

Guest editorial

SACJ 54, October 2014

ICT for Development in Southern Africa

Judy van Biljon and Hugo Lotriet

School of Computing
University of South Africa

vbiljja@unisa.ac.za lotrihh@unisa.ac.za

This edition of SACJ is a special edition that focuses on Information and Communication Technologies for Development (ICT4D) in Southern Africa.

ICT4D research (which inherently tends towards being multi-, inter- or trans-disciplinary) has contributed to understanding the challenges associated with the engineering, application and adoption of technologies in developing countries and contexts, thus impacting on design, policy, and practice. For the purposes of this special issue; the term “ICT” comprises electronic technologies for information processing and communication, as well as systems, interventions, and platforms that are built on such technologies. The term “development” includes, but is not restricted to, poverty alleviation, education, agriculture, healthcare, general communication, gender equality, governance, infrastructure, environment and sustainable livelihoods.

Many of the past and current discourses have dealt with questions on what should be researched. Examples of these are the ICT4D 2.0 Manifesto by Heeks [1], Chaudri’s critique of ICT4D projects [2] and Gomez and Pather’s paper on ICT evaluation [3]. The discourse on the diversity of research questions is inevitable given the diverse range of disciplines involved and the plurality of epistemological perspectives on ICTs in developing regions [4].

Against the ongoing discourse on what should be researched it is essential to also keep the discourse alive on how research should be done. The academic interdisciplinary field of ICT4D research has come under scrutiny for a lack of rigour. Weber [5] identifies challenges to building useful ICT4D models of reality in that the phenomena of interest are not always clearly defined, the theories that underpin the research are not articulated carefully, and the research methods and data-analysis methods used do not conform to norms for conducting high-quality empirical research. An analysis of academic ICT4D literature demonstrates that the majority of contributions are focused on best practices (including lessons learned, or success factors); field experience (including description, evaluation or analysis of an experience or project); and policy recommendations, while theory and methods, design and testing have received less attention [6]. Therefore an improved

understanding of interdisciplinary communalities and differences is needed to identify the standards applicable across disciplinary and methodological distinctions for high-quality research. Extending the disciplinary discourse, Walsham [7] argues for moving beyond multidisciplinary as currently enacted towards closer collaboration in a transdisciplinary framework. The aim of this special issue is therefore to explore topics that would enable a more profound understanding of and directions for extending research into the use of ICTs in support of economic and social development in Southern Africa, with an explicit aim of also contributing to the methodological and theoretical discourses amongst researchers in this area. The call for papers for the special issue therefore explicitly indicated the focus as being:

Theory building, including formulation of theory, conceptual frameworks or typologies)

Theory testing, including validation of existing typologies, theories or frameworks, and

Methodologies, including novel methods or approaches to collect or analyse data.

We were pleased with the response from researchers. Twelve papers were submitted of which four were ultimately accepted for publication. The collection of papers highlights the diversity of voices that need to be heard in ICT4D. Voices heard in this edition include that of caregivers in home-based healthcare (de la Harpe), children as co-designers in interface design (Gelderblom), persons with disabilities (Blake, Tucker and Glaser) and aspirant teachers (Bladergroen, Bytheway, Cantoni, Chigona, Pucciarelli and Sabiescu). In addition, both the voices of researchers in the disciplines of Information Systems and in Computer Science are present amongst the authors of these papers. In terms of discourses on the use of theory in ICT4D the range covered by the papers is as follows:

Deductive theorising. Retha de la Harpe uses Actor Network Theory (ANT) to explain processes, concepts and structures in participatory design of mobile care data applications for home-based healthcare in South African communities;

Inductive theorising. Bladergroen et al. provide an example of the development of a conceptual framework through use of grounded theory to explain the aspirations for “professional development of undergraduate pre-service teachers in South Africa”.

Methodologically the discourses in this issue relate largely to participatory design:

- Helene Gelderblom argues for and explores the involvement of children in educational interface design;
- Edwin Blake, William Tucker and Meryl Glaser reflect on their use of Community-Based Co-Design methods in the development of ICT access for deaf persons through the use of mobile devices.

We wish to thank all the reviewers for their time and the thoughtful and informative feedback received. We trust that readers will experience the outcome achieved by the appearance of this special edition as a small step forward towards a stronger conceptual and methodological base for ICT4D research in Southern Africa.

It is hoped that the vibrancy of these discourses on the conceptual and methodological foundations of ICT4D research will stimulate significant future contributions.

REFERENCES

- [1] R. Heeks. *The ICT4D 2.0 manifesto: Where next for ICTs and international development?* University of Manchester. Institute for development policy and management (IDPM). Development informatics group, 2009.
- [2] A. Chaudri. ICT for development: Solutions seeking problems? *Journal of Information Technology*, 27:326–338, 2012.
- [3] R. Gomez and S. Pather. ICT evaluation: Are we asking the right questions? In *Proceedings of the 4th International Development Informatics Association (IDIA) Conference*, 2010.
- [4] D. Kleine, A. Light, and M.J. Montero. Signifiers of the life we value? Considering human development, technologies and Fair Trade from the perspective of the capabilities approach. *Information Technology for Development*, 18(1):42–60, 2012.
- [5] R. Weber. Research on ICT for development: Some reflections on rhetoric, rigor, reality and relevance. In *Proceedings of the 3rd International Development Informatics Association (IDIA) Conference*, 2009.
- [6] R. Gomez. The changing field of ICTD: Growth and maturation of the field, 2000–2010. *The Electronic Journal on Information Systems in Developing Countries*, 58(1):1–21, 2013.
- [7] G. Walsham. Development informatics in a changing world: Reflections from ICTD2010/2012. *Information technologies and international development*, 9(1):49–54, 2013.

Note from Editor-in-Chief

We say goodbye in this issue to Computer Science editor Scott Hazelhurst, who has played an important role in building *SACJ* to its current standard. Scott invited me to apply for the editor-in-chief position in 2012, and I thank him for commitment to thorough reviewing and helping authors to improve their work. We are pleased to have two new editors, Reinhardt Botha and Ian Sanders, to replace those who have left over the year.

– Philip Machanick