A cultural appropriation of Usability Engineering and Participatory Design practices -A Namibian Experience-

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Here I am 12 years after having arrived in Windhoek, the capital of Namibia, spending time with different user groups redefining such straight forward terms as “Usability” before even thinking of starting the software development process. What a long way back, in 1994 I launched straight into the development of a computer aided learning system just to discover in the late usability evaluation phase that the chosen user participatory methods were culturally invalid and not participatory at all.

I could have spared myself of that painful experience would I have just studied social science and insights of a few computer scientists immersed in constructivism. Thus after substantial research in the field of cross-cultural system design I came to the following reasoning in 2000:
“In participatory design, the “real problem” as well as the system requirements are best determined through merging the different viewpoints of the stakeholders involved. However, in a multicultural system design setting, the forming and interpretation of viewpoints, as a cross-cultural judgement, is problematic in that it depends on the stakeholders’ perception of the environment. Yet the perception of reality and the structuring and processing of experience depends on our habits that are shaped by our culture. A foreign computer expert understands and models the environment as he perceives it through his personal culture-bound perspective which rarely coincides with the view of the local users. This obviously has a major impact on system design which in this case is based on a misconception of the initial situation, thus leading to the implementation of an undesirable system. Diverse disciplines advocate a dialogical approach to resolve or minimise those misperceptions within co-operative tasks. Yet cross-cultural dialogue is predetermined for misunderstandings due to distinct cultural determinants. […] Although the importance of communication in system design has generally been recognised and multiple methods have been put forth to facilitate communication between user and system engineer, their validity has not been studied in a multicultural context as yet. It is thus up to the system engineer to determine the stakeholders’ intention and communication competency and to accordingly develop and apply culturally valid communication techniques to conduct a successful dialog.”

Based on this recognition I developed a generic framework for dialogical system design. The most important conclusion being, that Information Technology as well as the development methods and techniques can not simply be transferred across continents and cultures but have to be determined within each development context jointly with the users. Thus “Participatory design in a cross-cultural context goes beyond the involvement of users in the design of the product but should include an appropriation of the design process itself.”

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2 “The Challenges of Participatory Design in an intercultural context: Designing for Usability in Namibia”, Participatory Design 2006, Trento, Italy
The viability of such an approach has been demonstrated in environmental development projects, where users take on ownership of the development process as well as of its outcome. Striving to determine how to design usable and sustainable software, I have been focusing on evaluating and experimenting with usability engineering and participatory design methods in the Namibian context. The hypothesis that methods have to fit the cultural context has been confirmed by findings such as: more qualitative feedback in interviews is obtained if usability evaluators and users are of the same ethnic group due to a reduced power-distance; questionnaire results are invalid due to high listener-satisfaction; workshops as a means of collective usability evaluation method rather than individual user evaluations reflect the local community habits and proved to be successful; involvement of the users in terms of participatory design rather than late user evaluations increases ownership; scenario techniques are a suitable method as it mirrors the Namibian narrative culture; scenarios furthermore create high context to successfully engage users in task evaluations.

Moreover did a thorough analysis of usability evaluations in the local context reveal a so far unknown challenge in cross-cultural usability engineering: namely that the implicit western understanding of “usability” and its associated assumptions lead to locally inappropriate usability evaluation. For example, “current usability testing methods are based on the assumption that an effective and efficient task completion correlates with user satisfaction. Our findings, however, imply that user satisfaction in the Namibian context is independent of task-solving success.”

Thus I suggest a contextual redefinition of “usability” and determination of valid methods. We have run a series of investigative sessions with different Namibian user groups. First, participants were asked to brainstorm on associative and related terms/concepts for the word ”usability” in general. Second, participants elaborated on general characteristics of a ”good working environment”. Third, participants select only the appropriate terms from the two previously produced lists which should apply to the software system they (will)work with, to be considered ”usable”. Terms that were named by more than one group were: easy, save, comfort, specific, reliable, pace, goal oriented, and conducive. Interestingly none of the groups mentioned terms commonly associated with ”usability” such as speed, learnable, memorable, and error rates.

More sessions will be run to determine whether the meaning is user group specific or whether culture specific terms can be identified.

The established clarification of a mutual new understanding leads us however to the next challenge, the correct choice and design of methods to evaluate the agreed upon meaning. It would be desirable to have evaluation tools to confirm the adequacy of the chosen methods or to develop a worldwide catalogue of best practises. I am hoping that the CHI 2007 workshop will be the genesis of an international community to discuss open questions, create international awareness on malpractices and facilitate the design of locally adequate and sustainable solutions.


4 “Assumptions Considered Harmful – The Need to Redefine Usability”, HCII 2007, co-author J. Fendler, to be published