

Chapter 6

Potentials of Digital Assistive Technology and Special Education in Kenya

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ABSTRACT

Technology specifically designed for people with disabilities is important in lowering boundaries to education, employment and basic life needs. However, the growth of a vibrant tech sector in Kenya has had little effect on the prevalence of digital assistive technology in the country. In this chapter, the authors report on initial explorations undertaken in Kisumu, Kenya to identify existing strengths, relationships, and gaps in access to digital assistive technology. The goal was to explore opportunities for initiatives in participatory design of assistive technology, using an international community/academic partnership. Relevant literature and projects from the areas of Information and Computer Technology for Development (ICT4D), Human-Computer Interaction (HCI) and Critical Disability Studies are reviewed and, these theories are grounded in the authors' experience working with stakeholders in the region. The conclusion discusses promising future directions for participatory and collaborative research in Kenya, and more broadly in the East African context.

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INTRODUCTION

The availability of non-commercial assistive technology is improving. A series of factors is driving this change including the upsurge in commons-based production (including open-source software and hardware), the growth of Do-It-Yourself (DIY) and Maker communities, and a proliferation of accessible and affordable prototyping components (Hurst & Kane, 2013). This improved access is especially promising in contexts where the need has long been recognized but technological and economical barriers have limited the development and deployment of Assistive Technology (AT) relevant to localized contexts and communities of users.

In this chapter, we will discuss the potential promising directions of digital AT development in Kenya, with a view to the larger East African context. We review relevant literature and projects from the fields of Information and Communication Technology for Development (ICT4D), Human-Computer Interaction (HCI), Critical Disability Studies and Participatory Design (PD) and related theories to researchers experiences working with stakeholders in the region. We conclude with a discussion of promising future directions. This chapter emerges out of a collaborative project being undertaken by an international, interdisciplinary team of social scientists, computer scientists and community agencies working together to develop a transnational model to improve access to AT. The transnational team includes two computer scientists specializing in digital AT and ICT4D, a psychologist and mental health researcher, an expert in social work and refugee studies and a founding member of a Kenyan NGO with experience working with children with disabilities. Our team shares a strong interest in interdisciplinary collaboration and community engagement with previous experiences working in East Africa and other developing regions of the world including South Asia and Central America.

This work investigates the use of cross-sectorial academic/community collaborations to improve the well-being of children with disabilities in Kenya, and ultimately, for all who might benefit, both in Kenya and around the world. Academic/community collaborations have tremendous potential in addressing complex social issues (Boyer, 1990; Chernikova, 2011). This is particularly the case if community members who are directly affected by the issues being studied are engaged (Minkler, 2005). These ideas of participatory and collaborative work underpin and shape the current initiative.

As part of this project, a stakeholder meeting, organized and facilitated by local community partner was held in the summer of 2014 in Kisumu. The stakeholders included representatives from different government, non-government, and community agencies and a national advocacy group. The meeting had three goals. First, to create a network map to explore existing, potential and desired relationships between different stakeholders; second, to identify gaps and barriers in accessibility and

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