Application in the Tanzanian TCPD Model

A costed plan was included in the national TCPD plan. LGAs were directed to add TCPD as a recurrent budget line so that donor contributions are not the only source of funds.

Lesson 9: Reflections on navigating the complexity of teacher management institutions

It is not uncommon to find numerous ministries and institutions involved in the management of in-service teachers, each with a role to play in TCPD. This inevitably creates a complex environment for all stakeholders to navigate.

Implications for design

Coordination and in-depth technical reviews involving all implementers to ensure buy-in, shared understandings, and agreement on the next steps are crucial at each design and implementation preparation stage.

Application in the Tanzanian TCPD model

For the accountable grant, one institution, TIE, was assigned lead responsibility for preparing the deliverables. This made it easier for the TA team to have one team to support and liaise with. It also maximised TIE staff's contextual expertise in designing the competence-based curriculum, facilitating interactive training and orientation workshops, and conducting teacher needs assessments over many years. TIE ensured that ministries, LGAs, and school representatives were involved at critical junctures in each stage of programme development to maximise stakeholder inputs and widen understanding of the TCPD model.

4. Conclusion

This report has presented the process of supporting the early stages of TCPD design and implementation in Tanzania, illustrating success and challenges to guide future strategies and engender future collaboration in the field.

The report demonstrates that developing evidence-based, robust, and implementable TCPD systems at scale is a complex and dynamic endeavour. While the lessons learnt during this process of designing TCPD at a national scale may be relevant in many school systems, the particular adaptations required to address them will be context-specific.

In addition, the combination of an adaptive TA model, sandbox approach, and iterative user studies carried out through close partnerships between government institutions and TA teams with wider stakeholder involvement provided a resilient, robust, and collaborative space. In this space, lessons could be identified and acted upon in order to continue strengthening the system throughout the process.

Since March 2022, a second phase of the accountable grant has continued to support the Government of Tanzania's TCPD planning and implementation. This phase involves EdTech Hub, TIE, and the Aga Khan University collaborating to implement a design-based implementation research study ([↑Koomar et al., 2022](#); [↑Koomar et al., 2023](#)). The study will investigate the effectiveness, cost-effectiveness, and sustainability of a technology-supported, decentralised, and school-based TCPD model to improve learning outcomes in rural Tanzanian primary schools. With staff members from TIE directly involved in the study, the research evidence generated will support further iterations of the TCPD programme in Tanzania.

References

These references are available digitally in our evidence library at

<https://docs.edtechhub.org/lib/9WBV8KPN>

Adam, T., El-Sefary, Y., Haßler, B., Khalayleh, A., Kremeia, A., Proctor, J., & Mtebe, J. (2021). *The Use of Technology in the CPD Implementation Plan in Tanzania* [Technical Guidance]. EdTech Hub.

<https://doi.org/10.5281/zenodo.4665846>. Available from

<https://docs.edtechhub.org/lib/N5HMII3R>. Available under Creative Commons Attribution 4.0 International. ([details](#))

Cambridge Education. (2021). *CPD Implementation Roadmap*. Cambridge Education. ([details](#))

Kondoro, A., Maro, S., Mtebe, J., Proctor, J., Komba, A., & Haßler, B. (2023). Towards Improving the Accessibility and Usability of a Mobile-based Learning Management System for Blind Primary School Teachers. *2023 IST-Africa Conference (IST-Africa)*, 1–10.

<https://doi.org/10.23919/IST-Africa60249.2023.10187797>. Available from

<https://ieeexplore.ieee.org/document/10187797/>. ([details](#))

Koomar, S., Adam, T., Massam, W. E., Anthony, G., Mrope, W. J., Mtenzi, F., Mwakabungu, F., Komba, A., Hennessy, S., & Barretto, J. (2022).

Design-Based Implementation Research Baseline Data Collection: Technical report [Technical Report]. EdTech Hub.

<https://doi.org/10.53832/edtechhub.0141>. Available from

<https://docs.edtechhub.org/lib/KMQCABXM>. Available under Creative Commons Attribution 4.0 International. ([details](#))

Koomar, S., Massam, W., Chachage, K., Anthony, G., Mrope, W. J., Malibiche, M., Mutura, E., Adam, T., Hennessy, S., Mtenzi, F., Komba, A., Mwakabungu, F., Paskali, J. H., & Nkya, H. (2023). *TCPD in Tanzania: Design-Based Implementation Research Cycle 1 Recommendations Policy Brief* [Policy Brief]. EdTech Hub. <https://doi.org/10.53832/edtechhub.0166>. Available from <https://docs.edtechhub.org/lib/HUR5C9QN>. Available under Creative Commons Attribution 4.0 International. ([details](#))

Maro, S., Kondoro, A., Haßler, B., Mtebe, J., & Proctor, J. (2023). Deployment of Offline Learning Management Systems: Comparing the Performance of Selected Micro-servers in Tanzania. *Journal of Learning for Development*, 10(2), 280–296. <https://doi.org/10.56059/jl4d.v10i2.835>. Available from <https://jl4d.org/index.php/ejl4d/article/view/835>. ([details](#))

Ministry of Education, Science and Technology. (2020). *National Framework for Teachers Continuous Professional Development*. United Republic of Tanzania.

<https://www.tie.go.tz/uploads/documents/sw/1670495875-National%20Framework%20for%20Teachers%20Professional%20Development%202020.pdf>. (details)

Annex 1

During the development and approval of the national TCPD plan, EdTech Hub and TIE developed summaries of key elements of the plan for sector stakeholders. This annex presents excerpts from the summary documents, including:

1. Background to the development of the national TCPD plan
2. Key findings from the *National Teacher Needs Assessment Report*
3. Mapping of existing TCPD materials and priorities for further materials development
4. The use of digital technology for TCPD
5. Key elements of the new TCDP model.

1. Background to the development of the national TCPD plan

In 2020, the Government approved the National Framework for Teacher continuous Professional Development (NF-TCPD) ([Ministry of Education, Science and Technology, 2020](#)), endorsed by the Education Sector Development Committee. It acts as the Government policy directive to guide TCPD plans. The framework was developed to facilitate national coordination and harmonisation of TCPD plans to improve the quality of teaching and learning. It sets out guiding principles for TCPD, including making TCPD mandatory for all teachers and grounding it in collaborative and participatory learning. In 2021, **the EPforR Bridging Year supported further development to operationalise the framework.** In April 2021, **the government produced the CPD Implementation Roadmap.** This entailed extensive research and consensus building among government institutions on effective TCPD modalities and delivery modes relevant to the Tanzanian context. Through this process, it identified school-based CoL as the main mode of TCPD. In September 2021, **the government produced a set of background and guidance documents** to further plan for and elaborate on the implementation plans encapsulated in the EPforR Bridging Year deliverables (see [Section 1](#) of this report).

2. Key findings from the *National Teacher Needs Assessment Report*

The purpose of this report was to provide a national-level baseline review of teachers' pedagogical needs and recommendations for TCPD in Tanzania, based on a documentary review and analysis (see [Figure 1](#)).

Figure 1. Documents included in the review in the *National Teacher Needs Assessment Report*

- Academic literature on TCPD and teacher development needs in Tanzania
- Evaluations of policy and programming for TCPD in Tanzania (including Uwezo / Twaweza (2019), EQUIP-T, SDI (2016), Tusome Pamoja, TZ21 (2012–2014), HakiElimu)
- Findings of previous teacher needs assessments by TIE (2020) and RISE (2020)
- Student results on national assessments [NECTA reports (2015–2020)]
- Findings from school quality assurance [SQA] reports.

Key findings on TCPD Provision

TCPD has been:

- Small scale: many teachers have not had any CPD
- Mainly funded by short-term donor projects, which is not sustainable
- (Often) one-off or cascade-model trainings implemented by numerous partners, not always mandated by the Government of Tanzania

Key recommendations on TCPD Provision

- Define minimum requirements for all teachers' participation in TCPD
- Move toward cost-efficient and participatory model of TCPD
- Embed ongoing teacher needs assessment (TNA) into TCPD activities
- Institute processes to ensure alignment between different donor-funded TCPD interventions

The review found the following teacher development needs:

- **Pedagogical skills** in:
 - Implementing competence-based curriculum and life skills

- Using appropriate teaching materials to enhance learning
 - Providing adequate feedback
 - Participatory strategies and ongoing assessment for learning
 - Early childhood education (ECE)-specific strategies, using technology to enhance learning
 - Teaching to the students' level
- **Subject content knowledge** in certain maths, science, and language topics, where instructions need to be strengthened
 - **Classroom management skills**, particularly in handling large classes
 - **Inclusion strategies**, to facilitate learning for children with disabilities and out-of-school children
 - **Social-emotional well-being skills** for teachers' own well-being

These findings were used to inform the development of the TCPD model, related implementation guides, and the list of planned modules.

3. Summary of the mapping of supplementary TCPD material and prioritised list of materials to be developed

A mapping of existing supplementary TCPD material against the national primary school curriculum was undertaken to make the availability of supplementary materials for TCPD visually clear and to enable analysis of curricular areas for which materials already exist or would require development. Existing TCPD modules and teacher supplementary materials (such as guidebooks) approved by TIE were mapped against the curriculum competences for each subject from pre-primary to Standard VII. Cross-cutting modules or materials (for example, videos or modules on inclusive education or classroom management) were also mapped.

This mapping, undertaken in 2021, showed that extensive TCPD materials exist for the early grades, and some TCPD materials exist for a few of the key teacher needs identified in the National TNA report, such as strategies for teaching and managing large classes. However, the mapping also showed that materials for the other current teacher needs listed in Deliverable 1A, such as using technology (digital) to enhance effective teaching and learning, were lacking. These findings informed the ongoing collaboration between TIE and EdTechHub towards CoL module development for the LMS.

Based on this mapping and the findings of the National TNA Report, the planned TCPD modules to be developed by TIE over the next three years were

identified. A total of 12 modules are to be developed per year; modules which are cross-cutting and focus on pedagogical skills will be prioritised for initial development. Modules will be developed as units for CoL and as self-learning modules. They will also be developed in digital and print formats. TIE will develop two versions of cross-cutting modules that apply to both primary and secondary education (one version for primary, another for secondary), as needed.

Table 1. *List of planned TCPD modules to be developed by TIE¹²*

Year 1 (2022–23)	Year 2 (2023–24)	Year 3 (2024–25)
Fasihi kwa Shule za Msingi (Literature for primary schools)	Teaching at the right level	Critical thinking and teaching for understanding
Managing large classrooms	Competency-based assessment module	Teaching at the right level
Teaching measurement and geometry	Life skills module	Analysing and selecting materials for teaching
Phonemic awareness	Applied algebra	Promoting patriotism (uzalendo)
Basic elements of writing	Competence-based teaching and learning module	Improvising interactive teaching and learning aids
Recognising numbers	Conserving our environment	Gender-responsive pedagogy
Reading and listening for comprehension	Teachers' health and well-being	Developing pupils' competences in social studies
Enabling students to communicate orally and through writing	Fundamentals of science and technology	Investigations and discoveries in science and technology
Development of English / Foreign language vocabulary	Assessing English language skills in large class	Enabling pupils to use English for different purposes
Effective assessment and feedback to pupils	Integrating ICT in teaching and learning in primary schools	Reading for comprehension (upper primary Swahili)
Early childhood learning activities	Statistics in different contexts	Maintaining health and the environment
Inclusive education Module 1	Teaching vocabulary and grammar / word classes in Swahili)	Inclusive education Module 2

¹² Yellow boxes denote cross-cutting topics relevant to all teachers, which will be prioritised for initial development.

4. Summary of the report on the use of digital technology for TCPD

The purpose of this report was to outline how digital technology will support TCPD in Tanzania, with a specific focus on TIE's (LMS and e-Library). The report included:

- Ongoing activities, including designing and implementing the LMS, user research, customisation of the system, development of the LMS Mobile App, and the development of web-based TCPD modules.
- Exploring accessibility of the system through user testing, configuring the LMS for offline access, zero-rating the LMS, agreeing hosting arrangements for the system, and the use of a portable LMS via flash disks.
- Plans for capacity-building workshops on instructional design and management of the LMS system for TIE technical staff before roll-out to ensure ownership of the system and sustainability of the model.

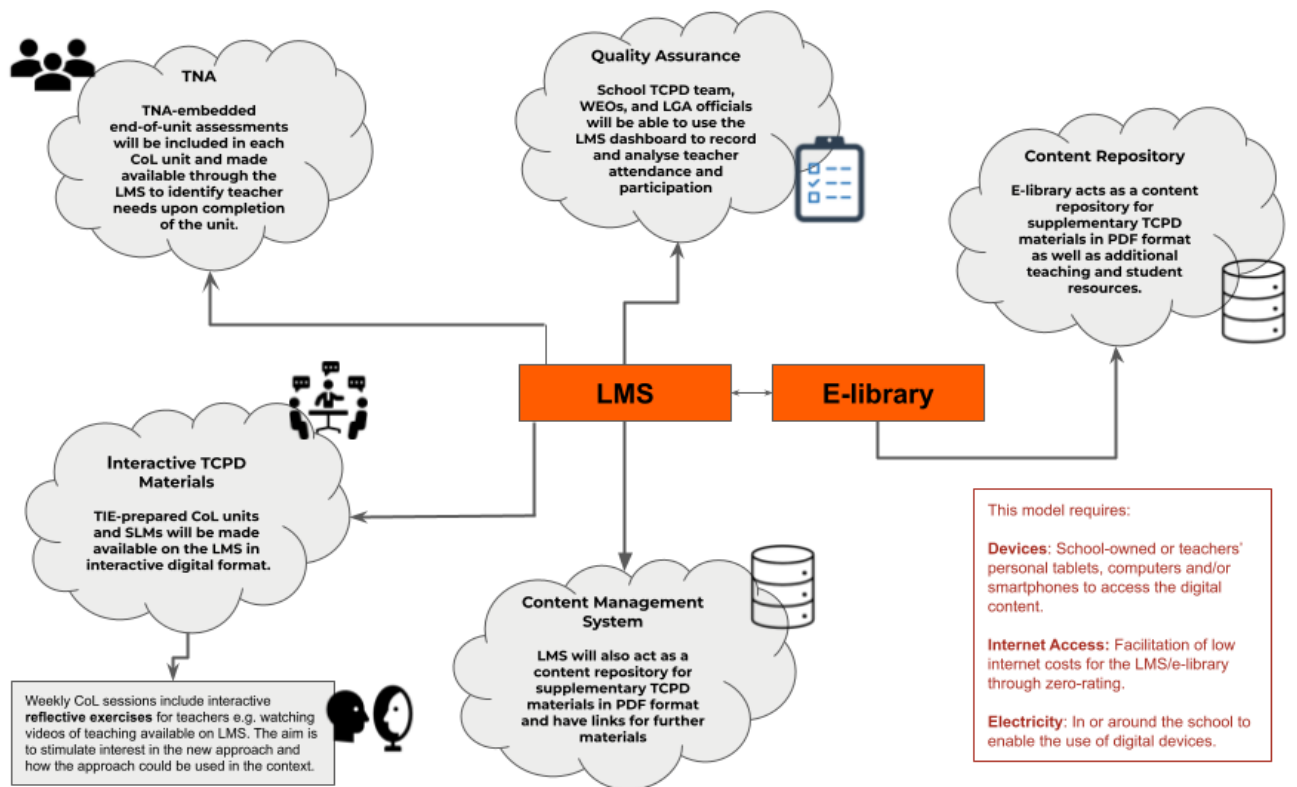
Two complementary systems were identified to support the TCPD model when possible, namely the LMS and e-library. Printed materials will also be made available to ensure access for all teachers. Integration of the two systems is necessary and will be coordinated with UNESCO and other partners. [Table 2](#) summarises the differences and specific features of each system.

Table 2. *Key features of the TCPD LMS and the TIE e-library*

	LMS	e-library
Function	Moodle platform, which supports teachers to self-learn, provides content and support for peer facilitators to facilitate TCPD sessions, and a space where government officials and other users can access TCPD materials for printing, and in digital format. Also acts as a content repository.	PDF, video, and audio content repository where all current, relevant resources for teachers and students can be uploaded and accessed by teachers and government officials for printing.
Access	Web-browser and mobile app. Requires digital device (tablet, smartphone, or computer), and an internet connection	Web-browser Requires digital device (tablet, smartphone, or computer), and an internet connection

Materials	Interactive digital TCPD materials including CoL units, self-learning materials, end-of-unit TNA, facilitator guidelines, coaching guidelines. Printed PDF materials will also be available.	PDF TCPD modules as well as additional teaching and student resources in PDF, video, and audio formats.
TNA	To be collected at the TNA-embedded end-of-unit assessment. To facilitate easy access and analysis of quantitative and qualitative TNA data for LGA officials.	N/A
Quality Assurance	Digitised data collection tools to record teacher participation in TCPD sessions and activities	N/A

Figure 2. The use of Tech in TCPD implementation



5. Key elements of the TCPD model

The government plans to roll out a school-based TCPD model that is supported by technology, where feasible. The model is informed by current evidence on effective TCPD in Tanzania and similar countries and on teacher needs assessments. [Figure 3](#) highlights the key design features of the TCPD model, and [Figure 4](#) shows the flow of activities to be executed in the implementation of the model.

Figure 3. Principle features of the TCPD model

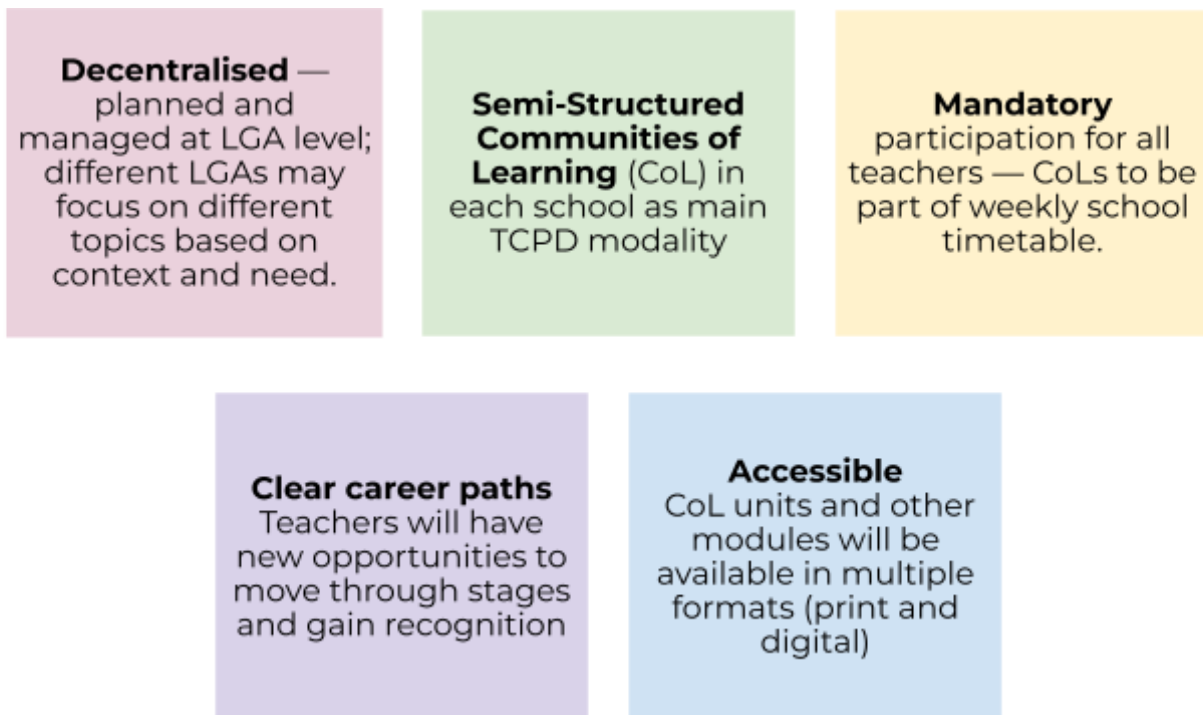
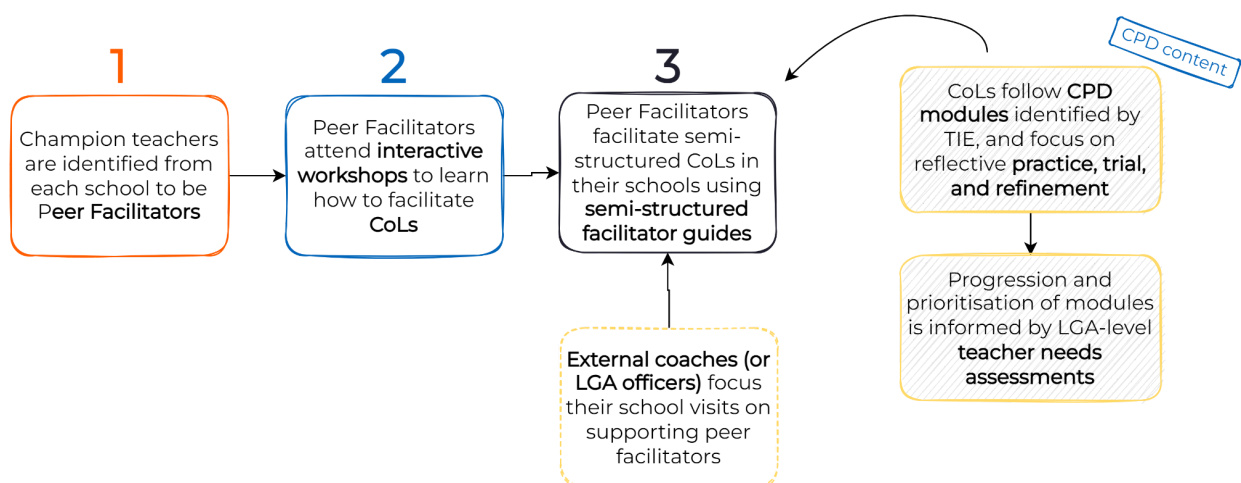


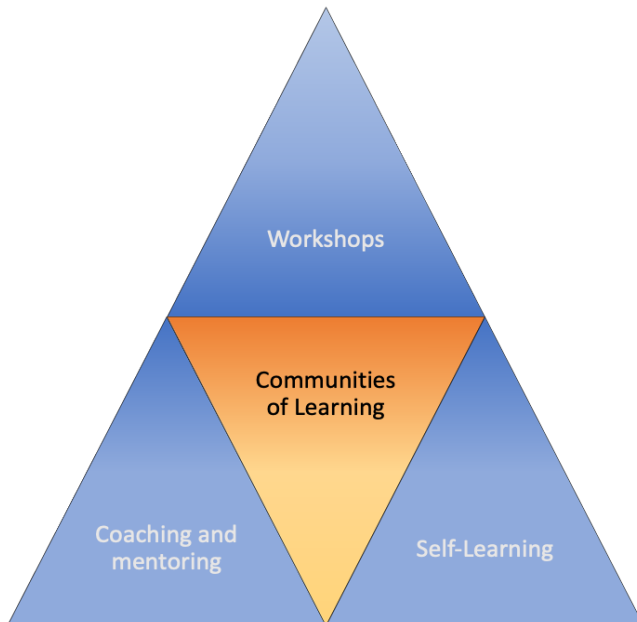
Figure 4. Flow of activities required to implement the TCPD model



Components of the TCPD model

School-level CoLs will be **at the core** of the TCPD model, with supplementary workshops, coaching and mentoring, and self-learning modules

Figure 5. *TCPD modalities*



Semi-structured CoL will be led by Peer Facilitators, using materials from TIE to guide CoL sessions at school and cluster level. All teachers will participate in CoLs regularly. Peer Facilitators will be selected from among Champion Teachers (high-performing, effective teachers identified by other teachers).

Workshops will be used to train and build the capacity of school-level TCPD teams and, initially, LGA-level Education Officers.

Coaching and mentoring will be provided by internal coaches on an as-needed basis for newly qualified teachers or teachers identified as requiring extra support in developing competence in particular aspects of their work. External coaches will provide coaching for peer facilitators on how to manage CoLs and improve facilitation skills.

Self-learning modules will be available for teachers who desire further professional development.

CoLs may be held at cluster level as well as school level, particularly when a ward or district identifies a specific, shared need across schools, for example, a need for targeted TCPD on maths instruction, English language, or early childhood education. [Table 3](#) details the distinctions between school- and cluster-level CoLs.

Table 3. *Description of school-level and cluster-level CoLs*

	School-level CoL	Cluster-level CoL
Participants	Consists of all teachers at a school	Consists of facilitators / TCPD teams or teachers from different schools meeting together
Led by	TCPD Team, comprising the Peer Facilitators, Head Teacher, Academic Teacher and Internal School Quality Assurance Team Coordinator	Ward Education Officers
Topics	Cross-cutting topics (e.g., managing large classrooms, and assessment and feedback)	This could be on a specific topic (e.g., facilitating TCPD) or subject (e.g., science teachers) or a specific education level (e.g., pre-primary school teachers)
Location	This CoL is school-based because the group of teachers at any one school are collectively responsible for student learning at that school.	Teacher Resource Centres or centrally located schools
Timing	Weekly one-hour session to be included in school timetable	Monthly one-hour session. To begin after school-level CoLs are established.

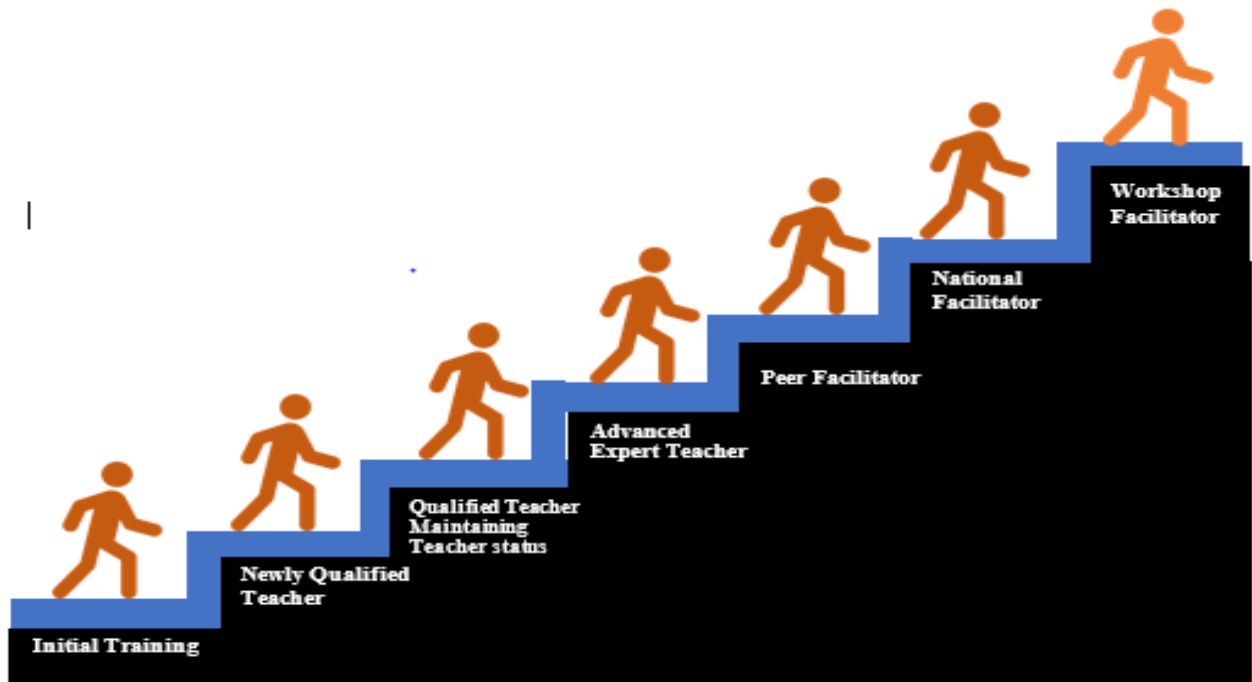
There are several key features that differentiate the semi-structured CoLs in this national TCPD plan from previous versions of CoLs that have been implemented in Tanzania's education sector. These are detailed in [Table 4](#).

Table 4. Comparison of previous versions of CoLs and the 2021 TCPD model

Previous versions of CoL	2021 TCPD model for CoL	Why has the model been adapted?
CoL is only a 'bottom-up', unstructured meeting place for teachers to discuss their challenges and share strategies / ideas / skills with each other.	CoL provides some time and space for teachers to share and discuss their own challenges, but the majority of CoL time is spent on collaboratively working through semi-structured units provided by TIE.	Unstructured > semi-structured Semi-structured units provide new inputs and resources to teachers to provoke reflection, practice, and growth. The strength of teachers sharing their own challenges and experiences is still present in this model, but the semi-structured CoL units provide added value.
CoL primarily reinforces trainings provided through a cascade model (i.e., when one or more teachers relay what they have learnt at a workshop to other teachers).	There is no cascade. All teachers directly engage in TCPD through CoL. The only workshops provided are for initial orientation of leaders and facilitators to understand their roles.	Cascade > no cascade Research and evaluations have repeatedly shown cascade models are more costly and less effective at reaching all teachers and changing classroom practices.
CoLs were organised at cluster or TRC level.	CoLs will primarily take place in every school. Additional CoLs at cluster level will be formed as needed for specific purposes, e.g., to bring together teachers in a specific subject to address a content-based challenge.	Cluster / TRC level to school-level implementation To ensure all teachers can participate and because a school's teaching staff, as a unit, is responsible for student learning outcomes.

Relating TCPD to teachers' careers, the National Plan identifies the stages of teacher education and what types of TCPD are needed at each stage. This should provide motivation to teachers to progress across the stages.

Figure 6. *Stages of teacher education*



Annex 2

Key definitions

In discussions with stakeholders, it was apparent that there was a lack of cohesion over the terminology used to discuss key deliverables within the Programme Operations Manual and the DLI 1.1 Deliverables. The following key definitions were outlined as part of the TCPD design process.

Terminology	Description
Academic Teacher / Academic Master	The teacher responsible for all academic matters in a school, for example, planning the school's class schedule and coordinating any TCPD activities and examinations.
Champion Teacher	A teacher who has been identified by their peers as an effective teacher and expert in a particular subject area.
Coach or mentor	A professional colleague who provides guidance to a teacher in order to reflect upon current practices and expand, refine, and build new skills.
Community of learning (CoL)	Arrangements that support the continuous professional growth of teachers, providing them with opportunities to think, talk, read, and write about their daily work, including its social, cultural, and political aspects, in a planned and intentional manner.
CoL Unit	A set of semi-structured materials on a unified theme or topic to be used by Peer Facilitators and teachers in school or cluster-based CoL sessions.
District TCPD committee or stakeholder committee	This committee's purpose is to assist in review and analysis of Teacher Needs Assessment reports and to advise the LGA on setting annual

TCPD priorities. Members can consist of representatives of the following (as available in each particular LGA): Teachers' College principals; University College of Education deans; Ward Education Officers; Head Teachers; Peer Facilitators; Academic Teachers / TCPD Coordinators and any other stakeholders the District or Regional Education Officer feels could contribute to the analysis.

Guide or guidebook

This term is reserved for materials created by the Government of Tanzania and does not include material created by other partners or programmes.

Peer Facilitator

A Champion Teacher selected to lead CoL sessions at school or cluster level. Peer Facilitators will receive training from TIE and have an ongoing facilitators' CoL for support.

Self-Learning Module

A distance or online 9-month course for teachers to pursue independently. The course assessment is marked by the course instructor and a certificate of recognition is given upon successful completion.

Supplementary material

This mainly encompasses materials developed by other projects and approved by TIE (such as EQUIP-T, Tusome Pamoja, Right to Play, UNICEF teacher training modules or guides).

However, any teachers' guides or handbooks that TIE develops, which are in addition to regular textbooks, will also be included as appropriate.

TCPD Team

The school-level team which coordinates all TCPD and facilitates CoL at the school. The TCPD team comprises the Head Teacher / Deputy Head, Academic Teacher, Peer Facilitators and the Internal School Quality Assurance Team coordinator.

Annex 3

EdTech Hub and its partners the Aga Khan Foundation, Aga Khan University, British Council, FCDO Tanzania, and the Institute of Physics hosted the three-day, in-person Utafiti Elimu Tanzania conference (translated from Swahili to mean ‘Research Education Tanzania’) in Dar es Salaam in March 2022. The conference brought together educators, government stakeholders, development / technology partners, policymakers, researchers, and other relevant stakeholders to discuss two fundamental questions: What have we learnt? What will we do with that knowledge?

Over the first two days, stakeholders were able to dive into four thematic areas of TCPD; data for decision-making; EdTech strategy; inclusion, school safety, and gender. The third day involved closed roundtable discussions with government decision- and policymakers to reflect on the discussions held over the first two days and identify key areas of action. The following excerpts highlight the TCPD findings and recommendations.

Excerpts from the TCPD Thematic Session, Utafiti Elimu Tanzania, March 16–18, 2022

Government research priorities

- How can the connection / transition between pre-service and in-service teacher education be supported and integrated better?
- How prevalent are organically developed CoLs, and how can we leverage them?
- How can we support more teacher-informed TCPD programmes where the teachers inform the design, content, and structure of TCPD?
- How can mentoring and coaching be integrated into TCPD effectively and cost-effectively?
- How can peer facilitators be supported to perform well in their roles and fulfil their responsibilities?

TCPD recommendations for the government

- Thinking carefully about enhancing teacher motivation about participation in TCPD (how can we involve teachers to understand what would motivate them — e.g., teacher incentives, links to career progression, certifications, other)

- a. Making workloads more manageable and making time for TCPD in the school timetable
- b. Linking to school and classroom outcomes and challenges.
- c. Providing space for teacher agency and how they address teacher challenges (providing space for local solutions).
- Including teachers in the policymaking process and design of the TCPD approach and content
 - a. Ensuring that the lived experiences of teachers are reflected in the policies.
 - b. Including the teachers in the design to align with teacher needs (including design and development of materials and plans).
- Careful and transparent selection of Peer Facilitators, e.g., through existing organic groups — to ensure that teachers feel that they are involved in the choice of Peer Facilitator.
 - a. Clear criteria and selection process — what competencies are required? (teacher involvement).

TCPD recommendations for research

- Measuring outcomes of student and teacher learning
- Investigating how we can prepare and support Peer Facilitators for leading TCPD
- Sharing knowledge and research as it is emerging with other researchers and government; keeping the conversation going.

Summary of TCPD roundtable discussion

Utafiti Elimu Tanzania, March 16–18, 2022

These recommendations were developed in the Utafiti Elimu conference by implementers of TCPD in Tanzania as well as TCPD researchers and experts in collaboration with government stakeholders.

1. Allocation of ring-fenced time for TCPD in the school timetable for teachers and Peer Facilitators
 - **Allocation of ring-fenced time for teachers** in the school timetable for TCPD. TCPD should not be an extra burden to teachers in overloaded schedules.

- **Allocation of time and resources for Peer Facilitators** to ensure they can perform their roles effectively.
- 2. Ensure costed plans in the deliverables are followed to allow quality implementation of the TCPD programme to
 - **Develop quality assured materials** including CoL units, training materials for Peer Facilitators, coaching materials for Peer Facilitators, school leaders, WEOs, DEOs, SQAs
 - **Conduct training of education leaders, school leaders, and peer facilitators** to enable them to lead learning at their schools.
- 3. Strengthen the monitoring, evaluation, and learning (MEL) system at different levels to track implementation of TCPD
 - **Develop MEL strategy, MEL plan, and capacity building for MEL at all levels of TCPD implementation** to ensure support and accountability.
 - **Mandate training for school leaders** on collecting, handling, and analysing data on teaching and learning and using this data to inform TCPD plans.
 - **Develop diagnostic assessment tools to help teachers** self-assess the learning in their classrooms.
 - **Quality-assure effective use of materials and implementation.** Supporting Peer Facilitators with pedagogical skills and assuring effective use of materials both internally through school-level SQAs and then externally via ward / district-level SQA.

Mandate and strengthen the implementation of the TCPD plans

- **Commit to making TCPD a priority** for the government and ensure appropriate allocation of resources.
- **Approve and mandate TCPD plans** so that they can become operational and accountability frameworks are set.
- **Communicate plans clearly and effectively with all stakeholders** from national, LGA, and school level to ensure everyone understands their roles and responsibilities and is trained appropriately. Ongoing support should also be ensured at all levels.