SUMMARY

MONITORING AND EVALUATION FOR IN-SERVICE TEACHER PROFESSIONAL DEVELOPMENT PROGRAMS

Coach

Guidance on how to design, implement, use, and sustain an M&E System for teacher professional development programs
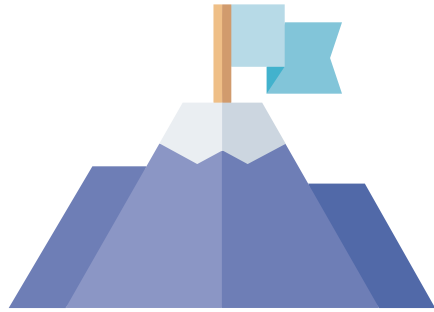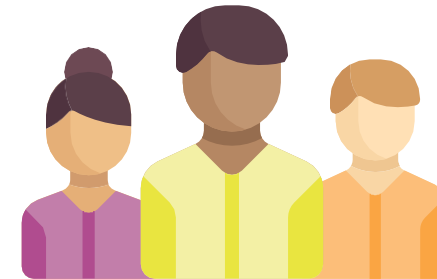
⊕ [SEE TECHNICAL GUIDANCE NOTE](#)

⊕ [COACH TOOLS AND RESOURCES](#)

WORLD BANK GROUP
Education

Coach is the World Bank's program focused on accelerating student learning by improving in-service teacher professional development around the world.

INTRODUCTION

Objective:

To provide high-level guidance for Task Team Leaders (TTLs), project teams, and external players on how to design, implement, and sustain a monitoring and evaluation (M&E) system for an in-service teacher professional development (TPD) program.

Audience:

- World Bank TTLs and project teams looking for technical guidance during project identification, preparation, appraisal, and implementation (additional financing/restructuring).

- Policymakers and external players looking for direction on how to design and implement an M&E system within an in-service TPD program. The information can support project design, component descriptions, technical analyses, and Project Appraisal Document (PAD) descriptions.

SCOPE

This Guidance Note Presents:

High-level direction on key factors to consider when designing and implementing an effective M&E system for a TPD program.

Specific design features may vary depending on contextual factors, including:

- available resources
- local technical capacity
- political environment or fragility
- and the exact features of the TPD program ("highly-" versus "low-" structured programs; and school- and cluster-based versus other models)

HIGHLIGHTS

What an M&E system can do:

✓ Enable key actors to make evidence-based decisions to expand the program and allocate budget.

✓ Provide valuable data to feed into both the implementation and design of the program by offering opportunities for course correction.

✓ Strengthen accountability relationships among stakeholders.

What building, maintaining, and sustaining an effective M&E system requires:

✓ Carefully selecting outcome indicators, establishing data systems, and getting the technical details right.

✓ Consistent tight feedback loops linking data with the decision-making processes to help governments and other actors improve the ongoing design and implementation of TPD programs.

✓ Equally important are strong political support and buy-in from key stakeholders who are willing to use the system to make evidence-informed decisions.

✓ Finally, context matters. Low-resource and FCV settings may need to start with an M&E system that has only a few basic indicators and requires ongoing support with technical and financial resources. Specifically, FCV contexts need to ensure adaptability within the M&E system to respond quickly to changing environments.

PURPOSE OF A TPD M&E SYSTEM

To guide the TPD program toward its objectives of *improved teaching practice, better quality student-teacher interactions*, and, ultimately, *improved student learning outcomes* by:

### ✔ *Monitoring implementation fidelity*

- Data from an M&E system can help ensure that the TPD program is implemented with fidelity.
  - Implementation data (such as the frequency of observations and feedback sessions by trainers, or the number of teacher guides distributed per teacher) can help monitor implementation fidelity and enable implementers to make course corrections, as necessary.

✔ *Monitoring result outcomes*

- Data from an M&E system can help determine progress toward desired outcomes, such as improvements in teaching practice, quality of student-teacher interactions, and student learning.
  - Outcome data can include longer term results, including changes in student learning, and medium- to short-term results such as progress (or lack thereof) in how teachers structure the lessons or engage with students.

Ultimately, data should help decision-makers track progress, decide whether the goals of the program are being achieved, and enable future evidence-informed decisions.
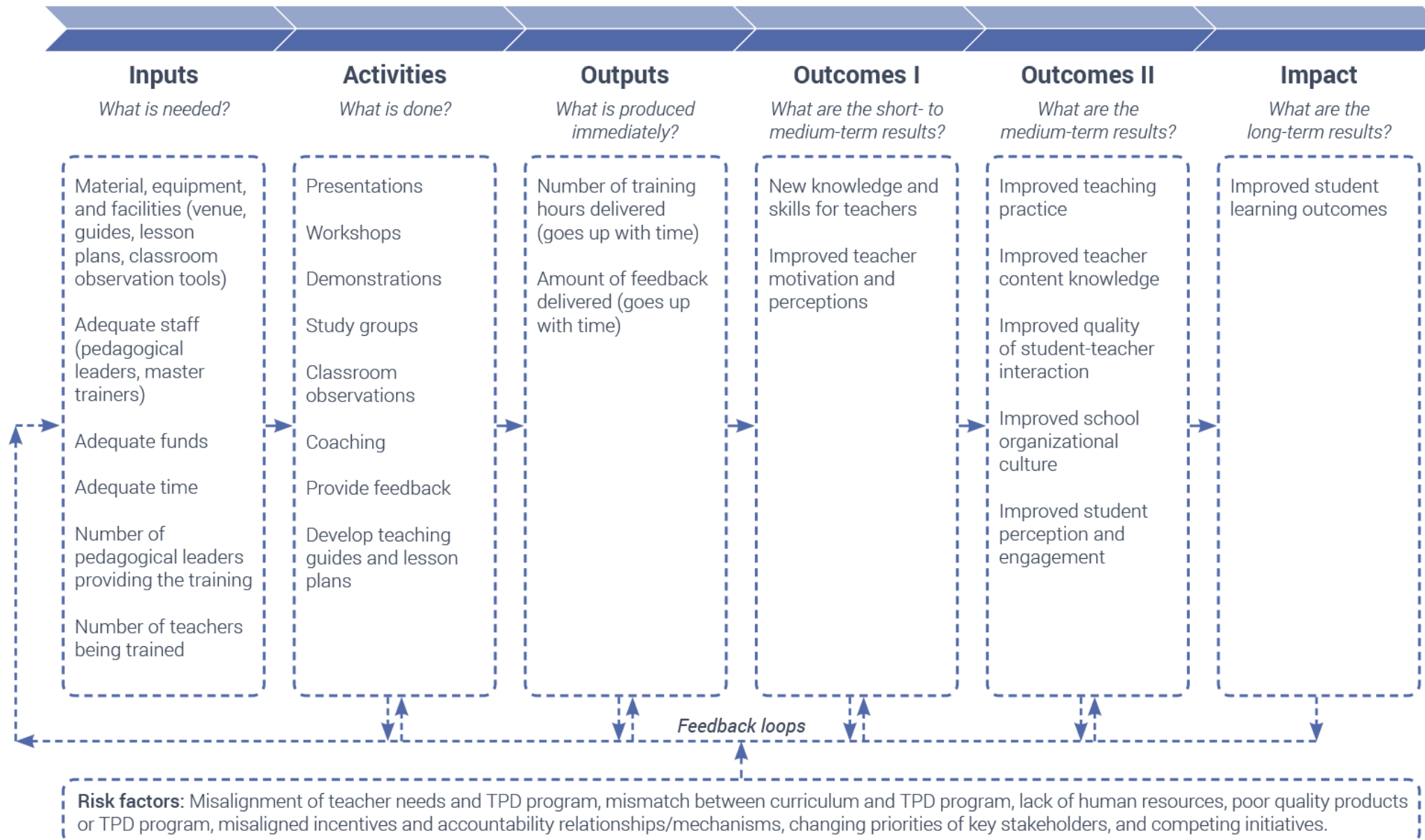
HOW DOES AN M&E SYSTEM ENSURE PROGRESS TOWARD PROGRAM OBJECTIVES?
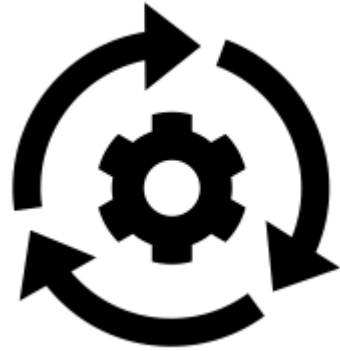
Through **tight feedback loops** that iteratively direct information into **decision-making processes.**

These tight loops can help agencies and implementers learn, innovate, and improve the **design and implementation** of TPD programs.

Figure 1. Underlying an M&E System Is a Sound Results Framework for a TPD Program

Inputs	Activities	Outputs	Outcomes I	Outcomes II	Impact
What is needed?	*What is done?*	*What is produced immediately?*	*What are the short- to medium-term results?*	*What are the medium-term results?*	*What are the long-term results?*
Material, equipment, and facilities (venue, guides, lesson plans, classroom observation tools)	Presentations	Number of training hours delivered (goes up with time)	New knowledge and skills for teachers	Improved teaching practice	Improved student learning outcomes
	Workshops			Improved teacher content knowledge	
Adequate staff (pedagogical leaders, master trainers)	Demonstrations	Amount of feedback delivered (goes up with time)	Improved teacher motivation and perceptions		
	Study groups			Improved quality of student-teacher interaction	
Adequate funds	Classroom observations				
	Coaching			Improved school organizational culture	
Adequate time	Provide feedback				
Number of pedagogical leaders providing the training	Develop teaching guides and lesson plans			Improved student perception and engagement	
Number of teachers being trained					

Feedback loops

Risk factors: Misalignment of teacher needs and TPD program, mismatch between curriculum and TPD program, lack of human resources, poor quality products or TPD program, misaligned incentives and accountability relationships/mechanisms, changing priorities of key stakeholders, and competing initiatives.

M&E IN PRACTICE: CASE STUDY OF KENYA'S TUSOME PROGRAM

Tusome, a successful national program in Kenya to improve early grade education, built in capacity to monitor outcomes and implementation fidelity in six important ways:

1 Frequent Monitoring

Tusome enabled **frequent monitoring** of key learning outcomes and embedded it as a key feature of the accountability relationship between curriculum support officers (CSOs) who supported teachers and Ministry of Education (MoE) officials.

For example, student learning data were viewable on a dashboard shared with CSOs and the MoE officials, to whom the CSOs were accountable.

2 Tight Feedback Loops

Tusome built in **tight feedback loops** to monitor teachers' progress toward desired outcomes and to tailor feedback to teachers as appropriate.

For example, at each visit, the CSO recorded whether the teacher employed the techniques for which the teacher had received training during the lesson and provided feedback to the teacher accordingly.

3 Ongoing Guidance

CSOs received **ongoing guidance** and feedback from implementation firm experts and county-level education officers who observed CSOs' feedback sessions with teachers.

For example, the Tusome technical team often observed the CSOs' one-on-one sessions with teachers and gave feedback on the quality of the CSOs' instructional support.

M&E IN PRACTICE:
CASE STUDY OF KENYA'S TUSOME PROGRAM *(contd.)*

Tusome, a successful national program in Kenya to improve early grade education, built in capacity to monitor outcomes and implementation fidelity in six important ways:

4 Outcome & Process Indicators

To ensure implementation progress, Tusome used not only **outcome indicators** but also **process indicators**.

For example, the CSOs' tablets, which were used for classroom observations, were equipped with GPS monitoring, enabling implementers to ensure that CSOs conducted their allocated visits.

5 Linked Data with Incentives

To strengthen accountability, Tusome **linked monitoring data with incentives**.

For example, the data on the number of classroom visits for each school were used to determine the CSOs' travel reimbursement.

6 Data Shared Widely

Monitoring data were **shared widely** to facilitate feedback and strengthen accountability relationships among actors.

For example, a dashboard showing the percentages of target visits at the county and national levels was used by MoE leadership to increase accountability for instructional support.

KEY ELEMENTS IN TUSOME'S PLAN TO MONITOR OUTCOMES AND IMPLEMENTATION FIDELITY

Frequent monitoring → **Tight Feedback Loops** → **Ongoing Guidance** → **Linked Data with Incentives** → **Outcome & Process Indicators** → **Data Shared Widely**

TYPES OF MONITORING INDICATORS FOR A TPD M&E SYSTEM

✔ ***Process indicators to monitor implementation:*** Process indicators show whether activities are being implemented as planned. These are vital to track management and implementation of programs, use of resources, and delivery of services. Nevertheless, by themselves, indicators do not show whether outcomes have been achieved.

- For example, a TPD program could be on track to meet the target number of teacher guides produced. However, if these guides are not well designed or if teachers do not use them, the teacher guides are unlikely to improve teaching practice.

✔ ***Outcome indicators to measure results:*** Outcome indicators include data to show whether program inputs, activities, and outputs have improved *outcomes*.

- For example, based on information from classroom observation tools, has student-teacher interaction (an intermediate outcome) improved as a result of using teacher guides (an input)?

MOVING BEYOND PROCESS INDICATORS TO OUTCOME INDICATORS

- M&E plans should include clear and measurable indicators that go beyond process indicators, such as those that track inputs, to those that measure outcomes.

- Outcome indicators can suggest whether the program is on track to meet intended objectives. Prioritizing outcome indicators can help draw the attention of policymakers and managers to results as opposed to process-oriented tasks.

- To incentivize progress toward results, outcome indicators also may be linked to financing.

Regardless of Type, Indicators Should Follow the SMART Principles

1. Specific:	Indicators measure as closely as possible what we want to know.
2. Measurable:	Indicators are specific and can be clearly measured.
3. Attributable:	Indicators are logically and closely linked to the program's objectives.
4. Realistic:	Data are obtainable at feasible cost with reasonable accuracy and frequency.
5. Targeted:	Indicators are specific to the program's target group. In a TPD program, the target groups may include teachers, students, and trainers.

Monitoring and Evaluation: Two Sides of the Same Coin

Monitoring and evaluation play complementary roles. Monitoring data usually indicate a program's progress at any given time relative to targets and can inform ongoing course corrections. In contrast, evaluation usually attempts to address causality: the reasons that targets are or are not being achieved.

Monitoring TPD Programs

A monitoring system gives ongoing information about the direction, pace, and magnitude of change to see whether the program is moving in the right direction and whether implementation is rolling out as intended. However, monitoring data do not give the basis for causal inference, that is, why or how changes are occurring.

Evaluating TPD Programs

Many types of evaluations can help measure progress toward desired outcomes. Types range from randomized experiments, including nimble experiments; to quasi-experimental designs; to non-experimental evaluations, such as process implementation evaluations or rapid appraisals. Each evaluation type produces different strengths of evidence.

EFFECTIVE PARTNERSHIPS TO FACILITATE DATA COLLECTION AND MONITORING IMPLEMENTATION FIDELITY

When designing, implementing, and using M&E systems, governments may face financial and technical constraints. In such contexts, collaborations with private firms, development partners, or other actors can facilitate data collection and use to monitor implementation fidelity and progress toward desired outcomes.

Partnerships can help facilitate data collection and can be used to monitor implementation fidelity. For example:

- Successful implementation of Tusome in Kenya resulted from a partnership between the Kenyan Ministry of Education, RTI (Research Triangle Institute), the United States Agency for International Development (USAID), and the United Kingdom Foreign, Commonwealth and Development Office (FCDO), which funded the program. RTI provided human and technical support to monitor implementation fidelity and improved program implementation based on the data collected.

- World Bank formed a multi-layered partnership with the government of Punjab, Pakistan to implement Teach, a classroom observation tool to monitor and evaluate teacher practices. The partnership along with a staggered rollout helped create early opportunities to integrate lessons learned, including feedback from partners, teachers, and district leaders.

EFFECTIVE PARTNERSHIPS TO FACILITATE DATA COLLECTION AND MONITORING IMPLEMENTATION FIDELITY *(cont'd)*

Partners also may help to…

…build systems to collect, store, maintain, and integrate data, especially in contexts in which such technical skills or systems are limited.

For example, the South African Department of Basic Education partnered with a third party, DataFirst, to host and securely share de-identified administrative data. These data have provided data management benefits to the government and enabled multiple impact evaluations of various education initiatives.
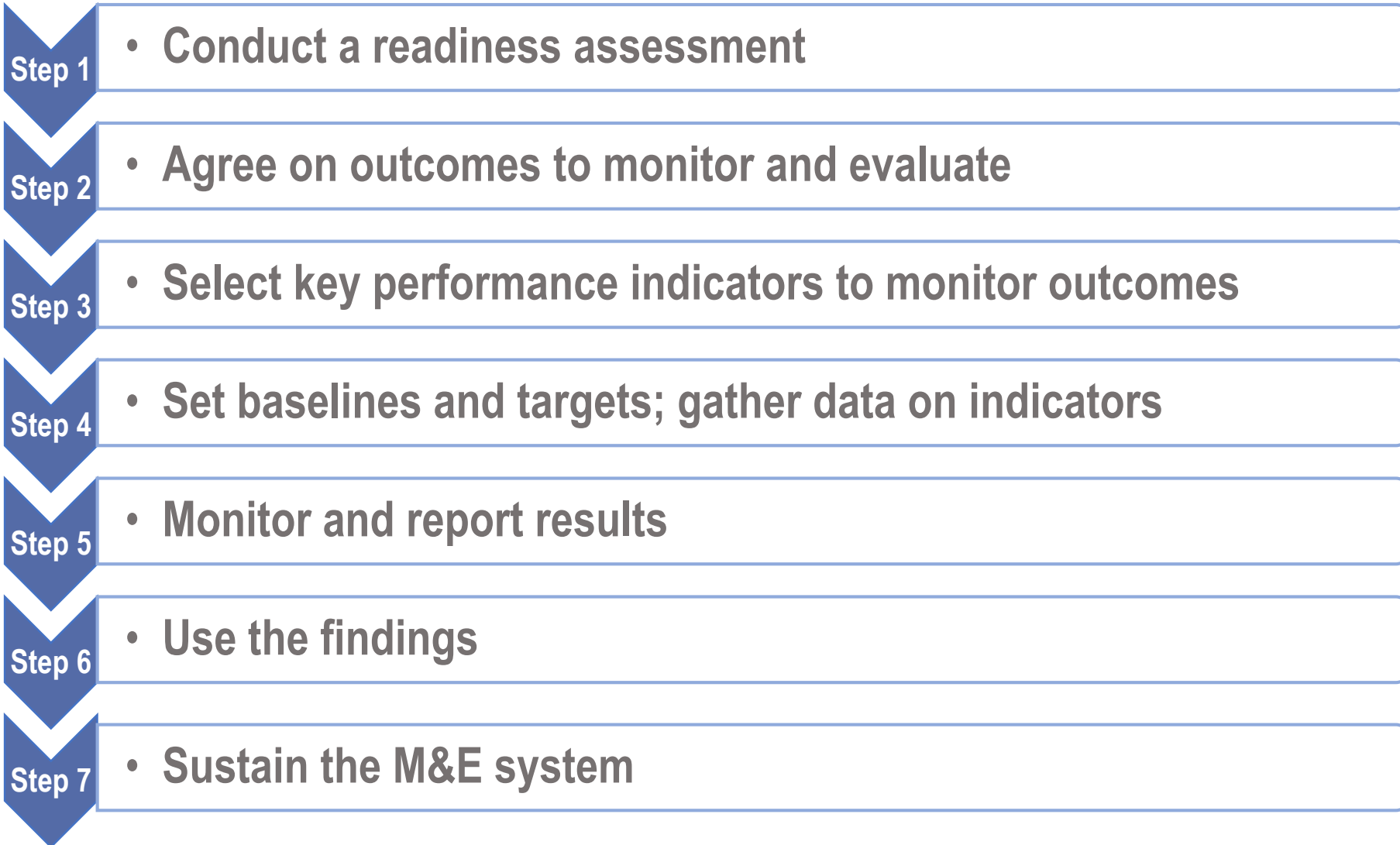
…Facilitate production of new evidence of program effectiveness.

For example, the government of Malawi partnered with the World Bank, Royal Norwegian Embassy, and FCDO to set up the Malawi Longitudinal School Survey (MLSS). It collected nationally representative data on school conditions and learning outcomes and produced policy-relevant insights on students' learning trajectories and the impacts of pilot interventions.

✔ To ensure a program's long-term sustainability, it is vital to build into partner contracts the technical assistance to strengthen the skills and capacity of the public bureaucracy and governmental actors, such as coaches and monitors.

STEP-BY-STEP PROCESS TO BUILD, MAINTAIN, AND SUSTAIN AN M&E SYSTEM

Step 1
- Conduct a readiness assessment

Step 2
- Agree on outcomes to monitor and evaluate

Step 3
- Select key performance indicators to monitor outcomes

Step 4
- Set baselines and targets; gather data on indicators

Step 5
- Monitor and report results

Step 6
- Use the findings

Step 7
- Sustain the M&E system

STEP 1. CONDUCT A READINESS ASSESSMENT

- ✓ **Confirm whether any M&E structures exist** in TPD programs and can be built on.

- ✓ Identify the **objectives** of the TPD program.

- ✓ Identify **local capacity** of the actors and agencies involved to perform their M&E roles.

- ✓ Identify **needs and opportunities to build partnerships** that address capacity constraints.

- ✓ Confirm whether the program development objectives are **anchored in the country's education sector strategy**.

- ✓ Identify **key barriers** to implement an M&E system and potential ways to address them.

- ✓ Identify **key incentives** to design and build an M&E system, and ways to use these incentives to create buy-in for the system.

STEP 2.
AGREE OUTCOMES TO MONITOR AND EVALUATE

- ✓ **Map the results framework** underlying the TPD program by laying out the causal pathway from inputs, activities, and outputs to outcomes and impacts.

- ✓ Based on the theory of change, **identify key outcomes to monitor**, including improved teaching practice, improved student-teacher interaction, and improved learning outcomes.

- ✓ If possible, **involve key actors** including the government, teacher unions, CSOs, school leaders, NGOs, donors, and other education stakeholders to help build consensus and create buy-in for key outcomes to monitor.

STEP 3. SELECT KEY PERFORMANCE INDICATORS TO MONITOR OUTCOMES

- ✓ Identify **key performance indicators** to measure improvements in outcomes linked to the effectiveness of the TPD program.

- ✓ Identify **key process indicators** to ensure that the program is being implemented with fidelity.

- ✓ Confirm that the selected indicators are **specific, measurable, attributable, realistic, and targeted** (SMART).

- ✓ Ensure that the M&E system is **not overloaded** with too many indicators.

- ✓ **Pilot the indicators** at a small scale and make changes as necessary before large-scale roll-out.

STEP 4.
SET BASELINES AND TARGETS, AND GATHER DATA ON INDICATORS

- ✓ Identify **existing data sources.** Determine whether these sources can be used to establish a baseline.
  - For example, EMIS, SABER, SDI, existing classroom observation data (from Teach or Stallings), and local assessment data.

- ✓ If new data are collected, identify **tools for data collection**.
  - For example, Tangerine and KoBoToolbox.

- ✓ When choosing a classroom observation tool, keep in mind the **licensing costs, cultural relevance**, and **enumerator capacity required**; identify whether teachers and coaches need training to use the tools.

- ✓ **Establish the baseline** before the program is rolled out.

- ✓ Agree on a **target corresponding to each indicator** over a set time frame. Targets should be realistic, contextually appropriate, time bound, and evidence based.

- ✓ Decide **how frequently data will be collected**. (Should be collected at regular intervals and ideally comparable over time to analyze trends).

- ✓ Develop **data validation processes** to ensure that data collected are accurate and reliable.

- ✓ In addition to quantitative data, **gather qualitative information** from key stakeholders including teachers, coaches, and master trainers about program results.

STEP 5. MONITOR AND REPORT RESULTS

- ✓ **Monitor performance** against established targets.

- ✓ Develop a central repository or dashboard in which data are stored and can be accessed by key actors and decision-makers.

- ✓ Identify **plans for analysis and dissemination** of reports and data visualizations.

- ✓ Ensure that **results are reported** to the intended audience in a clear and timely manner.

STEP 6. USE THE FINDINGS

- ✓ Based on data insights, **identify key actors** responsible for decision-making, such as ministry officials and implementation partners.

- ✓ Identify whether the appropriate decision-making bodies have the **time, capacity, and autonomy** to regularly review, discuss, and act on the data.

- ✓ Identify which **programmatic decisions and course corrections** are being made as a result of M&E information.
    - For example, which results feed into how resources such as teacher guides are allocated, or how training is designed?

- ✓ Identify whether the program is **meeting its outcome goals** and use the findings to make decisions.
    - For example, are results being used to make changes to program design, or to make decisions about budgetary allocations and scale-up?

- ✓ Identify whether the program is being **implemented with fidelity.**
    - For example, are trainers conducting their target number of visits to teachers? Does every teacher have access to a guide or other inputs?

STEP 7. SUSTAIN THE M&E SYSTEM

- ✓ Lay out **clear roles and responsibilities** for actors in charge of managing and maintaining the M&E system.

- ✓ Ensure that teachers, school and pedagogical leaders, and other actors who collect or provide data are given **appropriate time and resources** to perform their tasks.

- ✓ Ensure that the M&E system is producing **credible, valid, timely, and reliable information**.

- ✓ Identify whether **technical and financial capacity** exists to sustain the system; identify actions to enhance the capacity and performance of the agencies involved.

- ✓ Identify whether the **incentives** for various stakeholders are **sufficiently aligned** with helping sustain the M&E system.

- ✓ Identify a **strong political champion** for the M&E system.

- ✓ Identify and establish a **process to evaluate** the M&E system.

Additional Reading

This summary is based on the accompanying **Monitoring and Evaluation for In-Service Teacher Professional Development Programs: A Technical Guidance Note**. The guidance note provides details on these highlights and sets out how to navigate some of the challenges that governments and other organizations may face when designing and implementing an M&E system for an in-service TPD program.

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