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Teacher education, mobile learning, and the challenges of scale

Conference or Workshop Item

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Slide 1

TEC 14 Conference, Hyderabad,

21st - 23rd February 2014

Teacher Education, Mobile Learning
and the Challenge of Scale

Theme 3 Technological Resources for Language Education
(m-learning in teacher education; Technology enabled INSETT)

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The Open University

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Slide 2

1. Laying the foundations for EIA

2. EIA TPD Design Challenges

3. EIA TPD Approach & Outcomes

4. Policy Issues and Evidence
    a) CPD approaches
    b) Educational Technology investment

5. Challenges of Scale & Institutionalisation

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the Open University

Founded in 1969

to create access
to higher education
for all

Now a world leader in
distance education

1.7 million total students
700 different courses
20 million OpenLearn visitors
over 27 million downloads on iTunes U

Our model enables people

to learn while they remain
working in their communities

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Our model enables people

with full support and
training materials they can use

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committed
to development

through research, teaching
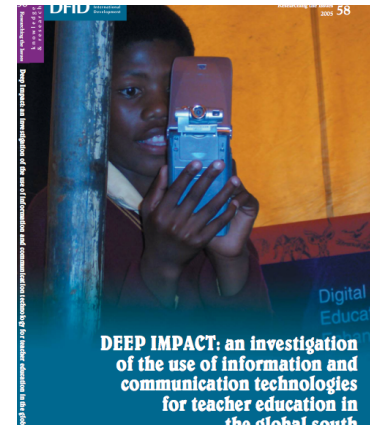and award winning professional
development programmes

developed and delivered
through partnership

DEEP (2001 - 2007)

- small scale participative research and development programme in rural South African homelands, and urban slums in Cairo.

- rural schools mostly off-grid, isolated, and with little or no resources, beyond blackboard

- 1 laptop, 1 printer-scanner per school, with offline content

- teacher pairs, informal peer support meetings

- Head Teacher and Community support

Leach et al 2005

Power & Thomas, 2006

Theme 2:
developing confidence;
'opening up';
enjoyment

interim findings

- handheld digital tools offer 'anytime, anyplace' professional learning and practice

- they enable a range of new learning activities in resource poor environments

- they support collaboration and professional learning

- they enable new classroom practices

- the teachers involved felt an enhanced sense of professionalism and self-esteem

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final evaluation data

- 85% of the teachers would spend their own money on a handheld computer for work

- 70% of the teachers found the handheld computer as or more valuable to their practice than the laptop computer

- only 14% of teachers found laptop computers more valuable to their practice than the handheld computer

TESSA
Teacher Education in Sub-Saharan Africa

www.tessafrica.net
2005 - ongoing

Part 2:
EIA TPD Design Challenges

English in Action (EIA)

	Impact: Increased Socio-Economic Opportunities for Bangladeshi Citizens				
	Outcome: Increased number of people able to communicate in English; with sufficient institutional capacity to sustain increases in the future.				
	Output 1	Output 2	Output 3	Output 4	Output 5
	Primary teachers and students	**Adult learners**	**Secondary** teachers and students	**Research, monitoring & evaluation**	**Institutionalisation & sustainability**

EIA Schools Component: Primary & Secondary [CPD only]

phase	phase II - pilot (2008 - 2011)	phase III - scale (2011 - 2014)	phase IV - institutional (2014 - 2017)	
			current funding	additional funding
Teachers	**600 GoB teachers**	**12.5 K Teachers**	**64k Teachers**	**124k Teachers**
Students	**118k students**	**2M Students**	**10.5 M students**	**17.5 M students**

Slide 21

Programme Requirements	**Challenges**
• Cost-Effective	• ELT & TD expertise: urban; limited; expensive
• Scaleable	• Limited Infrastructure (travel, IT, professional development networks)
• Equitable & Inclusive	• Minimise teachers' absence for training, and time away (gender issues)
• Sustainable	• Limited success of prior large scale TD programmes

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Previous approaches to ELT teacher development in Bangladesh

"…suffered from a lack of planning

….not providing supportive resources…

…lack of co-ordinated long-term focus…

In spite of a general improvement in T's knowledge *about* ELT…. there is little evidence of much difference in classroom practice"

A.Rahman on BRAC-PACE (2006)

"...teaching from the blackboard was predominant...
...teachers also read from the textbook and asked closed questions...
...monitoring and facilitating students ... individually."

In 90% of lessons observed,
no other classroom activities occurred
(EIA baseline studies, 2009)
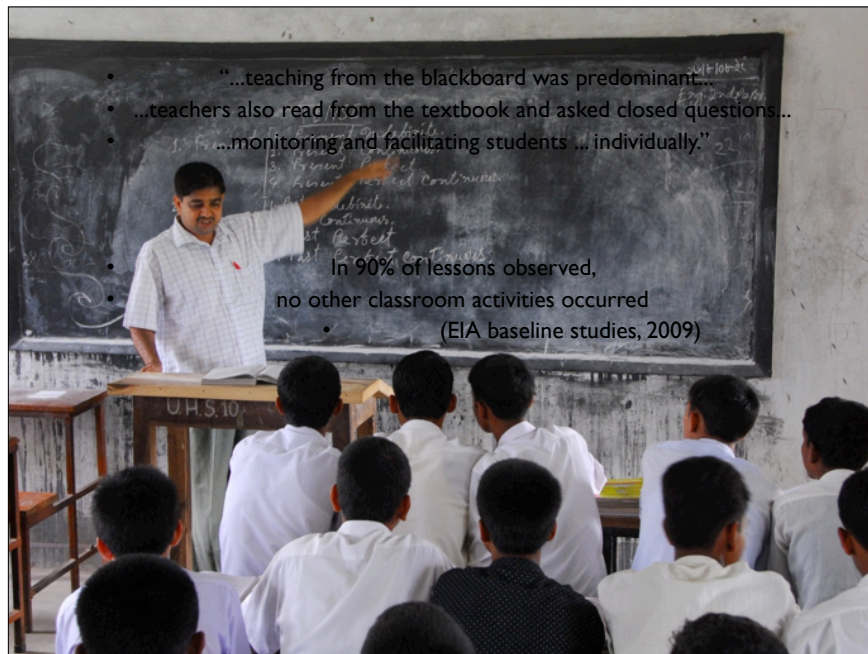
Programme Design Goals

- Minimise dependance upon national or international ELT expertise, for delivery at field level
- Maximise local peer support
- Identify appropriate ICTs:
  - minimum costs, 'training' and infrastructure requirements;
  - maximum utility: modelling and supporting target language and practices.
- Minimise teachers' time away from school
- Maximise impact on teaching and learning

Part 3:
EIA TPD Approach & Outcomes

ELTONS Video

support beyond school

support in school

new classroom activities

for teachers & students

professional development materials for teachers and classroom use, new tools, HT & peer support

peer support through meetings and visits; wider project support

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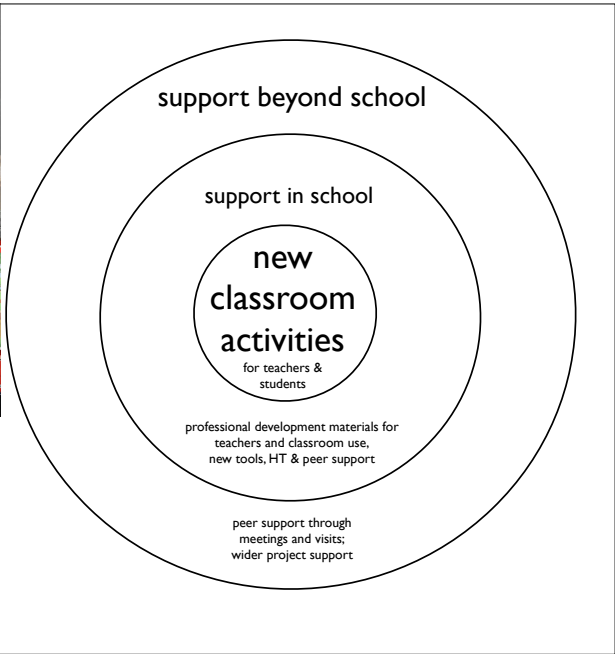
mobile phone: audio for classroom use

English for Today, Class 3, Lesson 27

Look at the Picture.
Now read and act.

- Shop assistant: Hello
- Selim: Hello, can I have a pencil
- Shop assistant: Sure. Anything else?
- Selim: Yes, an eraser and a sharpener
- Shop assistant: Here you are.
- Selim: Thanks. How much?
- Shop assistant: Ten taka please.

7 lines, 25 words, of dialogue

TPD video

Further Reading:
www.eiabd.com > publications > research reports

Power, T., Shaheen, R., Solly, M., Woodward, C., and Burton, S. (2012).
English in Action: School Based Teacher Development in Bangladesh.
The Curriculum Journal, 23(4):503–529.

IMPACTS		
ATTITUDES & PERCEPTIONS	CLASSROOM PRACTICES	LEARNING OUTCOMES
Teachers report shift in attitudes towards communicative approaches (86% Pri Ts; 92% secondary Ts).	Increased Teachers use of English (71%-86% talk-time) Increase Student talk (25-30% lesson time) Increased Student use of English (88% Ss talk time)	Independent evaluation shows improved learning outcomes for: Primary Ts (69%) Secondary Ts (27%) Primary Ss (65%) Secondary Ss (82%)

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Researching EIA: messy interactions
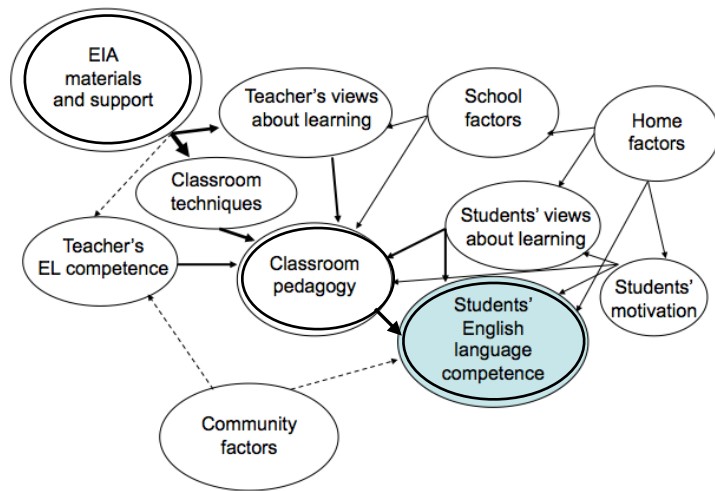
After McCormick, 2011

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Part 4:
Policy Issues?

Approaches and Evidence Base: International Development and…
- Teacher Professional Development
- Educational Technology Investment

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Common forms of Teacher Development

Long 'Out of School' Training	Short 'Cascade' Training	School-Based Teacher Development
2 weeks - 4 months out of school	1-2 days, central, divisional, local trainers, out of school	development activities in school, with peer support
limited evidence linking to outcomes	'those at the bottom don't get wet, or get wet with dirty water..'	limited evidence linking to outcomes

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Evidence for CPD approaches?

Approaches to CPD are largely based upon beliefs (Wilson & Berne, 1999)

...our understanding about what constitutes quality professional development, what teachers learn from it, or its impact on student outcomes has not substantially increased [since Wilson and Berne 1999]. (Lawless & Pellegrino 2007, 576)

General principals for effective TD

- **Context**: Classroom / school is best context for teacher development (Leach and Moon 2008).

- **Peer learning**: practising teachers learn best from each other, but with support from outside (Dembele´ 2003).

US / EU studies (e.g. CUREE 2008; Cordingley et al. 2005a, 2005b; Bolam and Weindling 2006) also show:

- **Coaching** (e.g. the stimulus of new ideas or practices).

- **Mentoring** (e.g. Providing feedback on actual practice).

- **Collaboration** (e.g. enabling teachers to work together).

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Rigorous Literature Review: …Teacher Education in Developing Countries

How can teacher education and guidance materials best support effective pedagogy?

i) teacher **peer support**;

ii) alignment of professional development with teachers' needs... and **follow-up monitoring** of teachers;

iii) **support from head teachers**; and

iv) **alignment of forms of assessment** with the curriculum.

Education Rigorous Literature Review

Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries

Dr Jo Westbrook
Dr Naureen Durrani
Rhona Brown
Dr David Orr
Dr John Pryor
Dr Janet Boddy
Francesca Salvi

December 2013
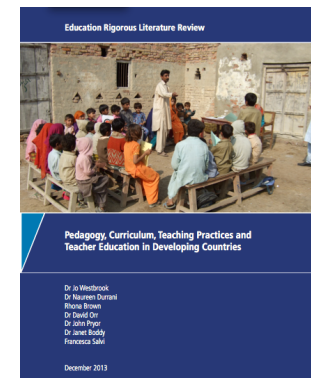
Westbrook et al, 2013

Educational Technology investment in development contexts

- Majority investment in technology

- Some investment in materials and resources

- Minimal investment in teacher development

- **Outcome: little improvement in teaching practices or learning outcomes**

- **= low cost-effectiveness**

technology

materials and resources

teacher development

After Pimienta 2007
Cawthera, 2001

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as many people have gained access to the telephone in the first five years of the 21st Century, as in the entirety of the 20th Century.

affordable mobile phones and a wireless infrastructure represent the first breakthrough in 'appropriate' ICT for the global majority

Power & Thomas 2007
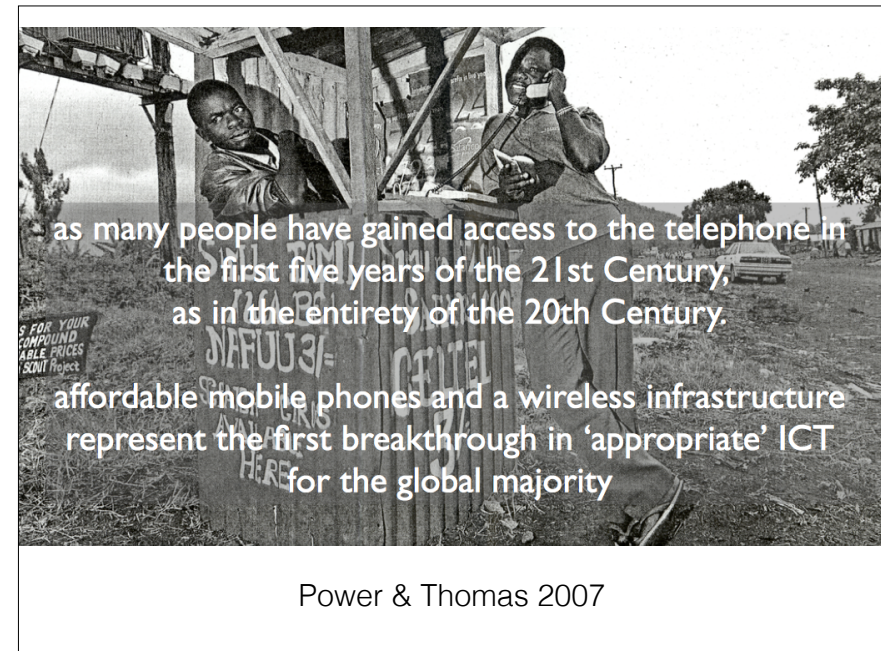
EIA handheld technology

Phase 2   Phase 3   Phase 4

iPod Touch
~ £180

Nokia C1
~ £35

SD card
~ £3.50

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EIA investment pattern: teacher development based

- relatively small per-capita investment in affordable mobile technology

- large investment in materials and resources for classroom use, and teacher development

- majority investment in 1 year teacher development programme: peer-supported, decentralised, school-based

technology

materials and resources

teacher development

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mobile Landscape review

- Educational media for instruction should be **selected based on the ability to deliver a desired educational technique to the intended location** at the most appropriate moment.

- Blended learning **approaches, where the device or digital content supports a teacher or facilitator in engaging learners in interactive learning, show better outcomes**.

- **Not enough is known**, however, about which characteristics of blended learning or **in which contexts blended learning models lead to more beneficial outcomes**.
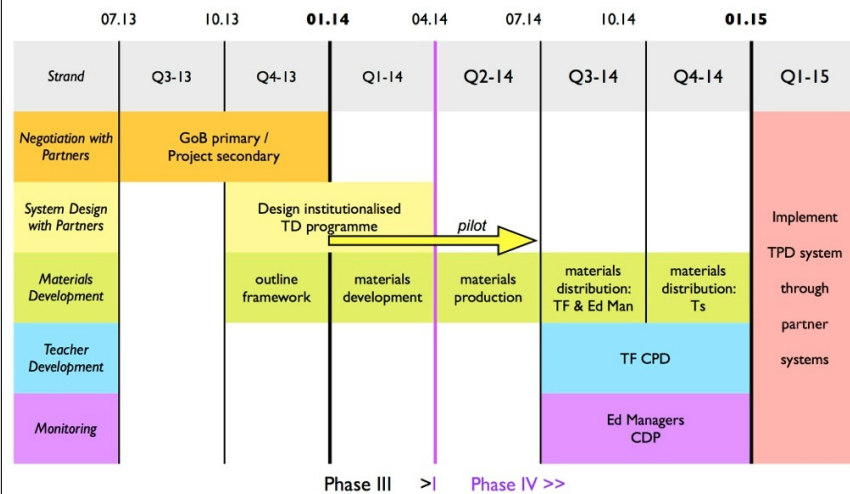

Landscape Review: Mobiles for Youth Workforce Development

Raftree, L. (2013)

Part 5:
Challenges of
Institutionalisation & Scale

Or, the road to 124 thousand teachers, and 17 millions learners?

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I&S for TPD: timeline

Strand	Q3-13	Q4-13	Q1-14	Q2-14	Q3-14	Q4-14	Q1-15
	07.13	10.13	01.14	04.14	07.14	10.14	01.15
Negotiation with Partners	GoB primary / Project secondary						Implement TPD system through partner systems
System Design with Partners		Design institutionalised TD programme → *pilot*					
Materials Development		outline framework	materials development	materials production	materials distribution: TF & Ed Man	materials distribution: Ts	
Teacher Development					TF CPD		
Monitoring					Ed Managers CDP		

Phase III >| Phase IV >>

Critical Success Factors for EIA Teacher Development (TD), by Difficulty of Institutionalisation (June 2013 workshop)		
Easy	**Moderately Difficult**	**Hard to Achieve**
High quality materials carry key knowledge / activities	Quality local AV resources easily accessible	Regular, ongoing support to teachers (not one-off training)
Programme should fulfill intent of curriculum	Peer support in school	Classroom practice and reflection drive TD
Programme should improve teachers own EL competence	Supportive Head Teacher participation	Teacher Facilitator role (not *Master Trainer*)
Programme should be accessible / relevant to teachers	Supportive local inspection & monitoring practices / personnel	
	Modelling good learning experiences in TD programme	

Conclusions

mlearning

- Powerful, affordable mobile technologies provide new pedagogic opportunities

- Offline media for mass reach and rural education, at present.

- individual ownership of technology allows for scale and sustainability

- Potentially redefining cost structures of educational technology investment

TPD

- Key Features, EIA & Literature:

  - Classroom activity based,

  - Supported by TPD and classroom resources

  - Peer & Head Teacher supported,

  - support & monitoring over time

- Wider systematic evidence base needed, on what works, in what contexts, and why

Conclusions

"You should not underestimate the power of education...
It is not beyond our power to create a world in which all children have access to a good education. Those who do not believe this have small imaginations."

Nelson Mandela (2007)

Mobile technologies are potential game changes in ELT and TPD provision. Simple, affordable, offline solutions are currently required, for the rural majority.

But the most important thing, is to focus not on the technology, but on the process of teaching and learning, and how people can work together, to share experiences, and improve practice.

ELT Teacher Education,
mobile learning & the challenge of scale?

technology

materials and resources

teacher development

experiences, issues & questions ?