Challenges in Cross-Cultural Design
Understanding Users and the Context in Tanzania
Introductions
post-graduate student in the Department of Computer Science and Statistics, University of Joensuu

lecturer (human-computer interaction and user-centred design)

usability engineer (in Finland)

interest in cross-cultural design since 2002
Project

- six months in Iringa, Tanzania (2008)

- two roles
  - 1) visiting teacher at the University of Tumaini, Iringa University College
  - 2) researcher doing fieldwork about mobile phones and Tanzanian students for the dissertation

- supported by Emil Aaltonen Foundation
Tanzania

- a developing country in East Africa
- 41 million people
- Kiswahili, English, Arabic, local languages
- Christian, Muslim, local religions
- most people live in rural areas
Iringa

- a town in Southern Tanzania
  - 500 km from Dar es Salaam

- about 100000 people

- several colleges
  - Tumaini University, Iringa
  - University College
Tumaini University, IUCo

- a private Christian university

- students come from all parts of Tanzania, many religions and different backgrounds

- about 3000 students, 100 teachers

- BSc in IT - programme started in 2007
Background of Research
Mobile Phones in Tanzania

Source: Tanzania Communication Regulatory Authority
Mobile phones are often seen as a possibility for poor people to increase their income.

Villagers in Iringa Region: mobile phones as a financial burden (Mpogole et al., 2008)

Still, more and more Tanzanians want to have one and keep using it – why?
A recent vision document suggests that user-centred design should start with a new stage, that of understanding (Harper et al., 2008).

Focus is on understanding the values of the stakeholders and choosing the ones for which we want to design.
Values are in the centre of the culture, but may be hard to see and understand.

Designer is unfamiliar with the local context.

Designer needs to consider what kind of techniques would work best with the local users.
Research Questions

- How do Tanzanian students see the positive and negative effects of mobile phones on their life?
- How does the local context affect the patterns of use?
- What kind of things should be considered when choosing the techniques to be used in Tanzania?
Method

- an ethnographic study combining several techniques
  - observation
  - diary study
  - storyboards
  - questionnaire
  - interviews
Things to Live With
- bad traffic conditions
- bad traffic conditions
- electricity and water on/off
Infrastructure

- bad traffic conditions
- electricity and water on/off
- faulty equipment
Infrastructure

- bad traffic conditions
- electricity and water on/off
- faulty equipment
- problems with mobile phone networks
Infrastructure

- bad traffic conditions
- electricity and water on/off
- faulty equipment
- problems with mobile phone networks
- slow Internet connections
Infrastructure

- bad traffic conditions
- electricity and water on/off
- faulty equipment
- problems with mobile phone networks
- slow Internet connections
- unreliable post office
- no address system
Health

- illness and death
- lack of healthcare facilities
- both designer and anyone around!
bureaucracy
- time-consuming
- contacts or outsourcing recommended

corruption
- Tanzanian police, court system and immigration office are amongst the six most corrupted public institutions in East Africa (Source: East African Bribery Index 2009)

theft
- streets, houses, workplaces
examples

- If you don’t say it, it does not exist.
- Lengthy introductions required.
- Very formal / informal communication in unexpected situations.
- Let’s check the spelling...
- Who says it matters more than what is said.
Gender and Power

- roles of males and females
  - how the local people react to the researcher
  - problems of getting participants involved
  - what kind of issues can be discussed

- power relations
  - it is difficult for a Tanzanian to disagree with someone who is older or in a higher position
Kiswahili is the common language of Tanzanians though not necessarily the first language they learn.

English is the language of teaching in secondary schools and universities but in reality the language skills vary a lot.

Outside the schools and offices English does not exist an interpreter is required.

Interest in Kiswahili is appreciated.
Techniques
Observation

- direct observation
  - difficult to hide!
  - lack of Kiswahili skills

- local media
  - television, newspapers, websites
  - helps to understand the local issues
Tanzanians students in general are not familiar with the concept of a diary.

- basic idea and purpose of a diary were often not understood

- no quantitative data, but interesting stories

13/10/08
“Unfortunately the whole day my phone couldn’t have a charge and there was not electricity in that day because our house use voucher.”

15/10/08
“I get one call from my brother, it was 5 minutes conversation, being informed that there is some problems in home. This information makes me not feeling well for at least whole night.”
- Provided insights into the mobile phone use in Tanzania and help for planning the rest of the study.

- One of the techniques that did not take much time and could be done at the beginning of research process.

- Some types of use were not reported.
IT students worked in small groups

task: come up with an idea for a new mobile phone service that would be useful in Tanzania

Idea was presented as a storyboard to the rest of the students

Presentations raised a lot of comments and discussion.
Storyboards

1. People exchange some ideas at a café.

2. Phone alert users that there's an SMS/voice.

3. System displays SMS/voice and users read/pay attention.

4. Users change their mind/behaviour.
- a long process
- review with a local person
- missing answers
  - a survey would be better
- Provided interesting results about the frequencies of some phenomena, although on its’ own results would be hard to interpret
examples of results

- About 50% of the students beep at least once a day and over 70% report that they get beeped at least once a day.
- Many students own several SIM-cards; the average number of SIM-cards was 1.72 per student.
- 92% of the students use at least once a day an operator service that allows them to check their balance for free.
Interviews

- how to find the participants
  - financial benefit vs. pressure from superiors
- a lot of time required for arrangements
- individual / group interviews
- language skills
- suspicions
  - recording
  - permission
“I know I like giving example of myself, my friend, my girlfriend knows only I have Tigo line, and I have never told her that I have two chips. So one day she beeped me through Voda, then I decided to change, no, she sent a message, she sent a message “please, call me”, okay then I change, I call, we talk a lot, then later she say whose number I used, no way, put everything clear, have to hide, hey God, please forgive the sin of having to hide, to maintain our relations, “oh sorry, this is not my number, this is my friend’s number, I just borrowed so that I can talk to you to minimize the costs because if I call you using Tigo line and you beep me through Voda, it is costiful to me.”
Things Learned
Summary

- Reserve enough time for the research – prepare for surprises.
- Learn about the local communication style.
- Ensure that you understand the wider context.
- Think how the relationship between the designer and the users will affect the use of techniques.
- Check whether it is really possible to communicate well with users without an interpreter.
- Use more than one technique.
- Plan carefully what are the best ways of contacting users and encouraging participation.
Thank you!

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