Week 8 SI757 Reading Notes
Session of 15 March 2010
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Heeks and Molla's compendium is a very useful survey of frameworks for the impact assessment of ICT4D projects. The authors assert there are not enough impact assessments and that this work addresses one of two identified challenges, lack of knowledge (lack of political will and motivation being the other). The first section provides an overview, the bulk of the document is a series of framework summaries, and the paper closes with a bibliography that provides references, including covering topics not addressed in the paper (e.g., sector-specific assessments).

The overview characterizes six questions that can serve as the basis for an impact assessment: why (rationale), for whom (audience), what (things to measure), how 1 (metrics), when (project phases to be assessed), and how 2 (results dissemination and use). Five categories, from total failure to total success, are offered as summary classifications. The table on page 8 offers a means to selecting one's assessment approach based on a variety of framework attributes (e.g., resource requirements, generalizability).

Where Heeks and Molla did not get into the details of specific research methodologies, Tacchi et al.'s handbook provides a detailed overview of ethnographic action research. "Ethnography is a research approach that has traditionally been used to understand different cultures. Action research is used to bring about new activities through new understandings of situations" (p. 1). Their approach is a variation of the well-known quality cycle of plan, do, check, act, which they re-categorize as planning, doing, observing, and reflecting. Ethnographic action research was developed for and draws on examples from nine projects in South Asia, but the authors consider the approach transferable to other regions. The majority of the projects are focused on women, which we discussed in class last week. This focus on gender is because "research has shown that in many countries, the single most effective way to reduce poverty is to educate young women" (p. 19).

The iterative nature of planning, doing, observing, and reflecting is intended to develop a culture of research and continuous improvement within projects. The authors distinguish this approach from impact assessment, which they imply is abstracted from the project and does not necessarily feed back into the project.

The authors are strong advocates for close relationships between the researchers and the research subjects, even to the point of involving the subjects as co-researchers. "Participation does *not* mean inviting participants only at the beginning, to frame project goals and research aims, which are then handed over to others to carry out. It *does* mean inviting appropriate participation at all stages of research, as an ongoing process or as part of a 'research culture'" (p. 27). That close relationship and immersion by the researchers in the field is necessary to "make sense of each feature of a place and a project in relation to the bigger picture and not in isolation" (p. 10). It also provides a person appreciation for community conditions (and a health skepticism for government statistics): "Do not simply accept, for example, the official definition of poverty---look at how it is defined and how it relates to what you are finding out about poverty" (p. 99). Then, through action research, "you are *developing* your projects through a rich understanding of your community, your projects and the ICTs you are using" (p. 12).

Practical advice from the field is the theme of the three other papers. Brewer et al., share their experiences from undertaking ICT4D projects, where they "encountered a wide range of

technical, environmental, and cultural challenges that are outside the scope of typical computer science research" (p. 15). The issues of power reliability, spyware and viruses, lack of local support expertise, staff turnover, customs and shipping, and "time dilation" are all things I have experienced in Africa. The lessons learned, including the importance of local partners, are also values that I've taken to heart.

Donner et al. have similar lessons, as they observe that ICT projects "require more than technical solutions" (p. 34). The authors provide a design model consisting of five stages: wonder, exuberance, realization, adaptation, and identification. They note that even "knowing that we might go through five stages of design doesn't mean that any of them can be easily skipped. In fact, while our prior experiences have saved us from some of the more blatant irrational exuberances, they never seem to grant all-around immunity" (p. 40). As with Tacchi et al., Donner and his colleagues advise that the critical factor is spending time with research subjects in the field—"Spend time early, spend time frequently, and spend a lot of time" (p. 40).

Another lesson from Donner et al. is to accept the simple solution. This echoes the "pragmatic design" approach by Marsden, who says that too often Moore's law "can blind developers to alternative design solutions" (p. 42). Marsden then provides examples drawn from mobile phone projects where the solutions that met local needs could also be applicable to users in developed countries. "Designing for the developing world leads us to innovative solutions less obvious to designers in technology-rich environments, but the solutions are no less valid" (p. 44). In a shift from pro- and para-poor to per-poor, Marsden notes that his team is now focusing on "empowered design," which will empower those in developing countries to create their own systems.

Week 8: PARTICIPATORY METHODS, ASSESSMENT, AND DESIGN (Mar 15th)

Eric Brewer, M. Demmer et. al., "The Challenges of Technology Research for Developing Regions," *IEEE Pervasive Computing* (2006), pp 15-23.

Jonathan Donner et. al. "Stages of Design in Technology for Global Development," *Computer* 41:6 (2008), 34-41.

Gary Marsden, "Toward Empowered Design," *Computer* 41:6 (2008), pp 42-46.

Joanne Tacchi, Don Slater, and Greg Hearn, *Ethnographic Action Research: A User's Handbook* (UNESCO 2003).

Richard Heeks and Alemayehu Molla, *Compendium on Impact Assessment of ICT-for-Development Projects* (International Development Research Centre, 2009).