Literacy through multimedia in rural, multilingual communities: Bridges to the Future Initiative, South Africa

ICT4D Symposium

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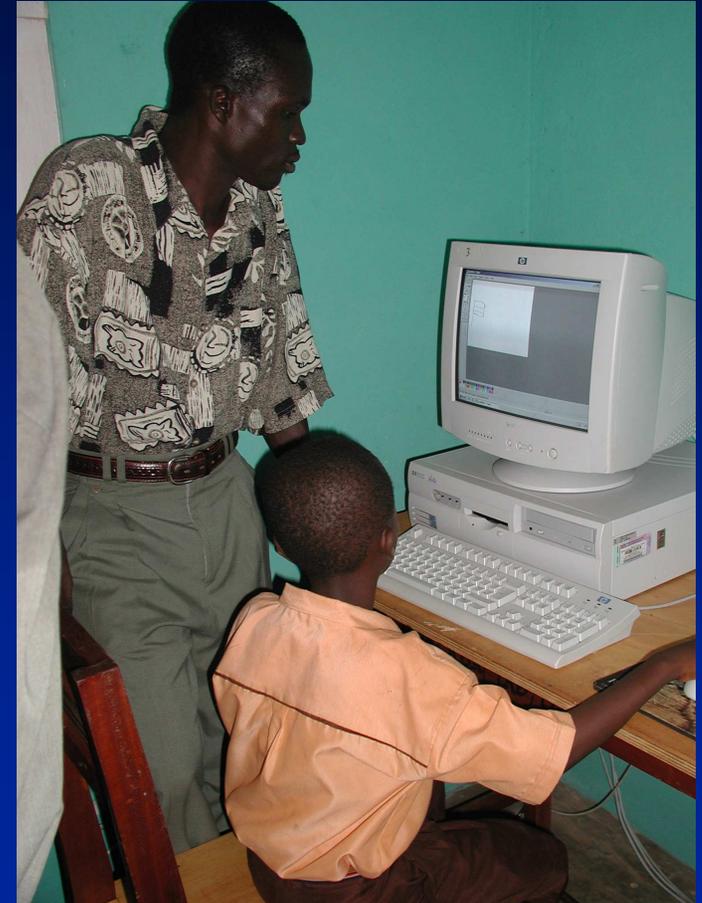
University of Pennsylvania

Main points

- **BFI goal: to research the benefits of ICT for literacy**

- **Personal research objective: research the potential success of multimedia ICT applications for teaching multiple languages**

The Digital Divide is really <u>plural</u>
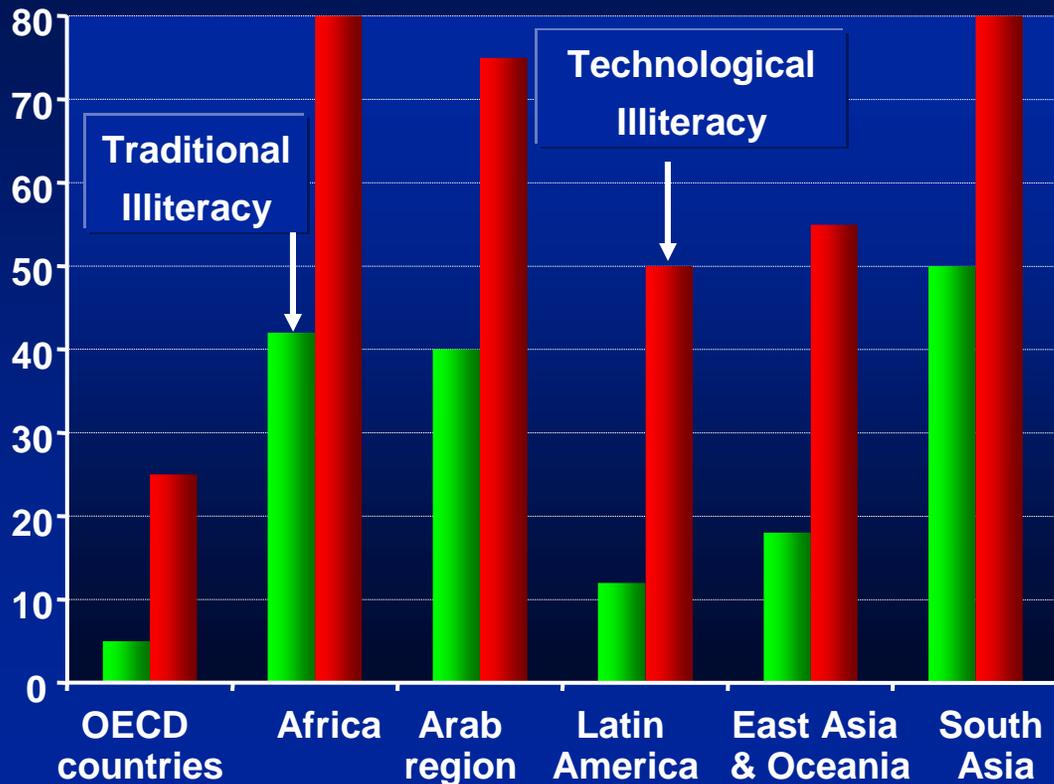
1. Access

2. Connectivity

3. Content

4. Skills

Who are the Poor?
Global Illiteracy and Technological Illiteracy

Youth and Adult Illiteracy Rates
(15 years and older, 2000)

Traditional Illiteracy

Technological Illiteracy

- **Youth/adult literacy** and **technological literacy** gaps are massive and growing

- **Large inequalities** by gender, ethnicity and language

- In **Africa**, more the **half** the population is illiterate or low-literate

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Why consider new ICTs for education and health?

Because… ICT-based tools can provide..

➔ **second-chance education and motivation for out-of-school youth**

➔ **large increase in learning quality**

➔ **cost-effective culturally-relevant materials**

➔ **immediate productivity**

➔ **customizable & context-sensitive**

➔ **improved teacher training**

➔ **very low-cost scale up**

Bridges to the Future Initiative (BFI)

Three diverse countries: **South Africa, Ghana, and India**

Main target groups: Out-of-school youth, reaching the most disadvantaged:

- Girls and women

- Ethnic and linguistic minorities

- Lowest income and unemployed

BFI provides:

- Very low-cost hardware infrastructure based on underused ICT labs

- Multimedia materials in multiple (local) languages to support literacy and information access.

- In-service teacher training

BFI summary

- **Access-only** Digital Divide programs do little to address poverty reduction.

- The last three cranium inches count - **Content** is key

- IT tools must be **consumer-oriented** and **context/culture** sensitive, and must have **learning** at their core.

- Literacy and technology are becoming **inter-dependent**

- The **Pro-Poor Challenge** is…building bridges to the **bottom half of the bottom half** of the Digital Divide in developing countries.

ILI
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- **Design process, Johannesburg**

  target audience and creators- referential, cultural disconnect

  - **field testing in local language**
  - **=> joins together design and research processes**

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Research process

- **Sample**
    - **- n for usability = 28, n for metacognition and survey questions =19**
    - **- 95% women**
    - **- range from 17 to 68**
    - **- 8 had never attended any school**
    - **- rural poor**
    - **- none had ever used a computer**

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Research process

1. usability interviews (28)

- **---task completion**

- **---evaluation**

- ***research note: detailed notes taken by interviewers of user behavior: sticking points, facilities, difficulties**

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Research process

- **2. Language learning via ICT research**

- **- metacognition tasks**
  - **a) general b) of language learning**
- **Survey**
  - **part 1 - language**
    - **a) when and how how often do you speak which languages? why?**
    - **b) what work will it take for you to be completely fluent in English? Sepedi?**
    - **c) read these two newspapers. which is more interesting and why?**
    - **d) why do you want to learn how to read and write in your home language/mother tongue? English?**

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Research process

- **2. Language learning via ICT research**

- **Survey (cont.)**
  - part 2 - general education
    - a) what do you think ABET education will get you? what subjects will be most important?
    - b) why do you think education is important now? how does this opinion differ from when you were younger?
  - part 3 - ICT
    - a) who, to you, uses computers- and how do you think they use them?
    - b) if you are intersted in learning how to use a computer, why?
    - c) how long do you think it will take you to learn how to use a computer?

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Research process

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Preliminary conclusions

1. Education generally and/or English and/or computers = opportunity

2. Sample tended to underestimate the time it would take to become literate in English (~1 year)

3. Most had straightforward and concrete reasons for learning how to use a computer and how to read and write in Sepedi and English (e.g. for dealing better with banking issues), but this was supported by less concrete ideas linking literacy (espcially in English) and computer skills to personal improvement in terms of both character and material well-being.

Next Steps

1. Continue design process in Johnannesburg

2. Encourage design team to work more closely with field team

3. Gather more data on:

a) metacognition of language learning in a multi-lingual environment

b) the ecological conditions of ICT literacy development- laptops, computer labs, ABET centers, community centers, etc.