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IPID ICT4D Symposium 2008

Research-in-progress

*The Use of Mobile Telephones as a Tool for Capture
Statistical Data in the Educational Sector*

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Research Design

- **Research Area:** m4d – mGovernment
- **Research Background:** A need for efficient management of primary education
- **Research Object**
 - EMIS (**E**ducation **M**anagement **I**nformation **S**ystem)
 - An information system for administration and management of the education sector



Research Design

- **Research Problem**
 - A problem for the EMIS system is the collection of data as most districts are not well computerised
- **Aim**
 - The aim of the research is to explore and analyse the possibility and conditions of using mobile telephone technology, especially text messaging (SMS), for data collection to the EMIS incl. different aspects of using mobiles



Research Design

Case study in Tanzania

Step I: Pre study 2007

Step II: Survey 2008

Step III: Pilot project 2009





Pre study 2007

- Mapping of information flow in primary edu.adm.
- Mapping of statistical data flow within EMIS
- Mapping of mobile phone networks, coverage, tariffs, systems e.g. GPRS, GSM)
 - Pre Study Report
 - Working Report: *Survey of m4d Studies*



Survey 2008

- Mapping of mobile phone ownership, usage and access among head teachers in rural primary schools
- Attitudes among head teachers in rural primary schools to acceptance and usage of mobiles in EMIS
- Attitudes among administrators on different levels to mobiles in EMIS



Background

- Implementing the Primary Education Development Programme (PEDP) since 2002 to achieve universal primary education
- Increasing enrollment rates - pupil numbers increased from 4.8 million to more than 6 million the first two years.
- Retention problems & Drop-outs due to over-crowding and under-training - Completion rate of 40-55% - Repeaters
- Financing/economic cuts - Inefficiency
- Shortage of qualified teachers, classrooms and educational materials



Background

- There is a need to plan and manage the education system
- There is a need of accurate and timely school data
 - allocate per-capita funding for the school
 - provide central government with appropriate management information to support planning
- Most primary schools are not connected to fixed telephony, electricity grid, or Internet
- Dramatic growth of mobile phone access
- Teachers early adopters



Findings from Kenya

Traxler (University of Wolverhampton, 2006)

- 12 districts (8.000 users, 85% active, ~250.000 SMS)
- SMS application to gather national schools enrolment data into EMIS
 - SEMA (Schools Administration Management Application)
- SMS bought in bulk → 75% discount



Findings from Kenya

Traxler (University of Wolverhampton, 2006)

- Doubts using private equipment
 - Difficulties understanding SEMAs role and intended use – lack of motivation
 - Errors in using the terse fixed format for gathering enrolment data
- ”The screen is small and the messages are short”



Findings

Claimed Benefits with SMS in EMIS

- Lower cost - zero capital and minimal running
- Transparency
- Speed
- Feedback incl reminders
- Low-tech
- High acceptability and ownership



Findings from Tanzania

Statistical Data Flow

A standard statistical questionnaire of 9 pages is distributed from MoEVT by courier or post annually to 14 700 primary schools via district education offices



Findings from Tanzania

Statistical Data Flow

Head teacher at school level (14 700)

→ Ward Education Coordinator (~2500)

→ District Education Officer (121)

→ Ministry of Education (MoEVT)

→ EMIS

Not all data are processed!



Thanks' for listening

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