

RISE Community of Practice Workshop

Identifying FLN Teacher Development Needs to Improve Effectiveness in the Classroom

Thursday 29 June 2023, 2:00-4:00pm GMT+1

This workshop explored tools for understanding foundational literacy and numeracy (FLN) teacher development needs. Teachers' content knowledge, classroom practices and beliefs are important for children's learning. But what tools are available for identifying these needs?

The workshop began with a reflection by Patrick Okwen of eBASE Africa, on the current state of teacher effectiveness in LMICs—large shares of teachers do not possess full mastery of the curriculum they are meant to teach, basic pedagogical knowledge is low, and the use of poor teaching practices is common. Teacher absenteeism is still a major problem in many LMICs. Regarding the learning potential of disadvantaged students, many teachers exhibit fixed mindsets—such as a belief that top-performing students are more deserving of additional support from teachers than low performers, even though the latter need that extra support more. It was also observed that regions experiencing conflicts endure more challenging contexts—such as countries where education is continuously under attack for various reasons.¹

Four presentations were made that highlighted specific tools for measuring teacher competences, practices and beliefs; experiences of applying these tools in various contexts; and relevant study findings.

- CENTA® standards: Competences (technical, professional, core) and mindsets for early childhood educators. Ramya Venkataraman (CENTA).
- Mathematical Knowledge for Teaching: A tool for surveying mathematics teachers' competences. Wendi Ralaingita (RTI International)
- Four classroom observation tools: Classroom observation tools for measuring teacher practices. Shwetlena Sabarwal (The World Bank)
- Out of Sight, Out of mind? Teachers' misconceived beliefs about their students' need for support. Sharnic Djaker (New York University).

The session was chaired by Permie Isaac (Funda Wande).

This note is a reflective summary of key takeaways from the session.

Tools overview, applications and related evidence

¹ Specific Sub-Saharan Africa countries mentioned: Chad, Cameroon, Niger and Nigeria.

Center for Teacher Accreditation (CENTA)® Standards for early childhood educators: Teacher competence testing tools that have been used mostly in India, but also other countries.² The tools are used to test teacher competencies for both certification/ accreditation and training needs identification for professional development purposes.

CENTA adopts a holistic view to teacher competencies—technical, professional, core, and mindsets. Technical competencies include teachers’ understanding of FLN and other skills, how children learn, content development and planning, student assessment and remediation, life skills integration, etc. Professional competencies include self-development, teamwork and leadership, teacher-student relationships, work planning and time management, etc. Core competencies include logical ability, communication, and technological awareness. Mindset covered include student-centeredness, belief in all students, initiative, and drive, etc.

For each of the above four broad categories, the CENTA competency framework comprehensively defines a globally-benchmarked set of expectations for ECE teachers at three different stages of their teaching careers—new teacher, experienced teacher, and senior teacher.

Mathematical Knowledge for Teaching (MKT) survey: A tool for measuring foundational math (Grades 1-4) teacher competencies primarily for the purpose of informing professional development. The tool has been used in Nepal, Kyrgyzstan, Uzbekistan, Madagascar, India, Jordan, and El Salvador.

The tool has 22 items and covers four math domains—numbers, operations, geometry and spatial sense, and measurement. It dwells on key aspects that teachers need to know to effectively teach foundational math, including content knowledge, knowledge of how students learn, and knowledge of how to teach foundational math content. Specific areas of focus include math content knowledge, scaffolding, helping students master difficult concepts they are struggling with, and developmental progressions.

A local math expert is required to facilitate local adaptation—item relevance, use of local examples, use of appropriate vocabulary and where necessary, outright translation. In addition to informing the design of professional development programs, the MKT survey is used for pre-post program impact evaluation purposes. It is not used for high-stakes decisions that affect individual teachers.

Classroom observation tools: Since classroom observations tend to be expensive and a little more challenging to conduct, it is important to consider when they may be most relevant and how to get the best out of them. When targeted at capturing causal changes in teachers’ classroom behaviours, it is important to reflect deeply on the expected change mechanisms, and how objectively and reliably these can be measured.

With classroom observations, change indicators can be thought of in two ways—broad or specific.

Use broad indicators for broad interventions such as teacher incentive programs, teacher monitoring, and sharing of diagnostic feedback with teachers. Relevant broad indicators

² CENTA offers a global platform covering over 1.3 million teachers in India, UAE, Philippines, Nigeria, Ghana, USA, and UK.

may include teacher attendance or teacher task engagement. Specific teacher behaviour interventions such as use of a scripted lesson plan or a specific instructional support tool require specific indicators that are customised to the intervention. Whether general, specific or both, the number of questions should be kept to a manageable limit (e.g., 12-15 questions).

As shown in Box 1, four classroom observation tools have been extensively used in LMIC contexts—the ‘SDI’ and ‘Teach’ from the World Bank, and ‘Stallings’ and ‘CLASS’ developed by academics.

Box 1: Summary of classroom observation tools			
	Administration	Time-on-task	Areas of focus
SDI	in-person	yes	Checklist of observed teacher behaviours, availability and use of materials, and classroom infrastructure.
Stallings	in-person	yes	Checklist of classroom environment, and of materials and infrastructure availability.
CLASS	video	no	Rater scoring across various dimensions grouped into 3 domains (Emotional support; Classroom organisation; Instructional support) plus rating of Student Engagement.
<i>Teach</i>	video	yes	Rater scoring across various dimensions grouped into 3 areas (Classroom culture; Instruction; (promotion of) Socioemotional skills.

Source: [Filmer, Molina & Wane \(2022\)](#)

The ‘SDI’ and ‘Stallings’ are broad-indicator, in-person observation tools covering teacher content knowledge, pedagogical assessments, presence at school and in class, time spent teaching, and the availability and use of materials. They are considered ‘low-inference’ since they require enumerators to just record (not interpret) what they see happening in the classroom.

‘CLASS’ and ‘Teach’ tools capture very specific behaviours such as socioemotional skills, classroom culture, inclusivity, instructional support, etc. They tend to be long and require in-depth training of enumerators for proper application. Consequently, previous studies have relied on use of video recording of classroom sessions/lessons and subsequent coding and scoring of teacher practices by trained observers. This need for highly trained observers to judge teacher practices using ‘CLASS’ and ‘Teach’ makes these two ‘high-inference’ tools.

Teacher beliefs: To facilitate effective learning, teachers need to know the distribution of student achievement in their class. This is necessary for teachers to set realistic or achievable learning goals and make the relevant pedagogical choices around instructional supports, group composition, assessment methods, etc. Teacher beliefs are strongly rooted in their estimates of the skill or achievement levels of the students.

Measuring the difference between actual student test scores and teachers’ estimates of those scores reveals the level of accuracy of teacher beliefs. Overall, teachers in LMICs tend to have inaccurate beliefs about their students’ skills—uniformly overestimating their academic abilities.

Two studies conducted in India and Bangladesh with test scores for math and language show four key findings. First, teachers tended to overestimate their students test scores. Second, teachers did well on estimation of the relative achievement ranks of their students. Third, teachers tended to underestimate the level of student skill variability in their classrooms—about half of the teachers in India and 75 percent of the teachers in Bangladesh. Finally, on group-level student achievement differences, teachers tended to overestimate the performance of low achieving students.

Breakout group discussions

In-depth discussions in small groups focused on three key aspects—how pre-service teacher training can address teacher development needs, how in-service teacher professional development can address teacher needs, and how to overcome challenges related to adoption of the tools.

How pre-service teacher training can best address teacher development needs

In many LMICs, pre-service teacher training is characterised by several gaps that make it difficult to fully address teacher development needs. A critical gap relates to inadequate emphasis on the actual practice of teaching as student teachers spend most of their training period accumulating theoretical knowledge. Another closely related gap relates to purpose—why do individuals opt into teaching? Individuals who take up teaching simply to find a job (rather than as a vocation they have intentionally chosen) struggle to leverage their agency to continuously become better teachers. Finally, inadequacy of resources and facilities required for good pre-service teacher training is a critical constraint affecting many LMICs. In many countries, the primary focus is on ensuring universal access to schooling and the accompanying need to lower the excessively high student-to-teacher ratios.

Pre-service teacher training can go a long way in addressing teacher development needs in LMICs by pursuing a double-pronged strategy that ensures student teachers obtain strong foundations in good teaching and sufficient opportunities to engage in school-based teaching practice. To achieve these, high focus should be given to teachers' content knowledge, and understanding of the science of effective teaching and learning—including pedagogical knowledge and a clear appreciation of how children learn. Additionally, teacher training should emphasise depth of knowledge such that teachers can foster both procedural and conceptual mastery for their students. A decentralised approach to teacher training may ensure increased opportunities for trainee teachers to engage in longer duration teaching practice, adapt to local teaching contexts, and obtain needed professional coaching support at the school.

Recent pre-service teacher reforms in India have led to positive changes in perceptions of the teaching profession. In Cambodia, internship periods for student teachers have been increased.

How in-service teacher development can best address teacher needs

Two key aspects of in-service teacher professional development programmes in LMICs affect their ability to effectively address teacher development needs. First, the

overwhelming majority of teacher professional development sessions tend to be implemented away from the school—a practice that promotes and perpetuates contextual inappropriateness and ensures such sessions remain highly theoretical. Second, these sessions tend to be incoherent with the system as a whole since they don't align well with other key activities such as pre-service training, teacher support supervision, teacher performance evaluation, curriculum implementation, monitoring, etc.

When planned and implemented well, in-service teacher professional development can effectively address teacher development needs in LMICs. First, sessions should be held more frequently and consistently, and target all teachers. Second, findings from classroom observations should be used to inform the design of sessions to ensure they are addressing the existing development needs.

In many LMICs, NGOs are heavily involved in designing and conducting in-service teacher professional development programmes.

How to promote the use of the tools

High levels of resistance to adopt tools for understanding teacher professional development needs may originate from the use of classroom observations for high-stakes purposes of teacher performance evaluation, as opposed to providing needed support towards teachers' professional development. A related aspect is the failure to ensure contextual alignment of the tools. Undertaking locally collaborative tool co-creation and adaptation efforts can facilitate implementation fidelity and promote take-up.

Utilisation should include adopting a school-level implementation model that ensures continuous utilisation of these tools at the school—with school leaders as the main implementing leads. A school-based model would ensure school, class, and teacher-level adaptation and shift the focus from using the tools for monitoring purposes to supporting continuous professional development purposes. Equally important is the issue of giving timely feedback to teachers.

High-value online resources on teacher development needs:

- CENTA® competency framework: [standards for early childhood educators](#)
- Mathematical Knowledge for Teaching: [Developing measures of teachers' MKT](#)
- Four classroom observation tools: [Identifying effective teachers](#)
- SDI: [Teacher effort, knowledge and skill in primary schools in Africa](#)
- TEACH: [Teacher preparation, practice and beliefs](#)
- TEACH: [Measuring teaching practices at scale](#)
- TEACH: [Effective teaching practices in primary school classrooms](#)
- CLASS: [Teacher quality and learning outcomes](#)
- Stallings: [Classroom snapshot user guide](#)
- Teacher beliefs: [Out of sight, out of mind?](#)
- Accuracy of teacher judgments: [A comprehensive review](#)