



## POLICY BRIEF

# TCPD in Tanzania: Phase 2 Round 1 Recommendations

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## About this document

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## Abbreviations and acronyms

<b>CoL</b>	Community of Learning
<b>DEO</b>	District Education Officer
<b>DSQAO</b>	District School Quality Assurance Officer
<b>ETI</b>	Empowering Teachers Initiative
<b>LGA</b>	Local Government Authority
<b>LMS</b>	Learning management system
<b>MEWAKA</b>	Mafunzo Endelevu kwa Walimu Kazini (Teacher continuous professional development)
<b>MOEST</b>	Ministry of Education, Science, and Technology
<b>PO-RALG</b>	President's Office—Regional Administration and Local Government
<b>TCPD</b>	Teacher continuous professional development
<b>TIE</b>	Tanzania Institute of Education
<b>TRC</b>	Teacher resource centre
<b>WEO</b>	Ward Education Officer

## Background

The study reported here is for Phase 2 of the research project known as ‘The Impact of a Tech-Supported, School-Based Teacher Continuous Professional Development Model on Learning Outcomes in Tanzania’ and part of the global [Empowering Teachers Initiative \(ETI\)](#),<sup>1</sup> which comprises 10 country projects. It is closely aligned with the implementation of ‘MEWAKA’ (Mafunzo Endelevu kwa Walimu Kazini) or Teacher continuous professional development (TCPD), and the Tanzania National TCPD implementation plan.<sup>2</sup> MEWAKA is an innovative, school-based, technology-supported programme currently being implemented by the Government of Tanzania in schools nationwide. The research was co-developed and designed collaboratively between EdTech Hub, the Tanzania Institute of Education (TIE), and Aga Khan University, with consultation from key stakeholders at the ministry level. The work’s current (second) phase focuses on issues of equity, agency, and adaptation in scaling MEWAKA.

This policy brief summarises the key findings and recommendations from the first round of data collection for Phase 2 of the research project, conducted in March 2024. Data collection methods in 12 ETI rural schools in Dodoma, Iringa, Mwanza, and Lindi regions comprised classroom and community of learning session (CoL) observations; teacher and school surveys; and interviews and focus group discussions with key stakeholders, including teachers, peer facilitators, academic teachers, ward, district, and regional education officers, district school quality assurance officers (DSQAOs), and national officials at the Ministry of Education, Science, and Technology (MoEST), and the President’s Office—Regional Administration and Local Government (PO-RALG).

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<sup>1</sup> See

<https://idrc-crldi.ca/en/project/empowering-teachers-initiative-teacher-professional-development-scale#:~:text=This%20project%20is%20a%20grant,and%20efficiency%20of%20TPD%20systems>. Retrieved 3 October 2024.

<sup>2</sup> Ministry of Education, Science & Technology. (2021). *Tanzania National Teacher Continuous Professional Development Implementation Guide*.

## Summary of key findings

Recommendations from Phase 1 were prioritised jointly with TIE, MOEST, and PO-RALG and assigned to identified actors. This section presents the subsequent findings, summarised in the shaded box below.

- **CoL scheduling / CoL length:** Scheduling CoLs and timetable clashes with CoL sessions continue to be challenging for many schools. CoL sessions ranged from 18 to 134 minutes, averaging 57 minutes, varying greatly between schools.
- **Teacher CoL participation and motivation:** Teachers showed a generally positive attitude and motivation for engaging in CoLs, mainly due to the impact of collaboration. However, some schools still see a need for refreshments or other motivation to engage teachers sustainably. Observations showed varying levels of interactivity and a need for peer facilitator training.
- **Access to the learning management system (LMS) and use of CoL modules:** Many teachers either infrequently engage with or do not use the LMS at all. Regionally, 70% of Dodoma teachers used the LMS rarely or never, compared to 30% in Iringa. Additionally, only 3 out of 12 schools used TIE CoL modules between March and May 2024. Many stakeholders at the local government authority (LGA) and school level lacked awareness of the importance of the modules in the semi-structured CoL model of MEWAKA.
- **CoL focus:** All 12 schools held CoL sessions on challenging topics like technology, curriculum changes, and examination formats (rather than the CoL module topics). Observations showed peer facilitators often teaching subject content rather than pedagogical skills.
- **Perceived impact of CoLs on teaching and learning:** Many teachers and school leaders reported that they perceived significant positive changes in teaching and greater student progress due to MEWAKA, noting improvements in problem-solving, understanding of difficult topics and new issues, and increased creativity and collaboration. Classroom observations confirmed that teachers fostered a supportive atmosphere; however, students were rarely encouraged to share personal experiences or their ideas.
- **Teachers with disabilities:** Out of 166 teachers, 14 reported a medically diagnosed disability, and 12 had chronic illnesses like diabetes or asthma. Teachers reported that tablets, LMS modules, and software are not sufficiently accommodating their colleagues with hearing and vision impairments.
- **Adaptations:** Schools with teachers with disabilities implemented strategies for equitable participation in CoL sessions, including employing collaborative and interactive methods (e.g., discussions), supporting teachers with disabilities to participate, and ensuring clear communication. No adaptations to CoL materials were reported, and

stakeholders noted a lack of guidelines and institutionalised, system-wide support for teachers with disabilities.

- **Gender-equitable participation in CoLs:** Male and female teachers participate equally in most (8 out of 12) CoL sessions, but there were imbalances in the remaining schools. Gender-related barriers included uneven engagement by facilitators and lower female contributions, especially during tech-related meetings.
- **Use of tech devices in CoLs and TCPD:** Smartphones and tablets were the main technology devices used in CoLs. One-third of teachers used personal devices for TCPD, with many using technology for peer feedback.
- **Agency in meeting teachers' needs.** Teachers have agency in addressing their needs through:
  1. Setting a CoL focus
  2. Using personal mobile data for TCPD
  3. Offering peer tech support.

Some schools provided teachers with internet bundles or meals, while one DSQAO created a WhatsApp group. However, stakeholder mapping outcomes stated that teachers have little decision-making power.

- **Mechanisms that allow adaptation** to meet local teachers' pedagogical needs: Mechanisms are planned to adapt CoL activities to local needs at both school and ward levels, including addressing challenges and spreading innovations. However, only Mwanza had a fully functioning feedback loop between schools, wards, Teacher Resource Centres (TRCs) and districts to provide external pedagogical expertise
- **Teachers' practical needs** that could not be met at the school level also largely remain unsupported. The needs include access to more devices, improved teacher digital literacy, tech devices accessible for teachers with disabilities, help with data costs, improved connectivity, and increased budgets for MEWAKA.

## Recommendations

Recommendations were discussed and prioritised during a stakeholder workshop that included TIE, MOEST, PO-RALG, and the research team members. They are presented here under the lead institutions identified for each action in priority order.

### Recommendations for TIE

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- Continue to provide training for head teachers, Ward Education Officers (WEOs) and DSQAOs to ensure they are well-equipped to support MEWAKA implementation in schools.
- Continue to enhance awareness among all stakeholders regarding CoL modules by ensuring stakeholders (especially at LGA and school level) understand the semi-structured nature of MEWAKA, which requires the use of CoL modules from TIE along with teacher-based problem-solving.
- Use TIE social media platforms like Instagram to promote CoL modules to teachers.
- Collaborate with What Works Hub for Global Education to explore how best to promote MEWAKA and engagement with CoL modules on the LMS by sending short message service (SMS) texts to teachers from time to time.
- Increase access to TIE CoL modules in schools with limited connectivity by reviewing and considering the implementation of an offline Moodle option to allow teachers to access modules without a constant or reliable internet connection.

### Recommendations for LGAs

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- Broaden conceptions and identification of disabilities. Ensure that education data accurately captures teachers with disabilities beyond visual and hearing impairments and mobility issues to also capture mental and intellectual disabilities (e.g., neurodiversity). Consider using

the established [Washington Group survey](#)<sup>3</sup> (short version) items to capture functional difficulties without labelling disabilities.

- Implement support mechanisms. Develop effective support mechanisms to help all teachers with disabilities engage fully in school activities, including weekly CoL and monthly TRC sessions.
- Devise strategies to increase the participation of female teachers in CoL sessions and activities. These may include:
  - Assigning District ICT Officers and school-based ICT champions the role of supporting teachers with low digital literacy to use the LMS and the government-distributed tablets.
  - Enacting a guideline (and reporting mechanism) on the selection of peer facilitators in primary schools to address the disproportionate representation of female teachers as peer facilitators.
  - Continuing to raise awareness among WEOs, peer facilitators, and academic teachers about the current state of gender parity in CoL sessions.
  - Organising targeted workshops and training sessions to present and address the findings on gender participation and disparities.
  - Emphasising the importance of providing actionable strategies to promote gender equity in MEWAKA/CoLs, including building female teachers' confidence with technology.
- Provide training to all peer facilitators to enhance their ability to guide and assist teachers, ensuring they are well-prepared to facilitate TCPD successfully.

## Recommendations for PO-RALG

- Develop and implement effective feedback loop mechanisms to address unmet teachers' needs at the school level and to facilitate the sharing of innovative TCPD and teaching practices across schools. This may involve:
  - Establishing clear systems for providing support when schools/teachers face challenges in CoL/MEWAKA implementation.

<sup>3</sup> See

<https://www.washingtongroup-disability.com/question-sets/wg-short-set-on-functioning-enhanced-wg-ss-enhanced/>. Retrieved 8 October 2024.



- Ensuring sustainable dissemination of effective solutions across the school network in the sector.
- Emphasise to WEOs, DSQAOs, and District Education Officers (DEOs) the significance of their roles in promoting, supporting, and ensuring the effective use of CoL modules and the LMS.
- Implement solar power solutions and/or share offline versions of the LMS and modules for schools without electricity or connectivity to ensure teachers' access to LMS and CoL modules.
- Promote the sharing of available, functional tech devices among teachers within schools.

## Recommendations for MOEST

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- Institutionalise support for teachers with disabilities to actively participate in MEWAKA activities by developing a comprehensive and inclusive guideline that addresses their unique needs and challenges. In particular, provide and support the use of assistive technologies like screen readers, introduce disability allowances to support accessible transport and consider establishing cross-school networks of teachers with disabilities. *(Further needs to be identified during Round 2.)*
- Continue pursuing zero-rated LMS content for teachers/MEWAKA across phone network providers.
- Analyse challenges arising in the use of recently distributed tablets by teachers across varied school contexts. The information will thereafter help to develop a sustainable plan for the future distribution and use of tablets.

## Detailed findings

### CoL implementation

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**CoL scheduling:** Scheduling CoLs and timetable clashes with CoL sessions continue to be a challenge for many schools. Notably, scheduling was raised as one of the top three challenges by all schools in the sample, except for schools in Mwanza. The district visited in Mwanza used an innovation whereby all schools hold CoLs at the same time on Wednesday afternoons. This did not eliminate timetable clashes, but it eased the scheduling of cluster-level CoLs (since all teachers were available at the same time) and reduced the number of clashes with non-teaching duties assigned by LGA officials.

**CoL length:** Observation data showed a wide range in the duration of CoL sessions—from as short as 18 minutes to as long as 134 minutes. While the overall average length was 57 minutes, close to the expected hour, the wide variation implies that CoL meetings can differ considerably across different schools. Specifically, in the Mwanza region, the average length of CoL sessions was notably longer than expected, averaging 103 minutes. The variation in length of sessions may reflect the adaptability of CoL sessions to the needs and practices of teachers in different regions/schools, highlighting the flexibility of CoL scheduling. However, it may also indicate that some schools prioritised MEWAKA more highly than others.

**Teacher CoL participation and motivation:** Survey data show that teachers are highly engaged in CoL sessions. Specifically, 96% of teachers reported attending weekly CoL sessions at their schools, while 65% also attended monthly CoL sessions at TRCs. At the observed CoL sessions, attendance ranged from 63% at one school to 100% at five schools. This participation rate reflects the importance teachers place on collaborative learning opportunities. When asked about their level of motivation for participating in CoL sessions, 90% of teachers said, “a lot”. This strongly positive finding highlights teachers’ reported enthusiasm for participating in MEWAKA sessions, with more than 90% reporting that they enjoyed CoL activities and felt motivated to participate. These findings indicate that CoL sessions are well received by teachers, who take advantage of the opportunities for professional development and collaboration that the sessions provide at the school and cluster levels.

However, it is possible that these self-reported findings may (partly) reflect a desire to please. In any case, the findings are tempered by the actual observed levels of interactivity, and some reported barriers, as follows.

**Teacher engagement in CoL sessions:** Our CoL observations show a varied picture of teacher engagement in CoL sessions. At one end of the spectrum, four schools earned high ratings across nearly all CoL items due to their focus on group work and interactive methods employed by peer facilitators. In contrast, two schools received low to medium ratings in both facilitation and teacher engagement, primarily due to their lecture-based, non-interactive sessions. This variation is largely attributed to (a) facilitation skills, as some schools frequently rotate peer facilitators, many of whom have not yet been trained for their roles, and (b) lack of guidance owing to not using CoL modules.

**Barriers to CoL implementation:** Scheduling CoLs and timetable clashes with CoL sessions continue to be a challenge for all schools, except for the three in Mwanza, where there was a district-wide CoL schedule. Other barriers reported by teachers include a lack of motivational refreshments (three schools in Iringa, Lindi, and Mwanza); not having expertise/facilitators for specific needs (two schools in Lindi and Dodoma); too little time for CoLs (two schools in Dodoma); and distance to TRCs (two schools in Dodoma). Additionally, one head teacher observed that scheduling CoLs outside of school hours does not effectively address teachers' needs.

**Access to the LMS and use of CoL modules:** 88% of teachers reported using technology for MEWAKA purposes. However, a notable issue arises with the underutilisation of CoL modules hosted on the TIE LMS. Despite the availability of 12 new, specially designed modules, CoL observations conducted in March 2024 showed that only 2 out of 12 schools used TIE CoL modules. In a follow-up telephone survey in May 2024, head teachers reported slightly different levels of use of the modules by teachers: 7 out of 12 schools did not use them at all, 4 seldom used them, and only 1 school reported using them regularly. Teacher survey data further highlight this issue, with 36% of teachers reporting accessing the LMS weekly or more, while 35% accessed it rarely (i.e., once or twice a year), and 12% had never accessed the TIE LMS. Yet, a regional comparison shows that 70% of teachers in Dodoma accessed the LMS rarely or never, in comparison to 30% in Iringa.

The data collectively shows a significant gap in LMS access and variable usage across ETI regions, suggesting a need for a strategy to promote LMS and CoL modules nationwide. Most LGA and school-level implementers

described the ‘bottom-up’ approach for CoLs that was used in previous TCPD interventions (e.g., the Primary Education Development Plan in the early 2000s) and did not show awareness that CoLs in MEWAKA are meant to be semi-structured through the combination of using official TIE CoL modules as well as teacher-identified topics and problem-solving.

**CoL focus:** CoL sessions observed in all 12 schools focused on difficult topics or challenges identified by the teachers. Common topics of CoLs included technology use, curriculum changes, and national examination/assessment. WEOs reported that teachers are responsible for deciding the focus and topics of CoL meetings, pointing out that such an approach enables teachers to address specific needs relevant to their contexts. Additionally, survey data shows that peer facilitators are using CoL sessions to teach peer teachers subject content rather than discussing pedagogical skills and strategies crucial for improving teaching practice. This mirrors findings from the Phase 1 research,<sup>4</sup> where peer facilitators were primarily teaching subject content to peer teachers.

## Impact of CoLs on teaching and learning

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Data shows that MEWAKA has had a substantial reported impact on teaching practices, with 92% of teachers reporting significant positive changes as a result of their involvement in CoL sessions. For instance, one teacher noted that MEWAKA has enhanced their ability to reach a diverse range of students, including those with disabilities/special needs. Similarly, another teacher highlighted that MEWAKA has supported them in using participatory teaching methods in the classroom to actively engage students in developing skills through increased participation. Broadly, teachers reported that their teaching practices have improved because of their engagement in MEWAKA CoL sessions at their schools and TRCs. They specifically noted that CoLs have helped them to:

- solve emerging problems with peers
- develop substantial understanding of new issues and changes, including curriculum changes
- improve instructional practice
- boost their creativity
- increase collaboration, with a strong sense of togetherness.

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<sup>4</sup> 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>

Additionally, the teacher survey reveals that MEWAKA has positively impacted students' learning, with 92% of teachers indicating that either all or some of their students have shown greater progress as a result of MEWAKA.

However, our classroom observations reveal a mixed picture. Eighty-two per cent of lessons showed strong student engagement and positive teacher–student interactions, with notable active learner participation, teacher listening, and gender sensitivity; teachers interacted with all students warmly and empathetically. Yet, only 45% of lessons had students actively asking questions. Additionally, teachers provided opportunities for students to share personal experiences in only 36% of lessons and facilitated engagement with peers' ideas in 45% of lessons observed.

## Equity and adaptations

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**Teachers with disabilities:** Out of 166 teachers, 14 reported having a disability diagnosed by a doctor that affected their participation in MEWAKA. One of the teachers with disabilities, along with an additional 11, had chronic illnesses such as diabetes or asthma. However, head teachers reported 11 teachers as having disabilities (64% of these being women and 36% being men), indicating a level of hidden disability. Conversely, one teacher did not self-identify as having a disability but was identified by the head teacher and peers, and researchers observed some impairment in her hearing. The reported disabilities were largely physical and included hearing impairments, visual impairments, and a physical disability due to a fire accident (though not officially recognised by a doctor).

Chronic illness and alcoholism were not considered disabilities by respondents. However, the teacher survey and key informant interviews made it possible to identify teachers with chronic illnesses that affected their participation in MEWAKA (12/166) as a category of teachers with disabilities, since chronic illnesses have a similar impact to a disability. There was some regional variation in both levels of disability and chronic illness.

**Adaptations to CoL activities and materials:** Schools with teachers with disabilities reported adopting several strategies to ensure equitable participation of all teachers in CoL sessions. The strategies include:

- employing collaborative methods to actively engage all teachers in CoL activities;
- offering peer support to teachers with disabilities, a practice strongly endorsed by the National MEWAKA Coordinator (PO-RALG);

- ensuring clear communication to allow all teachers to become informed about the proceedings during CoL meetings.

Several adaptations to CoL activities to accommodate teachers with disabilities were made at five schools. For instance, at four schools, peer teachers read materials aloud to support peers with visual impairments. One school provided a sign language interpreter for a hearing-impaired teacher, while another school, which also used reading aloud as a strategy, accommodated a hearing-impaired teacher by facilitating lip-reading. Furthermore, another school offered alternative seating arrangements for a teacher with a physical disability. No adaptations to the actual CoL materials were reported across ETI schools; this is, of course, in the context of low usage of the materials.

**Barriers for teachers with disabilities:** Some teachers with disabilities faced challenges in using technology for TCPD. Significant challenges in accommodating teachers with disabilities during CoL sessions include a lack of appropriate guidelines or system-wide support mechanisms. The National MEWAKA Ministry Coordinator acknowledged that teachers with disabilities have not received adequate support. This underscores the need for more focused systemic support to address the needs of teachers with disabilities to ensure their full engagement in CoL activities. Additionally, tablets, LMS modules, and software are not sufficiently accommodating teachers with hearing and visual impairments. Further findings concerning barriers to technology use are detailed in the next section.

**Gender-equitable participation in CoLs:** WEOs, peer facilitators, and academic teachers reported that male and female teachers participate equitably in CoL sessions. They reported that female teachers facilitate sessions for their peers. In our observations, however, only 5 out of 13 facilitators were female. Additionally, the WEO from one school observed that some schools have more female teachers than male teachers and that all teachers actively participated in CoL/MEWAKA activities, indicating inclusive teacher engagement. Data from CoL observations confirm that gender balance in contributions during CoL sessions generally aligns with the ratio of male and female teachers present. Specifically, in 8 out of 12 CoLs, male and female teachers' contributions were proportional to their representation in the sessions. However, at three schools, female contributions were significantly lower compared to their male peers, whereas at one school, female teacher contributions were proportionately higher than those of male teachers. Thus, while overall gender balance is maintained, there are some discrepancies in specific schools.

**Barriers related to gender:** CoL observers noted that peer facilitators occasionally missed opportunities to engage female teachers who were not actively contributing. In two out of three observed CoL sessions focused on technology, female contributions were proportionally lower than those of their male counterparts. Additionally, peer facilitators and academic teachers in one school reported that female teachers “isolate themselves” during technology-related CoL meetings, indicating a need for more inclusive strategies to build the confidence of female teachers and ensure equitable participation in CoL sessions.

## Tech access and use of the LMS

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**Use of tech devices in CoL sessions:** Teachers’ use of technology in CoL sessions varied across schools. Smartphones were used in 5 out of 12 schools (42%), tablets were employed in 4 out of 12 schools (33%), and laptops were used in 3 out of 12 schools (25%). Additionally, one school used a desktop computer specifically for a CoL session aimed at teaching teachers how to use Microsoft Word.

**Teacher’s use of tech devices for TCPD:** One-third of teachers do not use their personal tech devices for TCPD. Over 50% of teachers use smartphones or tablets for various TCPD activities, with 54% using smartphones and 58% using tablets to access the TIE LMS. When asked if the technology they use supports their personal development, 85% affirmed that it does so “a lot”, citing improvements in knowledge and ability to search for learning materials and resources. The most popular use of the basic mobile phone (by 46% of teachers) was giving and receiving feedback to peer teachers for their professional development.

**Barriers related to technology.** Barriers related to technology continue to impact the effectiveness of technology for TCPD in schools. The reported issues include:

- **A lack of essential tech devices:** Teachers reported a lack of essential tech devices such as tablets, projector screens, and photocopiers to support and enhance CoL implementation and effectiveness in their schools. Eleven per cent of teachers reported not owning a tablet because these teachers were hired after the initial distribution of government census tablets.
- **Connectivity issues:** Similar to Phase 1 findings, connectivity continues to be a significant barrier to the effective use of technology for TCPD across the 12 schools. This situation hampers access to the TIE LMS and modules. Because of this, most peer

facilitators rely on their personal mobile data to access TCPD materials.

- **Limited technical capacity among teachers:** WEOs were concerned with the limited technical capacity among teachers, saying that such a situation hinders teachers' ability to leverage technology effectively for TCPD. In particular, one WEO reported that some teachers struggle with using tablets or desktop computers for professional development.

**Tech access and barriers for teachers with disabilities:** 81% of teachers identified as having disabilities, either through a doctor's diagnosis or functional limitations, reported that the technology available to them was highly suitable for their specific needs, including teachers with visual and mobility impairments. However, some teachers with disabilities faced challenges in using technology for TCPD. The technological barriers they reported in accommodating their needs during CoL sessions include the following.

- **Lack of any functioning software or accommodations on tech devices to support teachers with disabilities.** Teachers depended on their peers to navigate tech devices and read materials aloud. At one school, 'talkback' software was installed on the tablets of teachers with visual impairments. However, use of this software was not observed during the research visit. Teachers spoke about how their visual impairment significantly diminishes their motivation to participate in MEWAKA activities. Additionally, a visually able teacher from one school highlighted that relying on peer teachers to support teachers with disabilities creates barriers to equal participation. A visually impaired teacher corroborated that view, saying that overreliance on peers for support is problematic when it comes to effective participation in CoL activities for all teachers.
- **Visual challenges reduce the motivation of teachers with visual impairments to engage in MEWAKA CoL activities** because they "can't see anything".

## **Mechanisms and agency in meeting teachers' needs**

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Data shows that there are mechanisms in place to adapt CoL activities to address local teachers' needs at both the school and ward levels.

- **CoL sessions focus on challenges facing teachers:** All CoLs focus on challenges that teachers identify and communicate to peer



facilitators or academic teachers. These challenges guided the planning of CoL meetings, including the scheduling, topics, and facilitators for each session. Additionally, several schools have implemented timetables to streamline this process, requiring teachers to report their challenges to the peer facilitators on a regular basis (e.g., weekly) to ensure that CoL sessions remain relevant and focused on teachers' immediate needs.

- **Addressing teacher needs at the ward/cluster level:** According to MEWAKA guidelines, mechanisms are needed to address teacher needs that are not met at the school level. Subsequently, CoLs at the ward/cluster level were organised to address these broader issues. In Mwanza's Misungwi district, for example, this mechanism appears to function effectively, with regular TRC-level CoLs organised on the basis of feedback from schools and teachers. However, in other regions, several head teachers reported inadequate follow-up mechanisms, leading to ineffective feedback loops and a lack of support when teachers' challenges exceed the expertise available within their schools. In Dodoma, the DSQAO felt the absence of TRCs exacerbated this issue, as schools cannot access essential support despite reporting their needs. This suggests communication breakdowns between schools, wards, and districts. To respond to this situation, Dodoma's DSQAO set up a WhatsApp group for English teachers, an avenue for ongoing peer support to enhance capacity, and organised additional cluster-level MEWAKA sessions for English teachers in collaboration with DEOs. No similar intervention was reported in other regions
- **Spreading innovations to other schools:** One out of four DSQAOs shared a clearer example of an innovation disseminated through the MEWAKA programme. Dodoma's DSQAO highlighted an innovative approach where teachers involved caregivers in developing local teaching materials to enhance student learning. These materials included pottery, clay, arrows, and bows. This innovation received support from school committees and community members from the village. The DSQAO expressed a desire to spread the innovation to other schools to facilitate broader adoption of this innovation in the district.

**Agency in meeting teachers' needs.** Data revealed the following forms of agency.

- **Agency in determining the CoL focus:** In addressing needs, teachers reported having significant agency in determining the

focus of their weekly CoL meetings. Additionally, WEOs and DSQAOs reported that while ward, district, or regional officers provide guidance on broader focus areas for schools to consider implementing, schools have the necessary autonomy to determine the topics for their weekly CoL meetings depending on their immediate needs.

- **Using personal data:** Many peer facilitators reported relying on their personal mobile data to access educational materials and resources for TCPD. At five schools, peer facilitators used their own internet bundles for TCPD. However, four other schools were concerned with this arrangement, highlighting variation in how ETI schools support access to personal development materials and resources.
- **Establishing local support systems/mechanisms.** Various support mechanisms were reported in response to technological challenges facing schools and teachers. For instance, one WEO invited teachers from Ifunda secondary school to assist teachers with the use of tablets. Likewise, Dodoma's DSQAO established a WhatsApp group for continuous teacher support and collaboration. Additionally, teachers with advanced digital skills supported their peers with limited tech skills to enhance tech effectiveness for TCPD, whereas teachers who have internet bundles and smartphones often shared these resources with their peers. One more mechanism is that of head teachers utilising school funds to provide internet bundles or meals during CoL sessions with the goal of facilitating effective teacher participation in professional learning with peers.

**Other unmet teacher needs:** WEOs, peer facilitators, and academic teachers reported that the limited use of tech among teachers is an unaddressed need, hindering effective teacher participation in CoL and TCPD activities. Inadequate funding for basic CoL equipment (such as markers and flipcharts), refreshments, and transport for cluster-level CoLs was also reported by teachers, WEOs, and school leaders as a barrier to effective implementation.