A Critical Evaluation of Past IDIA Research: Lessons Learnt for IDIA and ICT4D Researchers

Ishita Ghosh
Centre for IT and National Development, Dept of Information Systems, University of Cape Town
South Africa

Müge Haseki
Centre for IT and National Development, Dept of Information Systems, University of Cape Town
South Africa

Selina Mudavanhu
Centre for IT and National Development, Dept of Information Systems, University of Cape Town
South Africa

Jean-Paul Van Belle
Centre for IT and National Development, Dept of Information Systems, University of Cape Town
South Africa
Jean-Paul.VanBelle@uct.ac.za

Abstract

The International Development Informatics Association (IDIA) was established specifically to provide a platform for information exchange between Global South-based ICT4D researchers with the hope of providing a more critical and context-aware strand of ICT4D research. This paper takes a critical look at the past four years of the IDIA published conference proceedings to see whether this objective has been achieved. We found that authors indeed hail mainly from the South, but with a dominance of South African-based authors, the dominant reference disciplines are computer science and information systems, few papers conceptualize development from a critical perspective but participatory research approaches are the norm rather than the exception. The main research application domains are education, health and public access, which address critical areas of social needs, but only a small portion of research looks at rural areas, arguably those most in need of development. Recommendations for both ICT4D researchers and future IDIA conferences are made.

Introduction

Reflective practice is an important activity for conscientious researchers in general, but it is especially so for researchers in the domain of development informatics whose aim is not only to make academic contributions but also, hopefully, to make a concrete impact (Heeks, 2010). The International Development Informatics Association (IDIA) was established as a "platform for exchanging experiences in the field of Development Informatics" (IDIA, 2015) but, unlike other major ICT4D conferences and journals, it has the specific aim of providing a forum for, and connecting researchers from the South. The explicit aim is to escape the dominant viewpoints and biases that may be present in the ICT4D research initiated by researchers in developed countries.

However, a *formal* assessment of whether these aims – of providing a forum for South-based researchers and the manifestation of the unique "flavour" of their research – have been achieved, is currently lacking. Hence this research reflects on the four most recent years of published IDIA conference proceedings and asks the following questions of the IDIA papers published there:

- Has IDIA seen the hoped for author shift from North to South?
- Which disciplines and institutions do the authors come from?
- What kinds of collaborations are manifested in papers submitted to the conference?
- What are the dominant research paradigms and methods adopted?
- How is "development" conceptualised?
- Which research domains and geographical locations (sites) dominate?

The answers to these questions are not only meant to inform future IDIA conferences but, more importantly, also provide for critical reflection by ICT4D researchers.

A fairly standard descriptive meta-analysis approach was adopted for this research. A census approach was used and all 76 refereed research papers published in the proceedings of the last four IDIA conferences were analysed. A mix of qualitative thematic analysis and descriptive statistics is used to address the above research questions. In what follows, the terms Development Informatics (DI) and ICT-for-Development (ICT4D or ICTD) are used interchangeably.

The paper briefly discusses prior ICT4D "meta-analysis" studies, the research method adopted for our analysis, addresses each of the research questions in turn and concludes by summarizing the findings with suggestions for the way forward.

Background

There is a small but interesting set of reflective studies on the trends within the ICT4D domain. Some of these studies have focused on the domain at large and spoken to the communal themes and progress (Chepken et al, 2012; Gomez et al, 2012), typically also pointing to potential barriers and strategies to address these (Bussell, 2005). Others have done the same, but by drawing on published scholarship (Hedstrom & Gronlund, 2008; David et al, 2013); while others have reflected more on a specific publication venue, and therefore a specific academic community (Dodson et al, 2013). Finally, some scholarship focused on a few salient features considered to be especially noteworthy. For instance, the Dodson et al (2013) paper looks specifically at projects that "failed" to meet their development objectives. Gitau et al (2010) attempt to understand the presence and role of African researchers in the larger ICT4D field, thereby acknowledging the disproportionate presence of Western researchers in the field and firmly situating the importance of African researchers in the continent's development. Dearden (2012) reviews scholarship presented in the major ICT4D and development studies publication venues to find that the quantity, quality and detail of content that directly addresses the ethical considerations of interventionist ICT4D is very limited. Burrell & Toyama (2009) write a thoughtful paper on the common standards that might be employed to judge high-quality papers in the ICT4D field, especially when the field is made up of scholars representing a wide range of disciplines each espousing different epistemological perspectives. While their paper does not aim to review of ICT4D scholarship, it acknowledges the field's diversity and thus streamlines, to some extent, the intellectual course of the field as a whole. Finally, IDIA has seen some reviews of the ICT4D literature as well. For instance, David et al (2013) perform a review of ICT4D work that focuses on co-design with communities, thereby highlighting the prominent research issues in the field along with how different disciplines might choose to address these issues.

Methodologies employed in the above papers consisted mostly of a rigorous literature review of the conference and journal publications that have a high proportion of ICT4D-relevant papers. The Chepken et al (2012) study for instance, even if not a systematic review in the strictest sense (as the authors themselves acknowledge), relies on a descriptive analysis of their sample to eventually present the distribution across different variables over a 15 year period. Similarly, the Dodson et al (2013) study considers the research published in the journal of Information Technologies and International Development (ITID) over a 8 year period with a specific aim to evaluate the failures (and perhaps, at the same time, the successes) of ICT4D projects. Another paper by Patra et al (2009), looks at trends in ICT4D since the 90s not only through a rigorous literature review, but also through a survey of 50 researchers and practitioners in the ICT4D space.

However, none of the above researches have looked specifically at IDIA nor considered South-initiated research as a specific focus. This paper hopes to remedy this, with our findings not only of import to the organisers of future IDIA conferences but, more importantly, also to inform ICT4D researchers located in the Global South in respect of possible research directions.

Research Methodology

Our goal is to review research papers submitted to IDIA conference, and critically analyse findings across fields and research traditions to offer suggestions for moving forward on its stated goals of offering a critical voice to South-based researchers. It is hoped that this effort will reveal a clearer, research-based picture of the outcomes linked to information and communication technology use, as well as identify gaps in our knowledge, and drive the agenda not only for future IDIA conferences, but also to researchers based in the South looking to inform their ICT4D research approach.

In order to assess the scope of peer-reviewed research examining information and communication technology use for development (ICT4D), we reviewed articles of IDIA conference over a four year period (2011-2014). A total of 76 papers were analysed. Table 1 provides the breakdown of the articles included in this study.

Year	Number of papers
2011	14 papers
2012	22 papers
2013	13 papers
2014	27 papers

Table 1: IDIA papers by year

In an attempt to make sense of a sizable body of research that spans multiple different research traditions across four years, the review is organised around several themes, linking directly to our research questions. These themes emerge primarily from the findings that cut across these areas. However, they are also consistent with other meta-analyses of ICT4D (e.g., Avgerou, 2008; Gomez, 2013; Heeks, 2008).

Each paper was coded using a coding instrument developed for this review. The following information was identified in each of the papers: year of publication, authors, institutional and disciplinary affiliation of authors, country and continent of authors, collaboration amongst authors, title, keywords, research approach, conceptualisations of 'development', and research subject domains.

Working closely with the principal investigators, three coders (two doctoral researchers and one postdoctoral researcher) participated in the exercise with each coder working on an average of 26 papers. Before the coding started, the coders developed and

tested the instrument. They sat down together and coded three articles. During this process, the categories were fine-tuned with some categories being dropped and others being taken up. Supplementary coding occurred after the preliminary coding to identify the number of authors per country as well as the kinds of collaborations evident in the papers. Due to space limitations, only a number of salient results are reported in this paper.

Analysis and Findings

This section includes data for and critical reflections on the findings. The following findings were deemed to be most salient for the researchers and address the research questions in turn.

Disciplinary Affiliation of Authors

ICT4D research tends to be multi-disciplinary as computer scientists, social scientists, and other disciplines, such as design sciences and information systems, continue to explore how technology can be better leveraged to achieve development goals. Patra et al (2009) interviewed 50 expert ICT4D researchers and practitioners to better understand the past and future performance of ICT4D as a field. These 50 respondents, while not representative of the domain as a whole, still spanned 17 different disciplines, ranging from development studies, anthropology, and engineering, to city planning, media, and design. Such multi-disciplinarity brings with it different perspectives and intellectual rigor that can contribute meaningfully to the field. Moreover, when tackling the very complex and present problem of global development, it is certainly useful to have diverse skills, knowledge bases, and paradigmatic approaches to address the problem at hand effectively. In general, the field of ICT4D has a good track record of negotiating and settling differences across disciplines. Burrell & Toyama (2009) present a very useful article on better acknowledging and resolving any paradigmatic differences across disciplines. By and large, multi-disciplinarity is encouraged, be it interdisciplinary or cross-disciplinary work, and, as Burrell & Toyama suggest, we would all do better work if scholars and practitioners from different disciplines are able to recognize each other's unique strengths and thereby produce and share more meaningful knowledge.

Here, we determined IDIA's authors' disciplines based on their institutional and departmental affiliation. In total, there were 178 authors across 76 number of articles over the four years. We present the disciplinary affiliation of each of the 178 authors in Table 2. IDIA has seen, over the past four years, authors from a diverse range of disciplines which include Development Studies, Media Studies, Economics, Communications, Computer Science to name a few. While the multiplicity of disciplines can be celebrated, it is, however, important to note the dominance of researchers from the Information Systems (IS) and Computer Science departments (Table 2). It can be

argued that the dominance of researchers from IS departments is positive given the fact that most such departments are predominantly populated by people from that themselves have a background in pure disciplinary studies. Still, one needs to be cognizant of a dominance of IS scholars with a purely technical background. In much the same vein, as a community, we might need to interrogate the concentration of researchers from Computer Science, as scholarship from other disciplines remains limited. This scenario inadvertently results in IDIA conferences being dominated by ideas from one field despite the fact that the nature of ICT4D work requires expertise from a range of fields.

DISCIPLINE	NUMBER OF AUTHORS			
	2014	2013	2012	2011
Computer Science (A)	22	5	12	10
Information Systems (A)	26	12	23	4
Communications (A)		12	3	2
Public Administration/Governance (A)			2	
Psychology (A)			1	
Ministry of Science & Technology (G)			1	
Health-Tech (I)			1	
Economics (A)			1	1
Development Studies (A)		1		3
Hi-Tech (I)			1	
Non-Profit Foundation (I)	10		1	2
Business School (A)	4		1	
Design School (A)	1			
Dance Research (A)	1			
Construction Management (A)	2			
Media Studies (A)	2			
Biotechnology (A)			5	
Education Department (A)	1			1
Unclear	2	3		
TOTAL	71	32	52	23

Table 2: Disciplinary Affiliation of Authors

Country of authors

In this paper, the 'country of authors' refers to the country of the writers are working from, usually identified through their institutional affiliation, not their individual nationalities. Overall, South Africa is by far the country with the most number of researchers presenting at IDIA conferences. In 2014, when the conference was hosted in South Africa, 73% of the papers presented at the conference were from South Africa. Even in 2013, when the conference was held in Peru, South Africa had about 66% of the papers. Similarly, in 2012 when the conference was held Turkey, South Africa still

had the majority of papers. Sadly, although South Africa is dominant, papers from other African countries are largely missing. In 2014, for example, only one paper was from another African country, Namibia. In 2013, there were no papers from other African countries.

Although it is interesting to hear about the types of projects that are happening in South Africa, this dominance is problematic. It may, unwittingly, create a situation where ICT4D discourse in Africa is dominated by one country. Work and experiences of ICT4D researchers working in other countries in Africa remains invisible. The recommendation for the organisers of the conference is that they should encourage participation from other African countries, even if as collaboration with South African scholars, at the conference. One way to achieve this would be hold the conference in other African countries, as is done in 2015 (i.e. Zanzibar, Tanzania), with an explicit invitation to other African scholars (refer the "ESEFA" workshop call). While not a statistically significant trend, we do observe that when the conference was held in Turkey in 2012, the second highest participation, after South Africa, was from Turkish scholars. This was a substantial leap from the year before where only one Turkish scholar had presented a paper. Similarly, the only time any South American papers were included in the conference in the past four years, was when it was held in Peru in 2011, although the level of South American participation was definitely higher than reflected in the low number of research papers. In general, when funding sources for international travel to conferences remains limited, it might encourage local researchers to participate more if the conference is held within proximate distance.

Country of authors		Number of authors			
		2014	2013	2012	2011
Africa	South Africa	52	19	24	14
	Nigeria				1
	Mozambique			1	
	Namibia	1		1	
	Tanzania			1	
Europe	Switzerland		10		
	United Kingdom	1	1		
	Denmark			2	
	Finland			1	
	Turkey			10	1
	Spain	3			
	Italy	4			3
	Portugal	4			
	Sweden				1
Asia	Thailand		1	1	
	Philippines			3	

	Singapore	4			
	Saudi Arabia			1	
	Pakistan				1
	United Arab Emirates				1
	Malaysia			1	
	India			5	
Australia	Australia			1	
North America	United States	2	1		
South America	Peru				1
TOTAL	21 Countries	71	32	52	23

Table 3: Country of Authors

Collaborations across and between Global North and Global South researchers

As a development conference, it is essential to see different kinds of collaborations across and between countries in the two main socio-economic and political zones of the Global South and Global North. The kind of exchange that IDIA envisages is symbiotic with no one country or countries dictating the development agenda.

In general, since ICT-driven or -supported development has received much attention from governments and international organizations (e.g., the World Bank, the United Nations, the World Trade Organisation, the International MF), debates around strategy, potential, and impact have become persistent in the arena. Much of this debate is formulated within the context of discourses of developed countries, and how development and impact is defined and operationalized is driven by agendas of researchers, research institutes and agencies based in the Global North. Marais (2011) discusses exogenous and endogenous models for development and sets forth the need for both to understand the differences of departure in analysing the sustainability issues in ICT4D. The need to formulate an endogenous agenda and discourse in ICT impact on development has been recognized, although concrete, rigorous, and analytical results are still forthcoming.

We looked at the countries of the institutions that the authors are affiliated to and coded for "collaboration" only when the researchers were from two different countries. We were particularly interested in explicit collaborations among the Global South and between the Global North and South. From the papers that were included in this study, there were no instances of collaborations between the Global North. There were papers that showed evidence of some North-South cooperation. Interestingly, most of these partnerships were with South Africa. The scarcity of strong collaborations across and between the major socio-economic and political zones in the papers presented at IDIA

needs problematizing. Although potentially rich and vibrant exchanges of ideas, experiences and resources by researchers working in different contexts may well occur within the open discussion space of the conference, these debates are not reflected in the published proceedings and therefore not accessible to a wider audience.

COLLABORATION		NUMBER OF AUTHORS			
		2014	2013	2012	2011
North-South Collaboration	United Kingdom, South Africa	1	1		
	Italy, South Africa	2			
	United States, South Africa	1			
	Switzerland, South Africa		1		
	Finland, Mozambique		1		
	Turkey, South Africa				1
	Portugal, South Africa	1			
South-South collaboration	South Africa, Malaysia, Thailand			1	
	South Africa, Namibia	1			
	South Africa, Thailand		1		
TOTAL	12 Countries	6	4	1	1

Table 4: Author collaborations

In view of the above observations, IDIA can certainly facilitate more collaboration in this space for two reasons: i) it can improve the research and scholarship presence of the Global South while not sacrificing that of the Global North, and ii) improve research partnerships amongst the Global South in an equal and judicious manner to disable, to some extent, the dominance of the Global North in the overall scholarship. However, it is not clear how this objective can be achieved concretely.

The opposite question – are certain individual authors dominating the debate by publishing a relatively large number of papers – was also investigated. However, after weighting each author according to the number of co-authors listed on each paper, it was found that no single author published more than the equivalent of two single-authored papers during the period under review. Two researchers, Darelle van Greunen (South Africa) and Amalia Sabiescu (Switzerland) had an impact of two full papers each and a further seven authors published the weighted equivalent of more than one individual paper. In unweighted numbers, two authors (Amalia Sabeiscu and Judy van Biljoen) are listed on four papers, and a further two authors have co-authored three papers each. All of these statistics testify of a faithful core community but without individual researcher domination.

Academic versus Industry Papers
Most of the papers that are presented at the IDIA conference are written by researchers who are affiliated with an academic institution. Very occasionally, the conference sees

papers from industry that follow, not only a different format for reporting their results, but also subscribe to a different intellectual perspective in terms of advancing the field of technology and development. For instance, Alkinani (2012) is affiliated with an industry healthcare provider and reviews wireless technologies available to both patients as well as caregivers. This review looks at non-academic sources and provides a quick, exploratory review of available technologies without a critical analysis. Still, its value lies in pointing its readers to existing innovation in the area. Similarly, another industry funded project by Mtsweni and Abdullah (2014) proposes a hackathon model that focuses on the development of socially relevant technological interventions that could be implemented in communities within a shorter period of time, creating a venue for researchers to test their prototypes in the field and saving them time and resources.

IDIA's acceptance of these papers implies its openness to embrace industry research, and thereby, perhaps, to initiate a stronger conversation between academia and industry. The authors of this paper suggest that the IDIA conference organisers could further strengthen the links between academia and industry by including non-academic sessions or tracks as part of the conference, thereby mitigating, to some extent, the more rigid rules and regulations around submitting an "academic" paper which might inevitably lead to greater industry participation.

Reflections on "ICTs and Development"

One of the more consistent observations is that the concept of ICT4D itself is almost never properly defined in the IDIA papers. It is treated as though its meaning is commonly understood and agreed upon. In particular, and reflecting a general trend in the larger ICT4D conversations but, perhaps more critically problematic, in much of the IDIA proceedings, the concept of "development" is equated with economic growth. There has been a lot of scholarship over the years that has pointed to the myopic nature of such conceptualization of "development". For instance, Dudley Seers (1979) states that merely focusing on economic growth may not just be short-sighted, but also potentially treacherous, and that the entire nature of the development process needs to be reimagined. It is also encouraging to note that many papers that have been presented at the conference over the years have indeed used Sen's understanding of "development" (2001). For instance, Anwar & Johanson (2012) focus on Sen's capability approach while considering ICTs and development projects. More specifically, they focus on the "expansion of capabilities for human development through the use of ICTs." To this end, they ensure that they include salient questions in their data collection instruments and assess how the mobile phone contributes to blind masseurs' capabilities as a whole, instead of just to their economic well-being. In the same vein, Mealor & Van Belle (2014) explored the impact of mobile phones on the quality of the life of the elderly using a capability approach, this time based on Kleine's framework which is an ICT4D-specific derivation of Sen's capability approach. Similarly, Sabiescu & Buffi (2011) tackle the question of "agency" in their paper through Sen's perspective;

indeed Sen claims that agency is a development end in and of itself, and Sabiescu & Buffi are careful to espouse "agency" as one of the primary tenets of development goals (although they focus more on collective agency rather than individual agency).

Furthermore, when ICTs and development are considered together, especially since the UN declared technology as a potential alleviator of poverty in their Millennium Development Goals (reference), there is an "unqualified technological optimism" that is in need of critique (Thompson as quoted in Krauss, 2013). The past four years at IDIA have certainly seen studies of both kinds - some that are deterministic and others that treat the potential of ICTs within a given development context with restraint. For instance, David et al (2013) show in their review of ICT4D literature that a tendency to focus only on the technical means and a failure to integrate social aspects results in low adoption of ICT solutions. Veldsman & van Greunen (2013) unequivocally claim that the people in a community are "the most critical component." Moreover, Akhter & Georgsen (2012) employ a particularly circumspect approach when considering the potential impact of ICTs on knowledge creation amongst a rural community in Bangladesh - they acknowledge that ICTs cannot be treated as a magic bullet solution for the complex problems facing marginalized communities. In fact, they eventually conclude that the use of ICTs for information seeking on a short-term basis may not be feasible in rural areas. Similarly, Baquete et al (2012) argue that ICTs may not be a critical tool in raising awareness for environmental participation and decision-making in Mozambique. They identify access, affordability, limited coverage, and technological illiteracy as prevalent factors that continue to limit some of the potential of ICTs towards development goals in the global south. In much the same vein, Sabiescu & Buffi (2011) tackle the multi-faceted concept of "agency" as it relates to technology and development. Through ethnographic research conducted in two villages in Romania, and employing Sen's capability approach as well as the theory of distributed cognition, they show that collective agency (as opposed to individual agency) is critical in "enabling people to acquire the knowledge and skills for becoming active authors (of technology)" without which considering any form of ICT4D "success" remains limited.

Lastly, it warrants mentioning that even where "development" as a concept is not systematically unpacked in a scholarly article, there may still be an implicit (and often, explicit) assumptions within the paper that become salient indicators for the same. For instance, Van Dyk et al (2013) in their study evaluating the design of mobile phones for the elderly, state that their sample of elderly across South Africa and Scotland, comprise of a marginalized group due to their physical and cognitive limitations. They go on to state that the position of the elderly may become even more untenable in the developing world given their infrastructural challenges. Therefore, despite their sample not comprising of an economically disadvantaged group (at least, not apparent from their article itself), they believe that such a sample can still be meaningfully discussed within the precincts of a "development" conference, and rightfully so! The Mealor and

Van Belle (2014) study, by contrast, makes this argument explicit by their use of the Kleine capabilities framework. Of course, IDIA's acceptance of such papers only implicate their openness to embrace a much broader conceptualization of "development" and we hope that this trend continues.

A challenge proposed by Marais (2011) is the focus of ICT4D initiatives on the poorest communities with minimal resources. Marais suggests a systems approach that takes into account the scope of the project, the community, and the socio-economic context to evaluate and improve the sustainability of development strategies and initiatives. The author calls for ongoing long term support and funding to address slow human capacity development.

Reflections on Methods

The conference has certainly seen the inclusion of many studies employing participatory methodologies that strive to include research participants in the design and deployment of their ICT4D interventions (Tyukala, Pottas & Korpela, 2012; Van Zyl & Vannini, 2013; Krauss, 2013; David et al, 2013; Steyn & Das, 2014; Smith, 2014). Even studies that are seemingly deterministic in their belief of ICTs unilaterally effecting economic growth and development, appear to be painfully aware of the effort required and the challenges faced when trying to understand human requirements, and call for more rigorous user needs assessment (Van Greunen, 2013).This, in general, is a very encouraging trend (see also Heeks, 2010) and we hope IDIA continues to foster a more meaningful methodological approach that is participatory and user-centered in nature.

There has also been a small but encouraging number of nuanced theoretical papers that deeply reflect on the methodological orientation of studies intent on achieving development outcomes. Krauss (2013) does a particularly thorough job of addressing "the worrying lack of critical studies" (Washam & Sahay, 2006) in Information Systems research in the developing world and positions himself, as a critical ethnographer, in a social situation (that is any ICT4D field site and practice therein) where the researcher and the research participants demonstrate implicit, yet palpable, asymmetries in power, position, and knowledge. Krauss goes on to make a very persuasive statement that "the emancipation of the researcher is a precursor for the emancipation of the researched" and thus echoes the critique that any "false consciousnesses or ideologies" that endorse and promote an unequivocally (technologically) deterministic stance, expose the conflicting worldviews of the "developed" and the "developing" and are thus in need of "emancipation". More specifically, he says:

> "These false consciousnesses may lead to false expectations, assumptions, non-emancipatory practices, and on-going ICT4D failures if not addressed correctly. All stakeholders and participators in ICT4D are therefore in need of empowerment, enlightenment and emancipation with regard to ICT4D and assumptions about

power relations and position in development discourses."
Krauss (2013)

This also is in line with the deeply problematic dominance of scholars (and therefore, papers) from the Global North that can hope to achieve no real positive outcomes unless they are more reflexive and/or seek more collaboration with scholars from the Global South.

Research Subject Domains and Location Sites

Finally, we make a few observations on the domains of study and the research location sites of papers that were presented at the conference proceedings. In terms of domains, the papers spanned a wide range of areas where ICTs might be specifically leveraged to achieve micro or macro development goals. In general, however, the domains of education, health, and public access were dominant in the sample. Indeed, these three domains comprised of 47% of the 76 papers across the four years. Of these, education and public access were, in particular, heavily represented. Precisely because the bulk of the papers are from South Africa, it is fairly easy to understand the dominance of research on education. The country has been facing several challenges in education particularly at primary and secondary levels. While the attention on education might be a response to a need in the South African context, researchers need to be encouraged to focus on other domains lest over time ICT4D research is dominated by research on education.

We also looked at the research sites i.e. geographic locations that were chosen in the empirical papers presented over the past four years. It was often hard to determine if the sites where researchers conducted empirical studies were in urban, peri-urban, or rural areas. Of those papers that stated their research sites explicitly, it is interesting to note that there was a higher tendency to work in poor urban areas. This might be a case of easy logistics and access where proximal research sites with some form of working infrastructure may be particularly appealing. In justifying why urban areas are not a priority in their study, Mudziwepasi et al (2014) argue: "*The urban communities have benefited immensely from this development whilst the rural communities have benefited the least.*" The dominant focus on urban areas limits the kinds of theorising that researchers are able to do particularly because the realities of people living in 'underserved' urban communities is different from the realities of people living in rural areas. In light of this, IDIA must encourage a more balanced approach to research site selection, especially to avoid over-representation and saturation in the research sample over time.

Of the researchers that did work in rural communities, it was interesting to note that the Siyakhula Living Lab in rural Eastern Cape makes an appearance time and again at IDIA over the last four years (see Pade-Khene, 2012; Gumbo, 2014). Although the

Siyakhula Living Lab is interesting largely because the project has been successful, the continued focus by different researchers on this one community poses some challenges. Because the people in this area have been 'researched' so much, they might end up telling their interlocutors what they think they want to hear. In view of the above, the recommendation would for researchers to work with other communities across South Africa that have not received attention. This also involves contrasting ethical considerations of over-researching certain populations, which includes creating potential dependencies on research cash injections in the community, research fatigue by participants, long term impact (including raised expectations) of unsustainable research projects, and the unequal balance between the use of scarce community resources by researchers versus the benefit flowing from the research to the community.

Conclusion and Recommendations

This research set out to investigate whether IDIA, through its conferences, has met it stated goal of being a platform for information exchange between ICT4D researchers from the Global South, and to stimulate the type of research focus and approach which would be more relevant for the Global South context. This was done by analysing all 76 research papers as published in the peer-reviewed conference proceedings from 2011 to 2014.

On the positive side, it was very encouraging to find that the vast majority of the papers were authored by researchers working in the Global South, that there was a wide diversity of reference disciplines represented, that many papers testify to the importance of participatory methods and that core problem areas such as education, health and public access (47%) are being addressed.

On the negative side, we highlighted the dominance of South African authors, the lack of critical interrogation of the concept of development, a relatively low number of collaborative research papers (North-South or South-South), and a focus on (peri-) urban sites.

Our findings present a specific challenge to ICT4D researchers based in the global South to become more critical and reflective in their conceptualization and operationalization of *development,* consider the siting of their research projects carefully and pursue more South-South collaboration with the specific aim of developing a more critical view of the importance or relativity of local/national research contexts. The IDIA conferences provide a mechanism for debate and social networking, which has perhaps been under-utilized to date.

The implications of our findings for future IDIA conferences would imply that marketing to non-South African academics (and, potential, industry participants) needs to be increased whilst continuing the policy of hosting the conference in developing countries outside South Africa as well as combining the conference with tracks, workshops and other events which would attract non-South African participants, as is done for the 2015 event. Finally, perhaps the IDIA website could add a social networking platform and forum for its members to continue critical debates initiated during the conferences but also provide an effective means for pursuing collaborative research.

It must be realized that this paper only reflects the last four year of published conference proceedings and does not reflect the social networking nor the face-to-face discussions and debates which have happened at the actual conferences. The research is currently being extended to the earlier IDIA conferences; in particular, the 2010 conference, the first to be held in the South (albeit in Cape Town, South Africa), had a much wider geographic representation than more recent conferences. It must also be appreciated that the papers in IDIA are also not at all representative of ICT4D research by academics in the Global South – as evidenced by the predominance of South Africans. Future research should extend this and other ICT4D meta-analysis to uncover historical trends, gaps and opportunities in South-based ICT4D research. Indeed, such initiatives are already underway and it is hoped that this will be debated and concretized further at IDIA and elsewhere.

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