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Using technology to accelerate TPD towards achieving SDG 4: Landscape review and research agenda – initial findings.

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A joint research project funded by



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Background – The Problem

- SDG Goal 4: quality education for all.
- Teachers crucial to engaging students in learning and equipping them for lifelong learning.
- Teacher shortage, especially acute in the Global South.
- Teacher Professional Development (TPD) is a challenge for many countries.



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Background

- Progress towards achievement of SDG Goal 4 based on equity, quality and efficiency (framework for TPD@Scale).
- ICTs may enable high quality cost-effective Teacher Professional Development at large scale.
- Numerous projects across the Global South have used technology to assist with TPD.
- Findings are scattered across the literature, databases and within organisations.

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Aim of the Study

- To develop a landscape review of the current state of **large scale, ICT-mediated teacher professional development programs across the Global South** to identify major trends, patterns, and lessons learned, and to define gaps in our existing knowledge base.
- Develop a research agenda for the field, emanating from the findings.

e.g. (1) Dahya, N. (2016). Education in Conflict and Crisis: How Can Technology Make a Difference?: A Landscape Review: GIZ.
 (2) Landscape Review Mobile Education for Numeracy: GIZ

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Scope and Terms used

- **Scale:** currently, the review is framed by Coburn's (2003) reconceptualization using four dimensions (in addition to increasing sites)
 - **Spread:** impact across diverse sites and groups.
 - **Depth:** practice transformed in significant ways.
 - **Sustainability:** inclusion of policy and infrastructure to maintain impact over time.
 - **Shift** in ownership: empowerment of local communities to own and sustain the reform.

Coburn, C. (2003). Rethinking scale: Moving beyond numbers to deep and lasting change. Educational Researcher, 32(6), 3-12

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TPD@Scale – a conceptualization

- Coburn’s 4 dimensions of learning at scale
- Combined with best practices of effective TPD
- Implemented using relevant and suitable technologies
- In contexts appropriate in the Global South (e.g. resource-challenged environments)

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Learning at Scale

Spread: across diverse sites

Depth: effecting deep change

Sustainability: impact
maintained over time

Shift in ownership towards
local communities

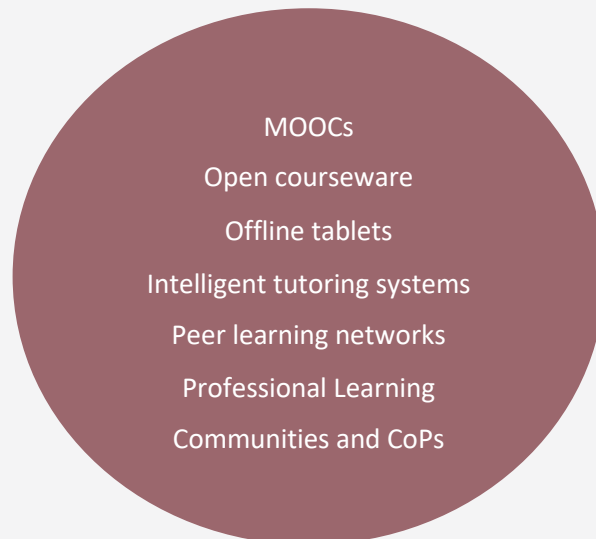
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Effective TPD



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Appropriate Technologies Inserting the “@”



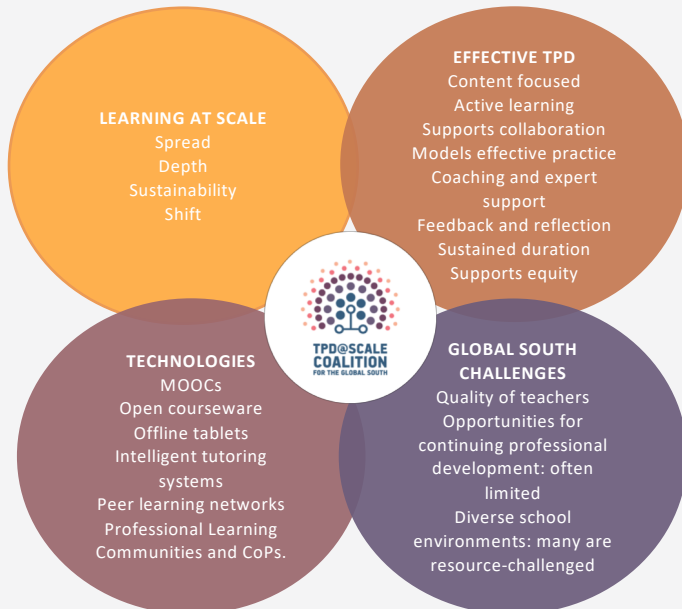
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Challenges in the Global South



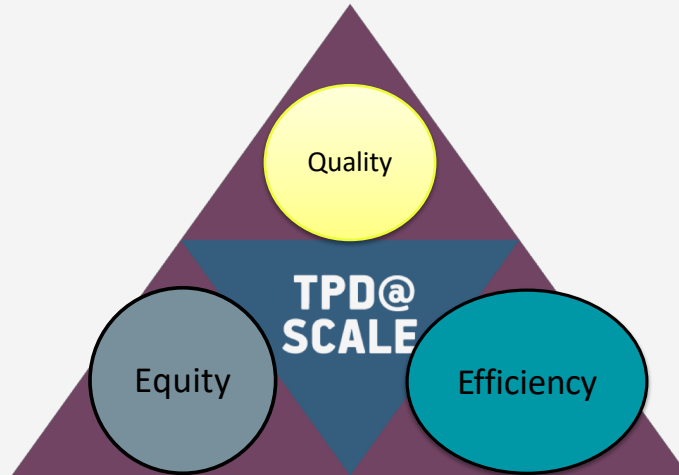
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TPD @ Scale in the Global South



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TPD@Scale Framework tensions



Presentation is based on research conducted so far, and is still in progress. Due to be completed March 2019.

Recent research on TPD@Scale was reviewed (20+ studies examined in detail).

Key ideas in design and implementation were identified in relation to EQE, and adopted as principles.

E.g. numerous studies stressed that PD pedagogy more important than the technology used.

Key principles that inform the development of TPD@Scale models

- Base model on effective, researched TPD practices.
- Focus on scaling and sustainability from start.
- Focus on pedagogy rather than technology.
- Use offline or blended ICTs “just in time” not “just in case”.
- Develop materials locally with direct relevance to curriculum.
- Provide teacher incentives for participation.

Key principles that inform the development of TPD@Scale models

- Teachers to implement their learning into classroom practice.
- Seeing themselves and others teach has value.
- Allow time for reflection on practice.
- Develop Professional Learning Communities and Communities of Practice.
- Work with national/local government departments.
- Investigate partners and develop Memoranda of Understanding.
- Design M&E upfront, and implement.

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Three cases of TPD@Scale (of an eventual six)

- Early Language Literacy and Numeracy (ELLN) Digital project in the Philippines (FIT-ED).
- Connected Learning Initiative X (CLiX) project in India (TISS).
- ICT for Rural Education (ICT4RED) project in South Africa (CSIR).

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ELLN Digital – Philippines: key features

- Pilot in 240 Dept. of Education schools across a range of urban, peri-urban and rural.
- Digital learning, collaborative learning and classroom practice.
- Offline CD-based multimedia course; better quality than the workshop-based ELLN course it was developed from.
- Incorporated collaborative learning through Learning Action Cells (LACs).

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ELLN Digital – Philippines: lessons learnt

- Offline worked – no f2f interaction by FIT-ED.
- Teachers own their materials, unlike a once-off workshop.
- Teachers struggle with independent and tech-mediated study.
- Changing the content into self-study materials very time-consuming.
- Need to keep all lines of communication open – e.g. changes of government, different cultures across the country.

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CLiX project - India: key features

- Started at scale – not scaled up. 460 schools and their teachers across 4 states.
- Mainly rural schools at grade 9. Blended model: teachers access courses through cell phone apps and browser.
- CoP for teachers using Telegram Messenger app.
- Also field teams, f2f workshops and MOOCs.

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CLiX project - India: lessons learnt

- Program provides access to knowledge for rural teachers – equity.
- Quality provided by direct access to faculty staff via App.
- MOOC completion rates very poor, resulting in a different strategy.
- Take-up variable across different states dependent on department of education interest.
- Teachers struggle with independent and online study.
- Changing the content into self-study materials very time-consuming.

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ICT4RED - South Africa: key features

- A research project in 26 schools in Eastern Cape, South Africa; TPD a major component.
- Deep rural, resource-constrained environment. Mostly Middle Schools and Senior Primary.
- Tablets provided to teachers (“earn as you learn”) – no Internet connectivity required.
- Collaboration and CoP fostered. F2F training.

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ICT4RED - South Africa: lessons learnt

- Incremental use of incentives for teachers & schools resulted in enthusiastic take-up by teachers.
- Teachers need to use the technology and be completely fluent in it, or they will not use it in the classroom.
- Teachers reacted positively to non-workshop style of TPD - using tablets instead.
- Hardware costs need to be planned for on a recurrent basis.

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Learning from the Cases

- The following principles have emerged from the three case studies presented: promising practices and lessons learned.
- As the review progresses, the principles generated will be used to identify gaps in existing projects to suggest improvements to their effectiveness, sustainability and scalability.

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Promising Practices in the Cases

- **Collaboration amongst teachers is key:** preferably as a CoP.
- Teacher access to material **offline** and on **their own devices** is welcomed by teachers.
- **Direct use** in the classroom of the PD ideas, followed by reflection.
- **High quality** evident in the materials provides effective PD.



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Lessons Learned from the Cases

- Changing the content into self-study materials is very time-consuming.
- If MOOCs are to be used, need to think through the MOOC pedagogy.
- Teachers struggle with independent and online study.
- Take-up beyond project is dependent on the Department of Education and partners outside control of project.



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Feedback – the next part of this session

- Will commence shortly.
- Please be prepared to discuss some of the issues identified in this presentation
- Please give suggestions for a research agenda.

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The research so far

1. What aspects are missing from the review so far?
 2. What other TPD@Scale projects are you aware of that can be included as case studies?
- Other comments

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Research Agenda – some initial ideas

- The need for more studies of TPD for disadvantaged and marginalized groups (lacking in the mainstream literature).
- Blended learning teacher education: what are the “best” blends, and what are the implications for costs and administration of support?
- How can teachers be motivated to learn digitally?
- What are the best pedagogies for MOOCs for TPD?
- How can research designs be improved to trace learner outcomes and attribute them to TPD interventions?

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References

This presentation is based on over 20 publications, reports and other papers.

These are available at

<https://docs.google.com/document/d/1BxaBW56HdfDFvCftHy-37NwZufocrrjb7TYaXbM87a0/edit?usp=sharing>

Or email me: tonyl@saide.org.za



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