Try it on Monday: Practical solutions – and opportunities – to strengthen teacher professional development at scale

Synthesis Paper

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What Works Hub for Global Education

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Contents

Executive summary

This guidance note provides practical recommendations for designing effective, scalable, and sustainable teacher professional development (TPD) programmes in low- and middle-income countries (LMICs). It draws on structured pedagogy research, large-scale implementation experiences (including Kenya's Tusome and Uganda's LARA programmes), and the author's direct experience implementing TPD programmes across multiple countries in sub-Saharan Africa, Latin America and Asia.

The central premise is that teacher professional development must be understood as a continuous cycle of learning, practice, reflection and support, not as a one-off training event. Effective TPD programmes combine three interdependent components:

1. Training that introduces new instructional practices grounded in adult learning principles.

2. Ongoing support – through coaching, communities of practice, and low-tech digital tools – that helps teachers implement and refine these practices.

3. Sustainability mechanisms that ensure local ownership, affordability, and alignment with national education systems.

The paper is organised around the teacher learning cycle – from initial training through classroom implementation to ongoing support – and addresses:

1. **Adult learning foundations** (Chapter 1): How teachers learn and what this means for TPD design

2. **Training design and delivery** (Chapter 2): Content selection, facilitation methods, and logistics for scale

3. **Ongoing support systems** (Chapter 3): Coaching, communities of practice, and remote modalities

4. **Measurement and evaluation** (Chapter 4): Tracking success from training to classroom practice to student outcomes

5. **Sustainability mechanisms** (Chapter 5): Government ownership, cost-effective design, and equity

The paper concludes that TPD is most effective when training is followed by regular, non-evaluative support that allows teachers to reflect, adjust, and build mastery over time. Sustainable TPD requires government ownership, budget alignment, and equity – ensuring that teachers in the most remote or under-resourced contexts receive the best possible support.

Introduction

Teacher professional development (TPD) encompasses the full range of structured opportunities for practicing teachers to strengthen their instructional knowledge and skills – through training workshops, one-on-one coaching, professional learning communities, and digital or blended modalities. Across low- and middle-income countries, governments and implementing partners have invested heavily in TPD to improve teaching quality and learning outcomes. Yet, despite decades of investment, many TPD initiatives remain fragmented, overly theoretical, or disconnected from classroom realities.

This guidance note synthesises four types of evidence:

1. **Published research** on adult learning theory, teacher professional development effectiveness, and instructional coaching (cited throughout)

2. **Programme evaluations and implementation research** from large-scale foundational literacy initiatives in low- and middle-income countries (LMICs), including Kenya's Tusome programme, Uganda's LARA programme, Zambia's STEP-UP programme, and multi-country training and coaching studies conducted by RTI International[1]

3. **Internal learning documents** and operational guidance developed through these programmes (training manuals, coaching tools, implementation reports)

4. **Practitioner experience** from the authors' combined work designing and implementing TPD programmes across Africa and Latin America over 15 years, working with ministries of education and implementing partners.

Where guidance draws primarily on implementation experience rather than published research, this is noted explicitly. The paper prioritises practical, field-tested recommendations while grounding them in the available evidence base on effective adult learning and teacher behaviour change.

This paper aims to provide implementing organisations and ministries of education with practical, evidence-based guidance on how to design, deliver and sustain effective TPD programmes. It draws from extensive programmatic experience and global research to distill best practices, gaps and challenges in TPD design and implementation. The focus is on applied learning: helping teachers adopt and sustain specific instructional practices that lead to measurable improvements in student learning.

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[1] Piper et.al. (2019). Piper et.al. (2020).

The paper is organised around the full teacher learning cycle – from training to practice to ongoing support – and identifies what makes each phase effective:

- Chapter 1 explains the foundations of adult learning theory and why teachers, as adult learners, require practical, relevant, and collaborative approaches to professional learning.

- Chapter 2 reviews best practices in designing and implementing teacher training, including content selection, facilitation methods, materials, and logistical planning for scale.

- Chapter 3 focuses on ongoing teacher support – coaching, communities of practice, and digital modalities – highlighting how these systems sustain instructional change.

- Chapter 4 outlines methods for measuring success, from teacher knowledge and classroom practice to student learning and cost-effectiveness.

- Chapter 5 addresses sustainability, emphasising government ownership, cost-conscious design, and equity considerations to ensure that TPD becomes an enduring part of education systems.

Across these chapters, a consistent message emerges: teacher learning is a process, not an event. Changing classroom practice requires time, trust and structured support. TPD programmes that are grounded in adult learning principles, provide frequent opportunities for feedback and reflection, and align with national systems are most likely to achieve lasting impact.

1 | Chapter 1: Adult learning

Designing a TPD programme must begin with an understanding of how adults, and specifically teachers, learn. While there may be some similarities, adult learning is not the same as student learning. Children's brains are more plastic and better at absorbing entirely new skills without effort, while adults learn best when they connect new information to existing knowledge, use deliberate practice, and have meaningful goals. This means that teaching teachers new practices to use in their classrooms requires specific considerations.[2]

Consider what teachers already know. Teachers come to learning with valuable knowledge and experience. Effective professional development starts by recognising and building on what they already know. This makes learning more relevant, engaging, and empowering.

Give opportunities to have a say in the content. Adults learn best when they help shape their learning.[3] Teachers should be involved in setting goals and identifying areas for growth. This builds motivation and ensures the training meets their real needs, grounded in their classroom experiences.

Include practical methods of learning.[4] The best learning connects theory to practice[5]. Techniques like simulations, microteaching, and lesson study let teachers practice skills and get feedback in safe settings. Ongoing cycles of trying, reflecting, and adjusting deepen learning and growth.

Content should be highly relevant and immediately applicable. Learning works best when it tackles real classroom challenges and can be used right away. Professional development should align with student needs, curriculum, and assessments to drive real improvements in teaching and learning.

Adults learn best through active, collaborative inquiry.[6] Teacher learning should mirror good teaching – active, social, and inquiry-driven. Collaboration through peer observation, co-planning, and learning communities helps teachers share ideas, solve problems, and keep improving together.

Learning is emotional and identity-based.[7] Adults bring their emotions, beliefs, and identities to learning. Effective teacher development respects this by encouraging reflection and helping teachers strengthen their professional.

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2   Knowles (1984). Darling-Hammond, Hyler, & Gardner (2017). Westbrook et al. (2013).

3   Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Knowles, M. S. (1984). Merriam, S. B. (2001).

4   Mejía, J. (2020).

5   Kolb, D. A. (1984).

**6**   Vygotsky, L. S. (1978). Wenger, E. (1998). Mejía, J. (2020).

7   Dirkx, J. M. (2001). Kelchtermans, G. (2009).

Teacher Learning Cycle[8]

One single training event is rarely enough to change teachers' practice. Teachers learn and decide to change their practice based on a cycle of learning, trying, reflecting, and maybe most importantly, how their students react to the implementation of the new practice(s).[9]

Figure 1: Teacher Learning Cycle
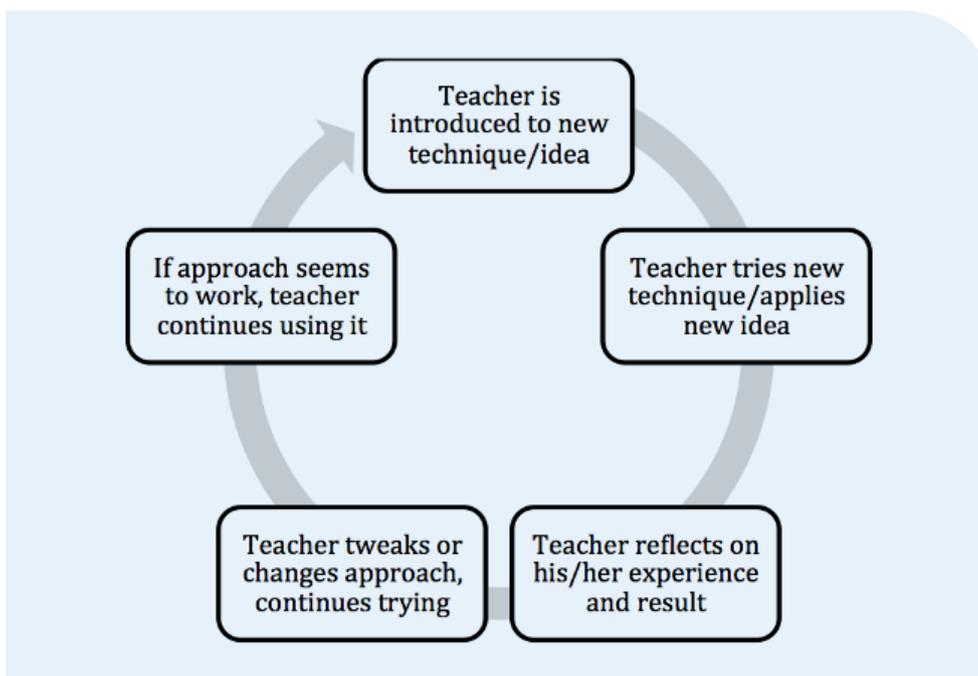
1. Learn. Teachers typically attend some kind of training or learning event. This event needs to help teachers understand enough to try to implement new on Monday alone in their classrooms.

2. Try. Teachers attempt the new practice on their own in the classroom either because they feel good about what they learned at training or they feel obligated.

3. Reflect. If the teacher tries the new practice, how did it go? Was it hard to implement? Most importantly, how did students react?

4. Adjust. Teachers will adjust the new practice based on their initial experience and hopefully try again. This may require support and encouragement, depending on the teacher and the initial experience.

5. Reflect and continue. If the approach works, meaning students improve learning or engagement, teachers are then more likely to continue using the new practice(s)

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8 Ralaingita, W. (2020).
9 Guskey (1986). Kraft, Blazar, & Hogan (2018).

Key to the success of this learning cycle is ensuring that teachers will try the new practice once they are alone in their classroom. If they are uncomfortable or unwilling to try, there can be no change. This means keeping content and new practices as simple as possible, and potentially, making teachers' jobs easier by providing lesson plans or structured materials or anything needed to implement a new practice. **Ask teachers to do as little additional work as possible**.[10]

It is important to note that teachers will not get it right the first or even the fifth time. Changing practice takes weeks or months and depends on the individual and their motivation to try.

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10 Based on implementation experience from Kenya's Tusome programme and Uganda's LARA initiative, where teacher uptake was significantly higher when new practices were integrated into existing materials rather than requiring additional preparation time.

2 | Chapter 2: Teacher training

Now we will turn to look at teacher training, best practices for developing training programmes, and the challenges to consider for scale and sustainability. Training can consist of any event or course that teachers engage in to learn a new practice, instructional method, or instructional materials. Training can be in person, online, simultaneous, or self-paced. It can take place at the school-level or in clusters. However, all trainings should consider the adult learning theories and the learning cycle to start the teacher change journey.

What does quality training look like?

A good training is not quiet, does not need PowerPoint, uses technology as a tool if it makes sense for all training sites, allows for teachers to discuss and ask questions, and gets teachers out of their seats teaching more than listening.[11] Successful trainings also have clear objectives and expectations for what teachers will learn and what they should be able to do after the training.

Content

The content of any training should be focused on what specific new practice or approach teachers are being asked to do in the classroom. **What specifically do you want teachers to do in their classroom after the training?**

Figure 2:   TeachWell Training Manual: Training objectives
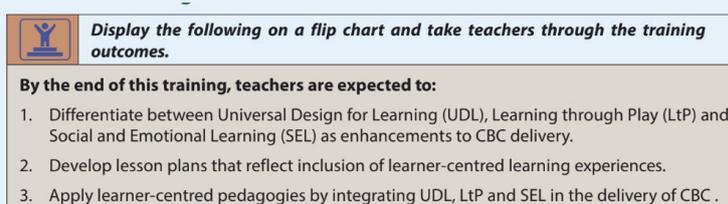
Display the following on a flip chart and take teachers through the training outcomes.

By the end of this training, teachers are expected to:

1. Differentiate between Universal Design for Learning (UDL), Learning through Play (LtP) and Social and Emotional Learning (SEL) as enhancements to CBC delivery.
2. Develop lesson plans that reflect inclusion of learner-centred learning experiences.
3. Apply learner-centred pedagogies by integrating UDL, LtP and SEL in the delivery of CBC.

Once the objectives and expectations are clearly laid out, break down the new practice or approach into small pieces or steps. Example: If teachers are expected to learn how to teach reading skills in a new way, do not give teachers a full lesson such as the one below to learn all at one time. This lesson has several activities which could all be new to teachers and learning all of them at once can be overwhelming. Instead teach each skill/part of the lesson seperately, what it is, why it is important, and what that one step looks like until you build a whole lesson. Teach each activity separately and then put it all together.[12]

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11 Mejía, J. (2020).

12 This author experience example is taken from the Kenya Tusome training design however the idea of breaking down complex new concepts has been implemented across almost all training experiences from EGRA data collector trainings to instructional programme trainings.

Less is more. The best trainings understand that adult brains can only take in so much information at one time. No matter how well planned your training is, information retention decreases as content volume increases. There is an inverse relationship between the amount of content covered and what teachers will remember and apply.[13] There will be a tendency to include and explain every possible theory or topic related to the new practice. However, human brains can only process so much in one sitting. While there is no set limit on the amount of content or topics, it will be less than you think. Plan for only the most essential content to help teachers try the new practice.

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13 Sweller, J. (1988). Mayer, R. E. (2004). Mejía, J. (2020).

Note on complicated interventions. Do not expect that teachers can learn and implement a complicated intervention that includes a new instructional approach, how to do formative assessment, and differentiating instruction. **Pick one thing** and focus on that for months before adding a new intervention. If there must be multiple interventions, spread them out and make sure there is coherence in how they are being introduced. This should also be a consideration of the overall programme or intervention design. For example asking teachers to learn a new instructional approach and regular formative assessment and using a new app to record their lesson plans is too much to learn and implement at one time. Start with the easiest, most familiar, or most immediately needed like skills or curriculum for a particular term or semester.

Methods

When talking about methods of training it typically means the types of instructional activities used during the training. There are four main methods: lecture, discussion, model, practice. Each of these methods is useful, but how they are used is important to the success of the training.[14]

Figure 4:   Science of Teaching How to Guide: Suggested training time allotments
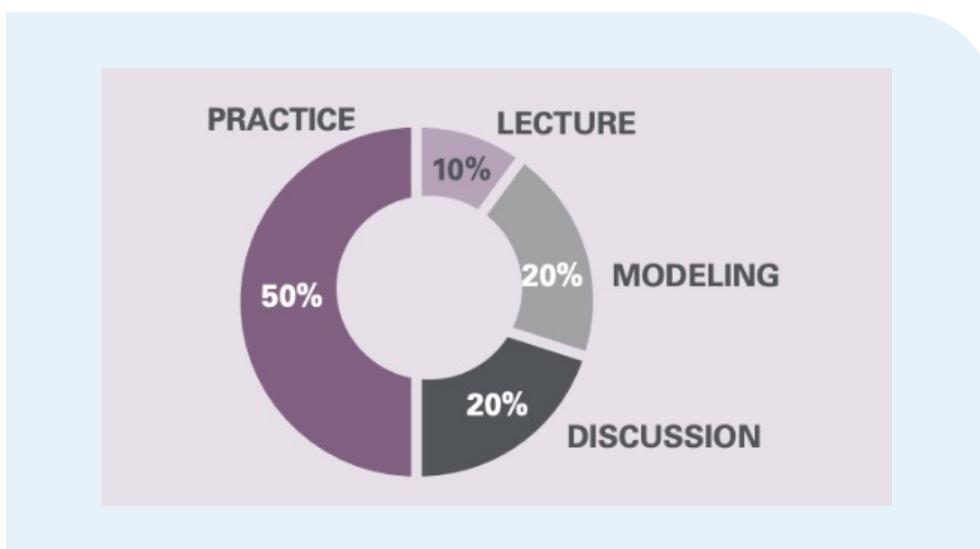
Lecture. Traditionally lecture has been the focus of adult learning, but research shows that adults learn by doing.[15] While it is often necessary to have some lecture throughout the training, limiting the amount of time teachers are being talked to is important.[16]

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14 Mejía, J. (2020). Percentages in Figure 4 are suggested breakdown of time based on numerous trainings across projects and countries. Exact distribution of time will depend on a variety of factors but could aim for an approximation of this distribution if possible.
15 Kolb, D. A. (1984). Knowles, M. S. (1984).
16 Knowles (1984). Darling-Hammond, Hyler, & Gardner (2017). Westbrook et al. (2013).

Discussion. Teachers will need time to ask questions and reflect on their learning. Focused discussion time will support clarifying or processing of new information.

Modelling. Teachers' understanding of a new practice will be greatly improved if they see a high-quality model before they try to implement. Modelling should be thought of as the 'I do' portion of the training where a facilitator or prepared teacher acts out the new practice while teachers watch and note any questions.

Figure 5:   Kenya Tusome Remediation Pilot Training Manual: List of activities

Regrouping based on letter tracker: Introduction	10
Regrouping based on letter tracker: Model	11
Regrouping based on letter tracker: Practice	11
Letter Activities: Introduction	11
Letter Activities: Go Fish (Introduction)	12
Letter Activities: Go fish (Model)	13
Letter Activities: Go fish (Practice)	13
Letter Activities: Bingo (Introduction)	13
Letter Activities: Bingo (Model)	14
Letter Activities: Bingo (Practice)	14
Letter activities: Road Race (Introduction)	15
Letter activities: Road Race (Model)	15
Letter activities: Road Race (Practice)	16

Practice. Practice will be key to teachers trying the new practice once they are back in their classroom. all teachers should have an opportunity to practice all parts or steps of a new practice. This is best accomplished if teachers practice in pairs or small groups. The more teachers get a chance to practice, the more efficacy they will build, thereby upping the chances they will try the new practice in their classroom.

Materials

Large-scale trainings generally involve training a small group of people who then train a larger group of people who train teachers. This means that the content of a training must be passed through multiple groups of people who may or may not fully understand the content themselves. Developing a clear and concise, well-formatted manual is going to be one of the best tools that will help pass down information in the way it was intended when it was developed.[17]

Use programme materials. Incorporate the actual teacher's guide or instructional materials directly into the training manual and sessions. Orient teachers to the guide's structure, symbols, and layout before using specific lessons as demonstration examples. **All model and practice sessions should come from the instructional materials directly. This approach forces teachers to look at the materials, learn what they are and how to use them.**[18]

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17 Mejía, J. (2020).

18 Based on author experience, teachers that do not learn and understand the materails they are being asked to use have not been able or are unlikely to use the materials once they are in they are alone.

Figure 6:   Kenya Tusome Training Manual: Practice activities example

Participants' Activity

English Class 1 Teacher's Guide, English Class 1, Week 22 Day 4, *Oral Blending*

English Class 2 Teacher's Guide, English Class 2 Week 22 Day 2, *Oral Blending*

Allocate time appropriately. Ensure trainers have precise time estimates for each segment. Include a comprehensive agenda at the manual's start and expected time for individual sections and activities. Build in buffer time to accommodate unexpected delays, questions from participants, or technical difficulties. Facilitators will need to understand how to adjust content and activities when the training is inevitably running behind.

Figure 7:   Kenya Tusome Training Manual: Activity timing

Welcome and Announcements   (20 minutes 8:30 am-8:50 am)

Welcome participants to day 2 of training. Post the agenda of the day and take the participants through it. Make any announcements necessary. Remind the participants to sign the attendance sheet in the morning and in the afternoon.

Review of Homework   (30 minutes 8:50 am-9:20 am)

Display the blending/ silent blending checklist. Take the participants through the checklist. Call 3 volunteers to model homework in their treatment groups. After each volunteer models, ask participants to give them feedback based on the blending/ silent blending checklist.

Silent Blending: You do   (20 minutes 9:20 am-9:40 am)

 Ask 1 or 2 volunteers to model the lesson activity in their treatment group as the other participants give feedback using the checklist on Silent Blending.

Syllable Box: Intro   (10 minutes 9:40 am- 9:50 am)

Ask the following questions to the participants:-

Ministry and teacher collaboration. Include teachers as much as possible in developing any training to ensure it is based in the reality of the classroom. Engage relevant government education officials throughout manual development. Their participation enhances governmental support, promotes understanding of instructional methodologies, and supports long-term programme sustainability while demonstrating training importance to participating educators.

Planning and logistics

Large-scale, cascade-style training requires significant advance preparation. Multiple decisions must be coordinated simultaneously so that any challenges can be addressed before implementation. Successful programmes coordinate with ministry counterparts to synchronise training schedules with existing priorities, thus minimising conflicts.

Training structure decision: Choose between cascade or direct (school-level) delivery models. The choice of teacher professional development (TPD) delivery model should follow the intended purpose, reach, depth, and sustainability of teacher learning. Each model serves a distinct purpose, and effective systems often combine them strategically to balance scale and quality.

Cascade models – where master trainers train others in successive tiers – are most appropriate when large-scale, rapid dissemination is required. They work best for standardised, structured content (eg scripted lessons, phonics routines) where fidelity can be maintained through clear trainer guides, observation tools, and monitoring systems. Cascades are cost-effective but require strong quality assurance mechanisms and follow-up coaching to sustain impact. While cascades enable rapid large-scale implementation, multiple training tiers risk message deterioration. When cascades are necessary, minimise levels and ensure consistent content across all tiers. Extend training periods to allow experienced facilitators to cover more geographic regions. Maintain full training duration for upper-level trainers and try to limit training events to 30 teachers per two facilitators when possible. Example: Kenya's Tusome programme successfully used cascades because content was highly structured, and school-level instructional support officers followed up weekly.

Kenya's Tusome Programme (Overview)

Tusome ('Let's Read') is Kenya's national early-grade literacy programme, launched in 2014 by the Ministry of Education with USAID support and implemented across more than 23,000 public schools and 1,500 low-cost private schools. The programme trained and supported roughly 110,000 early-grade teachers nationwide, providing structured teacher guides, pupil books, and regular instructional coaching delivered by Curriculum Support Officers (CSOs). Building on the earlier PRIMR pilot, Tusome introduced consistent lesson routines, classroom-based assessments, and ongoing support systems that strengthened instructional practice. Independent evaluations found significant improvements in early-grade English and Kiswahili reading outcomes, demonstrating that structured pedagogy can be scaled effectively within government systems. (NORC, 2020)

School-based professional development – including lesson study, coaching, and professional learning communities – is essential when the goal is to shift teachers' beliefs, decision-making, and instructional practices. These models enable modelling, feedback, and collaboration that support deeper pedagogical change. They are particularly effective for complex skills such as differentiation, formative assessment, or dialogic reading, but can be resource intensive. Example: In Uganda's LARA programme, school-based coaching increased teacher uptake of early grade reading practices far more than standalone workshops.

Uganda's Literacy Achievement & Retention Activity (LARA) – Overview

The USAID-funded Uganda Literacy Achievement and Retention Activity (LARA), implemented between April 2015 and April 2021, reached over 1.3 million early-grade learners and approximately 40,000 teachers across more than 3,500 schools. The programme provided structured teacher guides, pupil reading materials in local languages and English, instructional coaching through school-based support officers, and established systems for ongoing teacher professional development and classroom observation. LARA also sought to reduce school-related violence and improve retention through improved school climate. Independent evaluation found positive early-grade reading gains, especially in local languages, and strengthened instructional practice across participating schools. (NORC, 2020)

Hybrid or virtual models extend reach and continuity when geography, cost, or scheduling limit in-person sessions. When designed as short, contextualised, and job-embedded modules (eg videos, WhatsApp coaching, AI-enabled reflection), they can complement in-person PD by sustaining engagement and reflection between visits. However, they require strong facilitation and integration into school-based systems to avoid becoming stand-alone, low-impact courses. Example: In Zambia's STEP-UP programme, WhatsApp-based coaching and video demonstrations maintained momentum when in-person visits lagged.

It is important to note that designing the TPD programme does not mean choosing only one delivery method. It requires understanding the purpose of the programme, context, budget, and human resources available and choosing the best option or options for the particular programme and situation. This may mean using a combination of delivery methods to reach the programme goals. Table 1 below rates various factors to help decide which delivery method or combination of methods might be useful.

Table 1:   Factors for choosing TPD programme design elements

Factor	Cascade	School-Level	Hybrid/Virtual
Scale / coverage	High	Medium–Low	High
Depth of learning	Low–Medium	High	Medium–High (if designed well)
Fidelity risk	High	Low	Medium
Cost efficiency	High	Moderate–High	Moderate
Monitoring needs	Very high	Moderate	High
Best suited for	Structured content, national rollout	Pedagogical shifts, ongoing improvement	Remote or blended contexts, follow-up learning

Who attends training:[19] all teachers implementing new methodologies must receive training. Avoid training one teacher per school. They are likely to lack full understanding of the new practice thus giving a fragmented version of the training. School administrators should attend at least portions of training to provide institutional support. Multiple participants per school can create peer support networks for implementing later.

Trainer coordination strategy.[20] Develop comprehensive deployment plans specifying facilitator assignments, locations, dates, and training levels. Large-scale rollouts can involve hundreds of participants across multiple venues and therefore require systematic tracking tools and organised documentation systems.

Quality control.[21] Maintain message consistency across all training levels through dedicated oversight personnel. Assign experienced programme or ministry staff to monitor training quality, intervene when necessary. Implement simple evaluation tools such as checklists for quality assurance personnel to document challenges and enable immediate corrections.

Accommodation arrangements. Consider residential versus commuter training options carefully. Research comparing both approaches found residential training significantly more expensive without increases in participant learning outcomes.[22] However, safety and distance between training sites should be considered in this decision.

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19 Mejía, J. (2020).
20 Mejía, J. (2020).
21 Mejía, J. (2020).
22 Piper, B. & Zuilkowski, S. & Kwayumba, D. & Strigel, C. (2016).

Training of trainers.[23] Trainer quality determines training success. Trainers should experience complete training curricula they will deliver. Additional preparation in feedback techniques and adult education principles is key. Plan for two-person training teams, when possible, to manage workload. Utilise ministry staff, instructional coaches, or skilled teachers as facilitators.

Planning considerations.[24] Consider implementing multiple trainings throughout a school year as shorter frequent trainings allow for more touch points and covering less content at one time and revising content teachers are struggling with. Example: Initial session (5 days) before the school year, followed by shorter refresher sessions (3 days) during school breaks.

Cultural relevance, UDL, and SEL

Design training so that both content and facilitation are culturally responsive and context specific. Co-create agendas and examples with local educators; use languages, texts, and classroom scenarios that reflect participants' communities; and avoid deficit thinking by building on teachers' existing strengths rather than their weakness. Apply Universal Design for Learning (UDL) to adult learning by offering multiple means of engagement, representation, and action/expression (eg varied participation formats, accessible materials, and options for practice and demonstration). Embed social-emotional learning (SEL) for teacher well-being: establish a safe space to express concerns and confusions, incorporate brief regulation and reflection routines, and structure time for peer connection. Anticipate stressors that may limit attendance or presence – workload, travel fatigue, caregiving – and mitigate them with pacing, regular breaks, and supportive facilitation.[25]

> **What is Universal Design for Learning (UDL)?**
> Universal Design for Learning (UDL) is a framework that promotes flexible approaches to teaching that accommodate diverse learner needs. In TPD, UDL means offering multiple ways for teachers to engage with content (discussion, modelling, hands-on practice), multiple representations of information (demonstrations, visuals, examples), and multiple ways to demonstrate learning (peer teaching, reflection, microteaching). UDL ensures that TPD is accessible for teachers with varied backgrounds, languages, and learning preferences. (CAST, 2018)

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23 Mejía, J. (2020).
24 Mejía, J. (2020).
25 Knowles (1984). Darling-Hammond, Hyler, & Gardner (2017). Westbrook et al. (2013).

Practical design implications: It's helpful to consider what it might look like to include a focus on cultural relevance, UDL and SEL in trainings. Some practical ideas include deliver materials in local languages; ensure accessibility (captioning, large print, sign-language interpretation, ramps/seating); schedule around religious/seasonal calendars; provide childcare, stipends, refreshments, and travel support where feasible; use offline-first options for low-connectivity settings; train facilitators in trauma-informed and gender- and disability-inclusive practice; and monitor participation and satisfaction by school type and subgroup to ensure equitable uptake.

Prioritising this list of options can also be tricky. There may not be a universal list of non-negotiables rather the priorities might change depending on the programme and the context. For example, in Kenya it's often better to have materials in English as many people are not practiced reading local languages. The main thing to keep in mind is what is best or necessary for the specific context and who is best place to answer that question. The following table shows a general list of priorities, but these should be questioned for each context and programme.

Table 2:   Prioritising UDL and SEL options

Priority Tier	Design Implication	Why It Matters
Critical	Local language materials, inclusive facilitation, accessibility, disaggregated monitoring	Ensure participation, safety, and equity for all teachers.
High Priority	Offline options, contextual scheduling, stipends/ refreshments	Increase participation and retention in low-resource contexts.
Contextual Enhancer	Childcare and venue accessibility improvements	Deepen inclusion where resources and logistics permit.

What are the gaps/challenges/key problems with teacher training programmes?

The goal of teacher training is for teachers to adopt whatever new practice or approach the training covers. Designing a training programme that will meet this goal is likely to involve making some decisions and concessions based on the programme and context constraints or challenges.

Cascade model fidelity. Cascade models mean putting significant trust in the first or second layer of training to be able to reach the teacher level of training. Every layer of training will lose something. However, training all teachers in

a system may make avoiding a cascade of any kind impossible. Consider the following questions when thinking about if and how best to implement a cascade model.

- How can multilevel cascade training programmes minimise what and how much is lost or misinterpreted to ensure successful teacher trainings?
- What does strengthening the cascade model look like and how do we track the losses and respond to them?
- How do we capacitate those staff in the education system tasked to train teachers, with content and facilitation skills and at the same time supporting the trainers, so we are able to respond to their needs until we feel we have built a strong army of trainers in the system?

Personalising content or training methods. Often, training programmes aim to reach thousands of teachers at one time. This makes personalising the content or the methods nearly impossible, yet adult learning theories tell us this is important for learning. **Can large-scale teacher trainings offer options or considerations on how to adjust training by district or at the school-level?**

Training cost. Large-scale trainings are expensive. Often, these trainings involve hundreds or thousands of people moving around regions for weeks at a time. The alternative is more local training involving fewer people moving around for less time. **However, controlling quality or even knowing that a school-level training happened in all schools is difficult.** There will still need to be a certain level of cascade to train one person in each school or district. And the training may take longer to reach all schools. How can costs for large-scale training programmes be minimised with little compromise on quality?

Capacity and paradigm shift. Planning a training model that focuses on practice rather than a traditional lecture-style training could be new for government officials. This could mean that building a shared understanding of training best practices is essential for sustainability. Asking any stakeholder to shift their paradigm or definition of training may be its own project. Working closely with all stakeholders to design training programmes is likely to help this shift but may not solve the problem entirely.

Competing priorities. Governments and ministries of education all run on a budget. There is a set amount of funds that can be spent. Knowing that large-scale training can be expensive, how can teacher training be prioritised over so many competing needs and priorities?

3 | Chapter 3: Ongoing teacher support

The training event(s) is just the beginning of the learning cycle. Teachers now need to implement the new practice and do it well enough to improve student learning.[26] This is hardest and most crucial piece. Research shows that supporting teachers in the classroom in some way is essential for changing teacher practice.[27]

Teacher support should be planned to begin immediately after training.[28] This moment can be crucial to teachers' decision to change their practice. If they get support and feel accountable for trying, they are more likely to follow through the cycle. Once teachers have a better understanding, support can be tapered or prioritised for teachers who need it most.

Figure 8: Malawi National Reading Programme: PEA coaching resource Handbook

Activity 1.2: Characteristics of an Effective Coach

Please note that the characteristics are not listed in order of importance.

- Builds an **environment of support** by recognizing and encouraging positive behaviors and practices

- Acknowledges **skills and knowledge** of teacher/Section Head

- Treats the teacher/SH as a valuable **peer and colleague**

- **Invites questions** and **actively listens**

- Thinks **critically and creatively** to help others improve practices, skills and behaviors

- Maintains **confidentiality** (does not talk about teachers/SH with others except in positive, congratulatory terms)

- Shows **rapport and genuine caring**

- Provides **honest, supportive feedback**

- **Well-organized** and **prepared** for observations and modeling sessions

- **Motivates others** to reflect on, change and improve teaching and coaching practices

- Applies the **principles of Adult Learning**

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26 Ralaingita, W. (2020).
27 Cilliers et al. (2022). Kotzé, Fleisch, & Taylor (2019). Piper, Mejía, & Betts (2020).
28 Kraft, M. A., Blazar, D., & Hogan, D. (2018). Guskey, T. R. (1986). Ralaingita, W. (2020).

What is quality ongoing support?

Ongoing support is thought of as the various forms of assistance and resources provided to teachers after the training event or outside of the training. Traditionally there have been three modalities of support used in instructional intervention programmes: coaching, communities of practice and remote support.[29]

Quality support may look different across contexts, but it typically aims to empower teachers, happens frequently and collaboratively, is adaptive to needs of teachers, and is monitored with feedback loops based on data. Teacher support should not be punitive or evaluative. It should encourage teachers to ask questions and get help as needed. Support systems can act as a method of accountability for teachers to implement a new practice, but it should not determine if a teacher is promoted or fired.[30]

Coaching may occur internally, where senior staff observe instruction and provide feedback, or externally, through district or zonal level ministry staff who support multiple schools via observation and reflective dialogue with teachers and school leaders. Whether internal or external to the school the coach and teacher must build a relationship based on trust and respect.[31] The coach should be able to give both positive feedback and areas for improvement without judgment or consequence to a teacher's position. Ideally coaches should observe a full lesson using a simple structured tool that is short and focused on the new practice and stage of teacher learning. This tool should guide the observation and the feedback given to the teacher. Feedback sessions should occur in a private space away from students when the teacher can focus on the conversation. Feedback should be focused on evidence and be limited to the 1-3 areas of improvement that will most impact learning.[32]

Communities of practice[33] involve teachers convening within or across schools to exchange experiences, collaboratively problem-solve, and engage in professional reflection. High-quality communities of practice provide teachers with dedicated time for meaningful reflection and discussion about implementing new practices in their classrooms. These collaborative spaces focus on peer-to-peer support, where educators share practical solutions and strategies with one another based on their real classroom experiences. Rather

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29 Hennessy et al. (2022). UNESCO (2023). Jita & Mokhele (2014). Pouezevara (2018).

30 Kraft, M. A., Blazar, D., & Hogan, D. (2018). Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Ralaingita, W. (2020). Cilliers et al. (2022).

31 Ralaingita, W. (2020).

32 Kraft, M. A., Blazar, D., & Hogan, D. (2018). Author experience also has shown that teachers seem overwhelmed and defeated if more there are too many points of feedback or areas for improvement given at once.

33 Jita, L. C., & Mokhele, M. L. (2014). Wenger, E. (1998). Ralaingita, W. (2020).

Figure 9: Cambodia All Children Reading Teacher Support Manual: Communities of practice agenda

Example Communities of Practice Agenda – USAID/ Cambodia All Children Reading

Time	Topic
5 mins	Introduction and overview of agenda
10 mins	Discussion of what's going well in using the new Grade 1 Khmer teaching & learning materials
15 mins	Reflection on challenges from the last meeting and status of solutions (how have these challenges have been addressed/will continue to be addressed – is the solution working or does the challenge still exist?) *(To be included after the first meeting)*
30 mins	Discussion of new challenges and possible solutions* *Example challenges include:* • *Using the teacher's guide correctly* • *Finishing the lesson on time* • *Connecting each activity in the lesson (each activity should build on one another to support students' learning)* • *Giving clear instruction to students for each activity* • *Being behind schedule for the semester* • *Supporting struggling students* • *Engaging all students and keeping students' attention during the lesson* • *Connecting the teacher's guide with the lesson plans*
45 mins	Introduction to the monthly topic, including discussion and practice
15 mins	Closing and next steps, including agreements on what the teacher will work on for next time

than functioning as formal training sessions, communities of practice serve as opportunities to review, refresh, and deepen understanding of previously introduced concepts and techniques. To maximise their effectiveness, these gatherings operate with clear agendas or structured frameworks that guide how time is utilised, often rotating through predetermined topics or responding to teachers' specific needs and requests for discussion areas that would benefit their current practice.[34]

Remote support leverages digital and low-tech modalities – including radio, video, phone, text messaging, and online applications such as WhatsApp – to provide ongoing guidance at a distance.[35] Remote teacher support prioritises accessibility and practical implementation. Effective programmes are built for the most basic technology available, assuming teachers may only have feature phones rather than smartphones, and focus on delivering short, curriculum-aligned content in segments of five to ten minutes that teachers can easily consume and apply. Successful digital support emphasises two-way communication, often leveraging widely-used platforms like WhatsApp instead of less familiar tools. These programmes incorporate flexibility for

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34 Piper, B., Mejía, J., & Betts, K. (2020). Kraft, M. A., Blazar, D., & Hogan, D. (2018). Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017).
35 Ralaingita, W. (2020).

Figure 10: Cambodia All Children Reading: Teacher observation tool

local adaptation, allowing content to be modified for regional languages and pedagogical approaches while building in meaningful incentives such as recognition systems, digital badges, or practical rewards like airtime credit to encourage sustained participation. Most importantly, quality digital teacher support measures both engagement and application, tracking not only whether teachers access the content but whether they actively use and implement what they learn in their classrooms.[36]

Technical supports to consider

Train the coaches and community-of-practice (CoP) facilitators at least as rigorously as the teachers they support. Their preparation should cover both the content of any new intervention, including being able to model instruction, and the best practices of coaching and CoP facilitation – modelling lessons, conducting observations and feedback, applying adult-learning principles, and running effective CoP routines.

Tools will be key guidance and support for coaches and CoP facilitators. Many staff may be coaching and learning the new practices for the first time. Having a simple, concise tool that is directly tied to the practice teachers should be implementing will help focus an observation and give guidance on what feedback should be given. Data from these tools can also be used to know which teachers, schools or districts may need more support than others. Tools

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36 Jita & Mokhele (2014). Pouezevara (2018). Hennessy et al.(2022). UNESCO (2023).

for CoPs can help facilitators design or stick to an agenda while supporting them with any technical information that may help answer questions from teachers.

Prioritise instructional practices in phases, moving from easier, more familiar to higher-complexity skills aligned with the teacher learning cycle. Begin with routines that are quick to master and yield visible gains – for example, using the teachers' guide during a lesson or consistently implementing procedures for introducing letters – and then progress to more challenging tasks, such as writing part or all of a lesson plan or designing effective comprehension questions. Wherever possible, set priorities based on areas teachers themselves have identified, to strengthen ownership and uptake.[37]

Planning and design of teacher support

There are several considerations to discuss when planning a teacher support system. Support systems can consist of one or multiple modalities. When deciding on which and how many modalities, one should keep in mind that more modalities mean more touch points and a greater likelihood that teachers are going to get support and in a way that works for them. The following is a summary of common support modalities and their pros and cons.[38]

Figure 11: Science of Teaching How to Guide Ongoing Support: Teacher Support Modalities: Pros and Cons[39]

Modality	Pros	Cons
In-school coach	Relatively inexpensive. Allows for frequent observation/feedback. Can help ensure school-level commitment.	School administrators often are too overloaded to handle this role. Difficult to monitor. May involve extra training and support for school staff to take up role.
External coaching visits	Coaches can have higher-level training and can be a conduit for other experts to provide additional information.	Expensive. If coach-to-school ratio is high, or if travel is difficult between schools, teachers may receive few visits.
School-level teacher learning groups	Inexpensive approach. Can create a positive school environment for trying new approaches.	Less effective if only a few teachers per school. Without enough support, meetings can lose focus or reinforce misconceptions.
Cluster-level teacher learning groups	Can be relatively inexpensive and can energize teachers. Can be effective for finding solutions to problems or issues.	Groups need time and a budget for teachers to meet. Also need support and technical input to ensure that joint solutioning is technically sound.
Support via digital technology	Can help to bridge gaps where frequent in-person communication is not possible, or where an expert cannot visit all schools frequently.	Most effective combined with other approaches. Connectivity and access to digital devices must be taken into account.

Context Understanding the context will be essential to making decisions about which modalities and how to implement them. First, identify whether mechanisms for teacher support already exist or have existed within the education system. This could be staff internal to the school or staff within the

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37 Guskey (1986). Kraft, Blazar, & Hogan (2018).
38 Mejía (2020).
39 Ralaingita, W. (2020).

wider system such as district or zonal level staff. Learn what has and hasn't worked in the past and build on those lessons.

Once you know who is possibly available, map enabling and limiting factors related to geography, demography and staffing. For example: How far apart are schools, and what are the travel times for a coach? Do head teachers carry full teaching loads? Are pedagogical support posts in place and fully funded? Is internet or mobile coverage sufficient to sustain remote support?[40]

Budget Align technical rigor with fiscal reality. Donor-funded programmes often embed intensive supports that yield positive results but may be fiscally unsustainable for government scale-up. Conversely, routine government models may underfund teacher support to the point of ineffectiveness. Co-design with government cost-effective mechanisms that focus on minimum quality – for example, efficient and auditable travel-reimbursement arrangements, optimised coaching itineraries, leveraging existing support staff cadres, and remote support where connectivity allows. Plan an approach from design and proof-of-concept financing to recurrent, domestically financed costs. Throughout rollout, maintain an ongoing budget dialogue with authorities, using emerging performance data to advocate for upholding adequate teacher-support allocations and to iteratively refine the model.

Accountability and incentives. Designing for scale means considering how to prioritise teacher support among the many priorities the system and its staff may have. Designing accountability and incentives into the programme can help to emphasise the importance of the support system. At scale, embed the teacher-support model within clear, government-owned accountability structures so coaching and communities of practice (CoPs) can be monitored, roles and responsibilities are explicit, and targeted corrective support is triggered when implementation drifts. Pair these mechanisms with incentives that reward the hard work of instructional change, such as:[41]

- Formal credit or continuing-professional-development points for completing training
- Career progression, stipends, or formal recognition for serving as a coach or CoP facilitator
- Non-monetary awards and letters of recognition.

Link incentive policies to routine data on activity and quality, ensuring that feedback loops drive performance and sustain commitment across the system.

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40 UNESCO. (2023). Hennessy, S., D'Angelo, S., McIntyre, N., Koomar, S., Kreimeia, A., Cao, L., Brugha, M., & Zubairi, A. (2022).
41 Jita & Mokhele (2014) Pouezevara (2018)

Technology-enabled support hinges on reliable electricity for charging, ready access to devices, and affordable connectivity (Wi-Fi or mobile data). To avoid widening gaps, design for equity with offline-first, low-bandwidth tools; provide shared or loaner devices and data subsidies where needed; and pair rollout with basic digital-literacy training and responsive tech support. Budget for total cost of ownership (maintenance, repairs, replacements, security/charging). Ensure content is localised and accessible (language, disability), adopt clear data-privacy/safeguarding protocols, and monitor uptake by school type so the approach narrows rather than amplifies resource disparities.

Note on middle tier research

Recent research highlights the critical role of the 'middle tier' – those actors positioned between central ministries and schools, such as district officials, pedagogical coaches, and cluster supervisors – in driving improvements in foundational literacy and numeracy (FLN) across low- and middle-income countries (LMICs). These mid-level leaders can serve as essential bridges, translating national policies into classroom practice, providing instructional coaching, and supporting data-informed decision-making. Evidence shows that when adequately trained, resourced and empowered, the middle tier has significantly enhanced teacher effectiveness and instructional quality.

However, findings from more recent research on middle tier and ongoing support to teachers are finding that support often comes more from inside the school than outside. For example, in Rwanda a mixed methods study across two districts noted that although district and sector-level actors recognised the importance of visiting schools and supporting teachers, the most consistent and frequent instructional coaching was provided by school-based leaders such as principals, mentors, and subject advisors.[42] Despite Rwanda's relatively favorable staffing ratios, the middle tier is not the primary provider of instructional support. Their main role lies in amplifying national priorities, implementing policies, and reinforcing norms through regular school engagement. School-level staff are often more accessible and may have fewer outside priorities; thus, they can be more available to teachers. They will also know the community and possibly students in a way the middle tier staff may not.

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42 Beggs, C., & Bell, S. (2024).

What are the gaps/challenges/key problems of ongoing teacher support?

Reaching all teachers. One of the biggest challenges of any support system is reaching all teachers in all schools. Often rural schools can be far from a central district office and may require extra transportation leading to extra costs. This can make in-person coaching with external staff nearly impossible for all teachers. It will also make any cluster or district level CoPs or even training more difficult to attend. If all teachers cannot be reached this will increase disparities of knowledge and support leading to inequities in quality of instruction.

Cost of personnel. Another obstacle for supporting all teachers at scale is cost of sufficient personnel. If support is going to be implemented by people external to the school, there will need to be enough personnel to reach all teachers. Consider that a coach will need approximately 1 hour to observe and give feedback on one lesson. This means a coach may see 3-5 teachers in a school in one day depending on the length of the school day. For a small school this might cover all teachers but for a larger school it may require 2 days to cover all teachers. If a coach is lucky and only has 10 schools, they may be able to see all their teachers in a month. However, in many countries coaches handle 20 or more schools or maybe even more than one zone. Having a realistic coach to school ratio can be costly if there are not already enough personnel in the system.

In school support. Focusing on in school support may seem like an easier answer to the previous challenges as the travel and ratio of support personnel to teachers will be greatly reduced. However, it is important to consider that any staff in school already have responsibilities that will need to be either off loaded or adjusted to be able to make time for supporting teachers. Using senior teachers means taking them away from their class and instruction time. Administration personnel may have competing priorities and lack experience plus the added pressure of being coached by superior may lead to trust issues making coaching less productive.

Prioritising support over other needs of the system. Any education system will have to decide what of all the issues that face the system to prioritise. Often ministries are understaffed and have many problems to solve, leading to district and school-level personnel having to support several initiatives or programmes at one time. Supporting teachers either with external or internal personnel will need to be prioritised and clearly communicated to all levels of the system. This may mean making budget decisions or putting some programmes on hold to reach all teachers on a regular basis.

Knowledgeable personnel. Often personnel who act as teacher support may not only be new to an instructional approach or practice, but they may also be unfamiliar with a particular subject or grade level depending on their prior teaching experience. In many countries, support personnel may not have taught classes for several years. They may have been a secondary teacher instead of primary or a science teacher instead of a numeracy teacher. These personnel may also be supporting teachers professionally for the first time. These considerations mean that anyone supporting teachers will need significant training on both content and how to support teachers productively.

Cautionary considerations on technology

Treat technology as a tool to strengthen teacher training and support rather than the main topic. Digital tools can streamline scheduling and logistics, enable remote coaching and communities of practice, expand access to quality materials, and generate timely data for feedback and improvement. However, they can also widen the gap between those with resources and those without. Plan for equity from the outset by mapping connectivity and power constraints; designing offline-first, low-bandwidth solutions (eg SMS/IVR, radio, downloadable WhatsApp or video bundles); consider access to devices and data subsidies where needed; localising content to language and curriculum; and ensuring disability accessibility. Pair rollout with basic digital literacy training and responsive tech support, and budget for total cost of ownership – including procurement, charging, maintenance, repairs, replacements, and device management. Monitor usage and instructional impact, not just downloads; iterate from small pilots before scaling; and let pedagogy lead by choosing the simplest technology that reliably solves the problem without adding complexity for schools with fewer resources.[43]

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43 Jita & Mokhele (2014) Pouezevara (2018)

4 | Chapter 4: Measuring success

Measuring success of teacher professional development (TPD) programmes should follow the full learning cycle – from training to ongoing support to student learning. We can assess whether training strengthens knowledge and self-efficacy, whether coaching and communities of practice translate to learning and changed classroom practice, and, where feasible, whether these shifts contribute to improved student outcomes. Alongside results, track implementation quality (reach, dosage, fidelity), equity of access and effects, and cost and sustainability indicators, using mixed methods at multiple time points to inform rapid improvement and scale-up decisions.[44]

Successful training. Training is successful when it strengthens teachers' content knowledge, increases self-efficacy and motivation, and equips participants with concrete objectives and steps for implementation. Look for evidence that teachers can accurately explain and model the target practices through practice and start to shift perceptions in discussions. Because workshops alone rarely shift learning outcomes, treat training as the starting point of the longer change process that requires follow-up support.

Successful teacher support. Ongoing support – coaching and communities of practice (CoPs) – is successful when it drives sustained changes in classroom practice that were learned during training and possibly changes in teacher perceptions related to the new practice. Indicators include adequate reach and dosage (eg regular coaching cycles), high-quality feedback that is specific and not judgmental, teacher reflection, uptake of practices observed, and retention over time. If possible, track impacts on student learning, recognising teachers may learn and change at different paces and mediating factors (materials availability, time on task, class size).[45]

Methods for assessing success. Use mixed methods tied to your theory of change and scheduled at multiple time points (baseline, midline and endline). Combine pre/post surveys of teacher knowledge and self-efficacy; undertake structured observations of training and classroom instruction; review teacher lesson plans and assessments and student work related to the new practice; keep logs of coaching/CoP frequency and discussions; and hold teacher interviews or focus groups. Track implementation quality (fidelity, coach-to-

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44 Jita & Mokhele (2014) Pouezevara (2018)
45 Jita & Mokhele (2014) Pouezevara (2018)

teacher ratios), affordability (cost and cost-effectiveness per teacher or per learning gain), institutionalisation (policy uptake, budget lines), and feed findings back into rapid improvement cycles.

Student assessments aligned to the new practice can also support a full picture of success but consider what the new practice. An intervention focused on teaching specific skills through a set of activities or given lesson plans such as a remediation programme that teaches letter sounds and work reading will probably show more and faster impact than a programme based on abstract instructional approach such as adding universal design for learning to regular instruction. The latter may lead to some change in types of activities but will take longer to have an impact on student skills.[46]

When funding or personnel are constrained, the goal is to prioritise evaluation methods that yield the most actionable insights for the least cost. Rather than attempting comprehensive studies, focus on a lean mixed-methods design aligned with your theory of change – capturing teacher learning, classroom practice, and implementation fidelity through small but consistent data collection efforts. Also, find ways to use instruments for more than one purpose. For example, classroom observation tools can be used for coaching and monitoring of teacher improvement from a project perspective if designed thoughtfully. Select a few high-yield indicators directly tied to programme goals:

Table 3:   Possible high-yield indicators

Objective	Low-Cost Indicator	Collection Method
Improved teacher knowledge	Average % gain in post-survey quiz	Online or phone survey
Improved teaching practice	% teachers observed using key routines	Sampled observations or self-report
Effective implementation	Average # of coaching/ COP sessions per teacher	Coach or COP logs
Teacher motivation & confidence	% teachers reporting increased confidence	Self-efficacy survey
Institutionalisation	# schools integrating PD practices into routines	Coach or training reports

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46 National Reading Panel. (2000).

5 | Chapter 5: Sustainable teacher professional development

Sustainable teacher professional development (TPD) looks like teachers continuing to use new practices effectively once donor support ends. To achieve this, sustainability requires alignment with national priorities, integration into existing systems, and affordability within domestic budgets.

Demand driven. Programmes must respond to clearly identified needs in classrooms and be shaped by local and national priorities, rather than donor-driven agendas. Demand-driven TPD ensures that training content and support modalities address real instructional challenges, making uptake more likely and relevance more enduring.[47]

Government leadership and ownership. TPD should be co-designed with ministries from the earliest stages – development, planning, delivery and monitoring. This shared ownership helps shift mindsets from 'one-off training events' toward longer-term systems of teacher learning and accountability.[48] Government participation also supports institutionalisation, such as integrating TPD into teacher standards, appraisal systems, and pre-service curricula.

Using government resources and staff. Reliance on external trainers or project staff can create parallel structures that collapse when funding ends. Sustainable programmes leverage existing cadres of ministry trainers, district officers or school-based mentors. Where these roles have drifted into administration, job descriptions may need to be revised to refocus on instructional support.[49]

Cost-conscious design. Sustainability requires models that are both technically sound and fiscally realistic. Donor-funded programmes often pilot intensive coaching or residential training models that are too expensive for ministries to sustain. Scalable approaches balance rigor with affordability – for example, prioritising cluster-based training over large residential events, optimising coach-to-school ratios, or incorporating low-cost digital tools designed for offline use.[50]

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47 Darling-Hammond, Hyler, & Gardner (2017).
48 Westbrook et al. (2013).
49 Piper, Mejía, & Betts (2020).
50 Cilliers et al. (2018). GEEAP (2023).

Embedded accountability and feedback loops. Sustainable TPD systems monitor fidelity, reach and outcomes through simple, government-owned tools (eg observation checklists, coaching logs). Linking teacher support to existing accountability structures ensures continuity and allows corrective action when implementation drifts.[51]

Equity and resilience. Finally, sustainability requires attention to who gets left behind. Rural and under-resourced schools often face the greatest barriers to access. Designing TPD for equity – through in-school support, offline-first technologies, and targeted resources for hard-to-reach schools – helps ensure that improvements endure across the system rather than concentrating in better-off areas.

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51 Craig, Kraft, & du Plessis (1998).

6 | Conclusion

Teacher professional development (TPD) is most effective when understood not as a one-off training but as a sustained process of teacher learning, support and adaptation. Evidence from low- and middle-income countries shows that while high-quality training is essential to introduce new practices, it is the ongoing support – through coaching, communities of practice, and well-designed digital tools – that determines whether teachers continue to implement these practices with fidelity and impact.[52] Designing effective TPD therefore requires grounding in adult learning principles, careful attention to the teacher learning cycle, and a balance between ambition and simplicity: 'less is more' when it comes to introducing new practices.[53]

Implementers must also anticipate the systemic challenges – such as fidelity loss in cascade models, high personnel costs, inequitable access in rural areas, and competing government priorities – and plan for them from the outset. Programmes that co-design with ministries, embed cultural and contextual relevance, and align to existing resources and budgets are more likely to be sustainable. Importantly, equity should remain central, ensuring that the hardest-to-reach teachers and schools receive the same quality of training and support as those in better-resourced areas.

Ultimately, sustainable TPD means teachers are not only trained but also supported to keep trying, reflecting and improving their practice over time. This requires cost-conscious but technically sound models, strong government ownership, and feedback loops that allow for continuous improvement. When these elements are in place, teacher professional development can move beyond temporary improvements to generate lasting changes in teaching and learning outcomes at scale.

Recommendations for TPD Design and Implementation

Foundation: Adult Learning and the Learning Cycle

- **Start with simplicity:** Focus initial trainings on one high-leverage instructional practice at a time and allow teachers to build mastery before layering on additional practices.

- **Integrate adult learning principles:** Recognise teachers' prior knowledge, design practical and immediately relevant content, and provide opportunities for collaboration and reflection.[54]

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52 Cilliers et al. (2018).Piper, Mejía, & Betts (2020).
53 Knowles (1984). Darling-Hammond, Hyler, & Gardner (2017). Westbrook et al. (2013). Guskey (1986). Kraft, Blazar, & Hogan (2018). Jita & Mokhele (2014).
54 Knowles (1984). Darling-Hammond et al. (2017). Westbrook et al. (2013).

- **Design for the full learning cycle:** Pair every training with structured opportunities for teachers to try new practices, receive feedback, adjust and reflect.[55]

Training Design and Delivery

- **Invest in facilitators:** Train coaches, mentors and trainers as rigorously as teachers, focusing on both technical content and adult learning/facilitation skills.

- **Prioritise equity:** Ensure rural and under-resourced schools receive the same quality of training and support; design technology solutions with an offline-first, low-bandwidth mindset.

Ongoing Support Systems

- **Plan ongoing support from the outset:** Build in-school coaching, peer communities of practice, and low-cost digital support as integral – not optional – elements of TPD.[56]

- **Consider the middle tier vs school-level personnel:** Recent research (Rwanda middle tier study[57] shows that in-school personnel may be more likely to support teachers though there are notable drawbacks of time and experience. Consider which or if a combination is best for the specific context.

- **Strengthen the middle tier:** Clarify roles of district- and school-level leaders, ensuring they are equipped to reinforce classroom practice rather than only monitor compliance.

Sustainability and Scale

- **Embed sustainability:** Co-design programmes with ministries, use government personnel and resources where possible, and keep costs aligned with likely domestic financing levels.

- **Track and adapt:** Use mixed-methods monitoring to assess fidelity, reach, teacher uptake, and student learning – and feed results back into programme adjustments.

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55 Guskey (1986). Kraft et al. (2018).
56 Jita & Mokhele (2014).
57 Beggs, C., & Bell, S. (2024).

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