

MY BACKGROUND

- Kenya (East Africa)
- B/Ed (Kenya)
- MSc (UK)
- Doctoral Student (UK)

RESEARCH BACKGROUND

- VeSeL (Village e-Science for Life)
- Part of the Bridging the Global Digital Divide network sponsored by the Engineering & Physical Sciences Research Council (EPSRC) in UK.
- VeSeL; 5 UK Universities & 1 Kenyan University.
- TVU = VeSeL UK = User Interface Design

The effect of culture on UEMs: Findings from on-site case studies in Kenya and UK

- Aim of VeSeL project was to enable rural communities in Sub-Saharan Africa to use digital technology to improve their agricultural practices, with particular emphasis upon educational barriers.
- At the start of the project, a group of the VeSeL UK team, made a visit to Kenya to identify potential farming communities to work with.

- In collaboration with VeSeL Kenya, two local farming communities were identified.
- These two farming communities in Kenyan form part of the users in this study.
- Two sites in case one collapses.

IN THE FIELD; VISITING FARMERS IN RURAL KENYA

- Spent 2 weeks on each site interacting with them in their everyday life.
- The objective was to understand their technology needs and develop a user requirement profile of these users.
- Some pictures...

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USABILITY TESTING

- Exploratory study using DUCE method;

-gain understanding of users' perspective on user testing and

-assess the quality of user feedback that would be obtained.

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INITIAL USER TESTING FEEDBACK

- Perceived the usability evaluation exercise as an **exam (!)**.
- **Talked very little** during the usability evaluation.
- Only made **non-critical comments** despite finding it very hard to use the mobile phones.

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EXAMPLE

- Task 3

Enter the following number in the mobile phone

07863456872.

THE PROBLEM

- Usability evaluation methods (UEMs) developed in the USA and Europe do not give the same results when used in non-western cultures.
- The presence of an evaluator negatively affects user feedback
- The users' level of previous experience with technology

RESEARCH OBJECTIVE

- Provide new testing guidelines that increase the reliability of usability testing by avoiding cultural bias and therefore making it possible to generate comparable results across different cultures.

RESEARCH QUESTIONS

- i. How does the presence of the evaluator affect the quality of user feedback in cross-cultural user testing?
 - o Richness of user/evaluator dialogue=understanding why usability problems were encountered.
 - o Critical comments=can be useful design ideas/suggestions.

- ii. How does the presence of the evaluator affect the performance of the user in a cross-cultural context?
- The ability to unearth usability issues
 - Task success rate
 - Time of task completion
 - Deviation from the optimal path

- iii. What is the effect of the users' level of previous technology experience on the quality of user feedback in cross-cultural user testing?

PROPOSED SOLUTION

- Adapt usability evaluation methods so that they remain culturally sensitive without disguising the usability problems of the product being evaluated.

USABILITY TESTING ADAPTED

- Using the Face Negotiation Theory and a review of previous cross-cultural usability studies, we developed a framework that would be used to adapt UEMs when they are implemented among non-western users.
- Adaptation= increase the quality of the user feedback.

STUDY DESIGN

- We looked for two UEMs that had contrasting levels of user/evaluator interaction.
- The methods chosen were the Retrospective protocol (RP) and the Co-discovery (CD) method.
- The RP method has got a high level of user/evaluator interaction while the CD method has very little user/evaluator interaction.

CD method further adapted;

- the evaluator's presence very minimal.
- paired up men/men & women/women.
- paired-up users were from same tribe.

- paired up users were acquaintances.
- Mobile phone being tested not user
- users were of the same technology level.

- Both UEMs were implemented among Kenyan and British farmers.
- I travelled to Kenya and carried out usability studies among the two farming groups mentioned earlier.
- Selected British farmers to carry out the usability studies.

MOBILE PHONES THAT WERE TESTED



7-Oct-10

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IN THE FIELD

- Kenya/pictures



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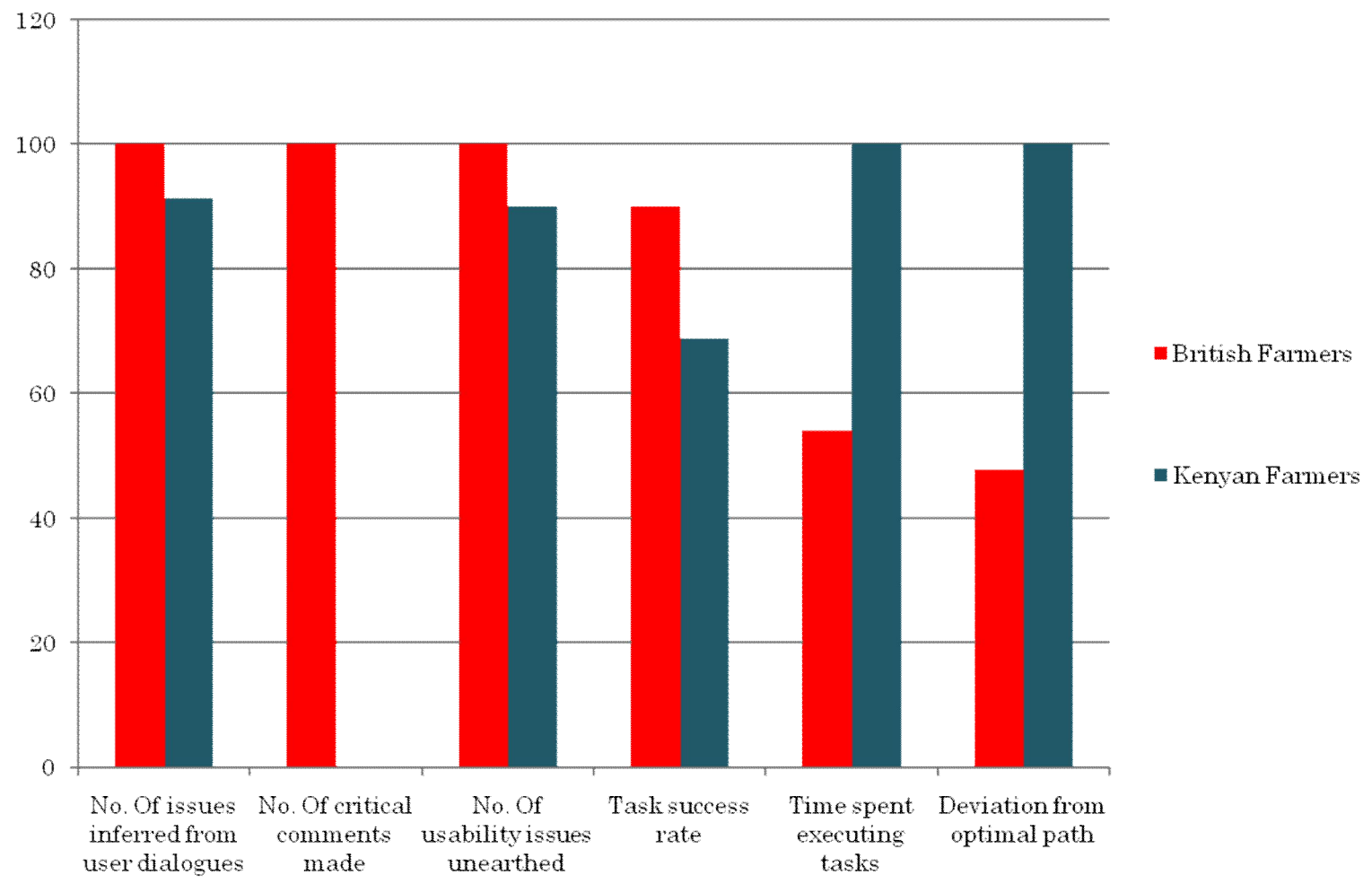
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RESEARCH FINDINGS

	Kenyan Farmers CD	Kenyan Farmers RP	British Farmers CD	British Farmers RP
No. of issues inferred	66	60	64	74
No. of critical comments	0	0	8	14
No. of usability issues unearthed	10	8	8	12
Task success rate	90%	47.5%	95%	85%
Aver. time spent executing task	1053.25sec	1571.75sec	827.75 sec	590.25 sec
Deviation from optimal paths.	50.25 screens	66.75 screens	28.75 screens	27.25 screens

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OVERALL

- The Kenyan farmers had higher quality user feedback with the adapted CD than the RP method.
- The British farmers had higher quality user feedback with RP than the adapted CD method.

PRACTITIONERS' TAKE AWAY

To increase the quality of user feedback among non-western users;

i. When carrying out usability evaluations whose objective is to understand the context of the users' actions, if the UEM(s) chosen involves a close user/evaluator interaction, then that method should be adapted so that the user/evaluator interactions is reduced or removed.

- ii. Use UEMs that have a level of teamwork aspect in them. If the chosen usability method lacks collaborative aspects in them, then an adaptation of that UEM towards being collaborative is highly recommended.
- iii. The users need to be of the same level of technology experience.
- iv. They also need be of the same tribal grouping and same gender.

- v The users' level of previous technology use does affect the quality of user feedback. Therefore, the higher the level of previous technology experience, the higher the quality of user feedback.
- vi. Remove anything that may make the user find the user testing exercise as an exam

- vii If the aim of the usability evaluation exercise is to obtaining design suggestions;
- for non-western low-end users, they will most likely not make critical comments. Consequently, there needs to be further investigation on how to obtain design suggestions from this category of users.

CONCLUSIONS

Adapting UEMs does increase the quality of user feedback among non-western low-end users.

UEMs targeted for non-western users may not be suitable for western users.

- End...

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- Any Questions?

KIITOS