



OER4SCHOOLS

Introducing digital OER

into **Zambian** primary schools

through school-based professional development



Key Ideas

- Assesses the feasibility of supporting interactive forms of subject pedagogy in primary schools – soliciting and building on learners' own ideas
- Through use of Open Educational Resources (OER) – freely available, customisable teaching and learning resources
- And Information and Communications Technology (ICT) – e.g. computers and internet
- In the context of school-based, collaborative professional development adapted to the local context

Engagement with new technologies as tools offers the motivation and a significant opportunity to update outdated didactic pedagogies



Pilot project (January – May 2010)

Participants

- 8 experienced teachers in 3 Zambian basic (primary) schools
- All serve disadvantaged communities
- Schools have access to internet and basic ICT facilities
- Teachers had little prior experience of OER, ICT or interactive teaching

Aim

- To develop, support and trial uses of OERs combined with new interactive pedagogical approaches for teaching mathematics

*"I have become a new teacher."
"The pupils are responding very well...
they've also become new pupils." (Daniel)*

Methods

- Initial engagement through 5-day intensive workshop
- Each teacher given a personal netbook computer
- Extensive follow-up support for the teachers through visits, discussions, phone calls and email
- Data collection included video, audio and observation notes of lessons and interviews
- Peer support within a 'community of practice': Teachers shared experiences, difficulties, lesson plans and digital resources with each other through a mailing list

"I used to do much of the talking ... I was telling the pupils instead of involving them" (Eness)



Findings

- All 8 participants developed their use of digital tools and resources and integrated them into mathematics teaching, although adaptation was limited
- Increased student engagement (including reduced absenteeism), understanding of concepts and attainment
- Teachers' response to the intervention was unanimously enthusiastic
- A marked reported increase in use of interactive teaching and collaborative learning approaches



For example:

- Some groupwork accommodated
- Learners' perspectives recognised and built upon
- Practical work introduced to increase engagement
- Teachers talking less, withholding answers
- Encouraging more discussion and questions
- Recognising that learner talk is productive not 'noise'
- Introducing brainstorming

- Degree of change observed was less than teachers reported; there was much closed questioning but this represented a shift away from 'telling' with no questioning!
- Constraints included slow, outdated computers, lack of access to machines and supportive nondigital resources, pupils' lack of ICT and collaboration skills
- Groupwork skills remain under-developed
- But the interactive approach was carried over into teaching of other subjects and new practices were shared with others
- Initial workshop was the key catalyst. Ongoing peer cooperation and researcher support were also pivotal
- Teachers are keen to meet again with the other teachers to exchange further ideas



"I didn't know that there was a system of interacting amongst learners. I thought it was teacher to learner..." (Brian)

"This world is a world of technology" (Agness)

"Let's keep this fire burning, we ain't stopping here!" (Brighton)

Conclusion

This was a short-term, small-scale intervention and radical change cannot be expected, although teachers are highly motivated to make significant changes and to continue the work. Our hope is that teachers can begin to adapt more digital OER for their own contexts and use these for enquiry-based learning.

Future plans

- Develop and trial a professional development resource in collaboration with other organisations working in Zambia - Camfed, UNZA, Ministry of Education, iSchool, teachers colleges, UNESCO, TESSA etc. - and build a proposal for longer term external funding
- Generalise to other core school subjects and sub-Saharan African countries
- Ultimately aim to offer methodologies and models for OER-ICT-pedagogy adoption that support lasting transformation of poorly resourced educational systems



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