Quality education for all with empowered and effective teachers.

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Context

- Sustainable Development Goal 4 — ensure inclusive and quality education and promote lifelong learning opportunities for all by 2030
- Massive teacher shortage = critical bottleneck
- 68.8 million teachers need to be recruited and trained (UNESCO Institute of Statistics, 2016)
- Existing teachers are often poorly prepared.
  - Sub-Saharan Africa and in the Caribbean: 25% of secondary school teachers have had no formal training (UNESCO, 2016)
  - Sub-Saharan Africa: 15% attrition among public primary school teachers (UNESCO, 2016)
  - 20% of instructional time is lost in Latin America and the Caribbean due to absenteeism and inadequate preparation (Bruns & Luque, 2015)
What is the **TPD@Scale Coalition for the Global South**?

**Collaborative effort** of education and technology stakeholders worldwide who are engaged in teacher professional development (TPD)

Aims to contribute to the attainment of [SDG 4](#) through collaboration, research, and implementation support

1 Ensure inclusive and quality education and promote lifelong learning opportunities for all
Mission

To promote quality, equitable, and sustainable large-scale, ICT-mediated teacher professional development through collaboration, research, and implementation support

Objectives

1. Support governments and implementers across the Global South in the design, development, and deployment of quality, equitable, and sustainable TPD@Scale models

2. Support research and knowledge-sharing on innovative TPD@Scale models and how to adapt them effectively and appropriately for a wide range of Global South contexts

3. Harmonize efforts and investments in TPD@Scale in the Global South
Definition: Teacher Professional Development

- “activities that develop an individual’s skills, knowledge, expertise and other characteristics as a teacher” (OECD, 2009, p. 49)
- may include formal and informal experiences.
- effective TPD is a long-term and continuous process that includes regular opportunities and experiences planned systematically to promote growth and development in the profession (Darling-Hammond, et al., 2017)
- a systems approach to TPD should be adopted to strategically develop high-quality teachers at scale in a cost-effective way (Asian Development Bank, 2017)
Characteristics of Effective TPD

- Content focused.
- Incorporates active learning utilizing adult learning theory.
- Supports collaboration, typically in job-embedded contexts.
- Uses models and modeling of effective practice.
- Provides coaching and expert support.
- Offers opportunities for feedback and reflection.
- Of sustained duration.

(Darling-Hammond, et al., 2017)
Definition: “At Scale”

Scaling is a process that involves “a range of pathways that expand and deepen effective approaches that lead to lasting improvements in people’s lives. These approaches may consist of a policy, program, practice, or idea... [T]he act of ‘scaling’ is about expanding coverage while simultaneously ensuring the depth of change necessary to support and sustain a lasting educational improvement” (Robinson, J. P., Winthrop, R., McGivney, E. (2016). Millions learning: Scaling up quality education in developing countries. Center for Universal Education at The Brookings Institution, p. 35.)

@Scale as defined in the emerging research and development field of learning at scale ("L@S") refers to learning environments mediated by information and communication technologies (ICT) that engage large numbers of learners, whether remotely or face-to-face.
TPD@Scale Coalition for the Global South

**Effective TPD** (Darling-Hammond, Hyler, and Gardner, 2017)
- Content-focused
- Active learning
- Collaborative learning
- Models effective practice
- Coaching and expert support
- Feedback and reflection
- Sustained duration

**Learning@Scale**
- MOOCs
- Open courseware
- Intelligent tutoring systems
- Peer learning networks, professional learning communities, communities of practice

**Challenges in the Global South**
- Quality of teachers
- Opportunities for continuing professional development
- Diverse school environments
- Gender-based and other asymmetries and biases

**Quality**, **Equity**, **Efficiency**

TPD@Scale Coalition for the Global South
Coalition Theory of Change

TPD@Scale Coalition for the Global South
Members (19)

- Ateneo Laboratory for the Learning Sciences
- Concordia University Centre for the Study of Learning & Performance
- The Education University of Hong Kong
- Foundation for Information Technology Education and Development
- Fundación Ceibal Center for Research
- International Development Research Centre
- International Education Association
- IT for Change
- Korea Education Research and Information Service
- National Educators Academy of the Philippines, Department of Education
- The Open University School of Education, Childhood, Youth and Sport
- Peking University Graduate School of Education
- Putera Sampoerna Foundation School Development Outreach
- SUMMA (Laboratory of Education Research and Innovation in Latin America and the Caribbean)
- Tata Institute of Social Sciences
- United Kingdom Department for International Development
- United States Agency for International Development
- University College London Institute of Education
- World Vision International
## Summary of 2019 Activities

<table>
<thead>
<tr>
<th>Global</th>
<th>Asia</th>
<th>Latin America</th>
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</table>
| Knowledge-sharing and Coalition-building events  
*London, Dubai* | Technical Assistance and Case Study  
*Philippines, Indonesia*  
Knowledge-sharing and Coalition-building events  
*Manila, Seoul* | Regional Landscape Review and Agenda-setting  
Webinar Series |
| Landscape Review and Research Agenda  
Review of Emerging Technologies  
Research Framework  
Webinars  
Toolkit | Africa | Technical Assistance and Case Study  
*Ghana*  
Middle East | Technical Assistance and Case Study  
*Chile / Peru*  
Knowledge-sharing and Coalition-building events  
*Costa Rica* |

*TPD@Scale Coalition for the Global South*
Landscape Review of TPD@Scale
Overview

Two-part study

- Landscape review of teacher professional development at scale (TPD@Scale) in the Global South
- Formulation of a research agenda to inform governments and implementers on the uses of ICT to advance equitable, efficient, and quality TPD@Scale
Purpose

The landscape review will:
● provide a comprehensive overview of the state of ICT-mediated TPD on a large scale for primary and secondary education teachers across the Global South
● seek to understand the key principles and components of design, development, and deployment of large-scale, ICT-mediated TPD programs in developing country contexts by examining both successful and less successful cases

The research agenda will:
● prioritize research questions relevant and actionable for governments and implementers interested in employing proven TPD@Scale models and techniques
Research Questions

1. **What models have been deployed?**
   a. How have such models been designed/adapted for the context?
   b. What are their key features?
   c. How have they been implemented?
   d. What impacts have these models made with respect to quality, equity and efficiency?
   e. How has the impact and sustainability of models in differentially resourced environments been affected by different factors (e.g., education, infrastructure, technology, economy, social and cultural aspects)?

2. **What are the key lessons in (a) learning design, (b) development, and (c) implementation generated from the experience of these models?**

3. **What are the key inclusion-related challenges (e.g., gender, disability) involved, and how might findings from research questions 1 and 2 address such issues?**
Analytic Framework: Scaling

A successfully scaled intervention should:

- **spread**, maintaining its impact across diverse sites and groups;
- **effect depth**, in transforming practice in significant ways;
- **be sustainable**, by encompassing policy and infrastructure in order that the outcomes produced will be persist in the long term; and
- **empower local communities to own and sustain the reform**, so that there is a **shift** in ownership from the original implementers towards local actors.

(Coburn, 2003)
## Analytic Framework: Learning Design

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<tr>
<th>LEARNING DESIGN ELEMENTS</th>
<th>DESCRIPTION</th>
<th>EXAMPLES</th>
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<tbody>
<tr>
<td>learning activities</td>
<td>The tasks, problems, interactions used to engage the learners and upon which learning is based</td>
<td>Reading activities, computer-based interactions, simulations, inquiry tasks, projects, open-ended problems, collaborative tasks</td>
</tr>
<tr>
<td>learning resources</td>
<td>The content, information and resources with which the learners interact in completing the tasks</td>
<td>Web pages, readers, textbooks, computer-based tools, web links, notes, documents, workplace manuals, case studies, databases</td>
</tr>
<tr>
<td>learning supports</td>
<td>The scaffolds, structures, motivations, assistances and connections used to support learning</td>
<td>Learning guides, discussions chats, suggested learning pathways, mentors, buddies, workplace trainers</td>
</tr>
</tbody>
</table>

Oliver (1999, 2001) and Herrington, Reeves, and Oliver (2009)
Analytic Framework: Inclusivity and Internal Efficiency

- **Inclusive TPD:** Barriers to inclusion
  - Access to technology
  - Language
  - Gender
  - Socio-economic status
  - Geography
  - Race and ethnicity
  - Disability

- **Internal Efficiency:** involves the optimization of inputs (teachers, administrators and other human resources, physical facilities, materials, instructional methods, teacher training, etc.) to produce the desired outputs (learning gains)

TPD@Scale Coalition for the Global South
Methodology: Data Collection

- Search terms used:
  - "TPD developing countries" and “ICT"; “ICT and teacher professional development at scale”; "using technology" and “teacher professional development"; “Teacher professional development MOOC”; “Teacher professional development” and “ICT in schools”; “teacher professional development in developing countries”; “ICT in professional development” and “Sub- Saharan Africa”; “Teacher professional development”

- Yielded 2,859 results
- Consultations at Mobiles for Education Alliance Symposium 2018 (USA) and the 2018 Global Symposium on ICT in Education (Korea) to identify projects
- Contacted 40 individuals and organizations
- Reviewed 30 documents
## Methodology: Review Criteria

### TPD
- The teacher must be the learner. Excludes leadership training.
- Learning can be structured or unstructured.
  - Structured: With defined learning objectives, resources, activities, and expected outcomes. May be formal courses or non-formal training activities (such as workshops and seminars). May be time-bound or self-paced.
  - Unstructured: No defined course of study; just-in-time learning such as occurs in a professional learning community.

### Education level
- Teachers of pre-school (0-4) and school age children (5-18) working in formal and informal learning settings, public and private, including teaching assistants and paraprofessionals.

### Global South
- Projects implemented in the Global South. However, review studies from elsewhere were also considered where they provided TPD principles or recommendations which may be applied globally.
# Methodology: Review Criteria

| @Scale | ICT is used in some way to enable the achievement of horizontal scaling (reaching more people and places) of, in whole or in part, course delivery and/or learning support and/or learning assessment and/or unstructured learning.  
Horizontal scaling. Two scenarios were considered:  
- Models that actually reached teachers in the thousands  
- Models that have the potential to reach thousands as designed. |
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<tbody>
<tr>
<td>Timeline</td>
<td>2000 to 2019</td>
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</table>
| Sources | **Language:** Primarily reports in English, but reviewed those in French, Spanish, Portuguese and Mandarin where relevant and available.  
**Type:** Documentation (article, report, conference paper, chapter, book, grey literature from NPOs, government reports, funders’ reports, project websites, thought papers, blogs, private sector case studies and publications) and interviews with key informants. |
## Methodology: Case Study Selection Criteria

### Scale
Satisfies 3 of Coburn’s 4 dimensions of scale: namely spread, depth and sustainability. The 4th dimension, shift, may only be possible to achieve over a longer time scale, or as part of a scaling up of a project which has proved its worth.

### Cases Selected
- 4 main cases are presented.
  - India (2), Philippines (1), China (1)
  - Sufficient detail available on development and implementation; some evaluation data.
- 10 other cases in Asia-Pacific, Africa, and Latin America also featured
  - Focus on a specific component or strategy of the intervention, which yields interesting insights
  - May not yet be large-scale ( >1,000 reached )
Peking University X-Learning Center

**MOOC** on www.icourses.cn

- **Online peer and facilitator interaction** via MOOC platform
- **Informal PLCs** via other channels

**Guided independent study** of the MOOC with PLCs within the MOOC platform and on other channels

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TESS-India

Schools and Districts organize teachers

MOOC on edX

Guided independent study of the MOOC

Online peer and facilitator interaction via MOOC platform

Informal PLCs via WhatsApp

Facilitated F2F contact classes. Teachers without computers access the MOOC in class.

Led by MOOC Facilitators who have completed the MOOC

MOOC Facilitators create groups on WhatsApp for discussions

TPD@Scale Coalition for the Global South
Connected Learning Initiative (CLIx)

TPD@Scale Coalition for the Global South
ELLN Digital

SCHOOLS

A

B

C

Multimedia courseware

Guided independent study of the multimedia courseware

Classroom application of concepts learned

Weekly refresher and enhancement webinars for division-based Learning Facilitators trained F2F in ELLN

Learning Facilitators provide implementation support to LAC Facilitators during periodic visits and via voice calls and texts.

Reflection and knowledge-building

F2F PLC: Collaborative learning through school-based Learning Action Cells (LACs) led by LAC Facilitators. Teachers meet weekly with at most fourteen other teachers in LACs to reflect on the course and their classroom practice.

SUPPORTED BY THE SCHOOL HEAD

TPD@Scale Coalition for the Global South
Findings: Key Principles and Agenda

4 Themes

• Designing effective TPD for scale
  o Differentiation/personalization
  o Learner support
  o Assessment
• Resourcing
• Inclusive TPD
• Cost-effective TPD
Review of Emerging Technologies

- Aims to examine emerging digital technologies to determine whether, how, and within what time frame these technologies may be employed in large-scale TPD to address three key issues that impact on effectiveness and efficiency at scale:
  1. personalization of learning/differentiated instruction
  2. learner support
  3. assessment for and of learning
- May include: augmented and virtual reality; MOOCs; intelligent tutoring systems; and personalization technologies such as adaptive learning systems
- Conducted by Ateneo Laboratory for the Learning Sciences
TPD@Scale Coalition Secretariat

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