

## DOROTHEA KLEINE, DAVID HOLLOW AND SAMMIA POVEDA





# Children, ICTs and Development

Capturing the potential,  
meeting the challenges

DOROTHEA KLEINE, DAVID HOLLOW AND SAMMIA POVEDA

A Report for the UNICEF Office of Research – Innocenti,  
by the ICT4D Centre at Royal Holloway, University of London  
and Jigsaw Consult

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## About the Authors

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**Dr Dorothea Kleine** is Director of the ICT4D Centre at Royal Holloway University of London ([www.ict4dc.org](http://www.ict4dc.org)). This multidisciplinary centre brings together 10 academics and 11 doctoral students committed to undertaking top-quality research in partnership with, and in the interests of, poor and marginalized people everywhere. One of the leading centres for ICT4D research globally, it has been voted a Top Ten Global Think Tank in Science and Technology in the University of Pennsylvania's survey of experts for two consecutive years (2013 and 2014). Dorothea Kleine is a Senior Lecturer in Human Geography and directs the specialist MSc in Practising Sustainable Development (ICT4D specialism). She has published widely on ICT4D, her most recent book being *Technologies of Choice: ICTs, Development and the Capabilities Approach* (MIT Press 2013). Educated at Munich and Oxford universities, she holds a PhD from the London School of Economics and Political Science. She has conducted collaborative research and consultancy work with a variety of organizations, including UNESCO, UNICEF, EuropeAid, the Department for International Development (DFID), UK, the German Development Agency (GIZ), InWent and with NGOs. Dorothea Kleine has served the ICT4D community as Managing Editor (2004-2006) and Editorial Board Member (since 2011) of one of the leading journals in ICT4D, *Information Technologies and International Development*, as General Programme Chair of the ICTD2010 conference in London and on the Programme Committee and Senior Programme Committee of ICTD2012 Atlanta and ICTD2013 Cape Town.

**Dr David Hollow** is a Director of Jigsaw Consult, a social enterprise based in London that works with a wide range of international development organizations. He is also an Honorary Research Associate and occasional lecturer at the ICT4D Centre, Royal Holloway, University of London. David has worked in international development for ten years, in over fifteen countries, with a variety of donors, government, private sector and civil society organizations (such as the Department for International Development UK, UNICEF, the International Development Research Centre (IDRC), the global association of mobile operators, GSMA, and Save the Children). Much of his work focuses on monitoring and evaluation, the social implications of technology, and education policy. He holds a PhD in Development Geography from Royal Holloway, University of London. His doctoral research focused on evaluating the impact of ICT on education in Africa. David Hollow is also Chair of Trustees for Refugee Support Network, a London-based charity providing educational support to young people affected by displacement and crisis.

**Sammia Poveda** is a PhD Student at Royal Holloway, University of London. Her doctoral research evaluates different approaches to basic ICT training offered in Brazil, aiming to find out what elements may improve critical ICT usage. Sammia is also a coordinator of the Technology and Design Working Group of the Human Development and Capability Association (HDCA), and runs a Latin American ICT4D discussion group using Facebook as a platform. Before her PhD, Sammia worked in international development for four years with the German Development Agency (GIZ) and the Amazon Cooperation Treaty Organization (ACTO), which worked with the eight Amazon Basin Countries: Brazil, Colombia, Venezuela, Guyana, Suriname, Ecuador, Bolivia and Peru. This work also involved liaising with other international organizations such as the United Nations Conference on Trade and Development (UNCTAD), United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). Sammia also served two years pro bono as the Institutional Development Director of the Centre for Digital Inclusion (CDI) in Brasilia.

## Foreword

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Information and communication technologies (ICTs) – such as mobile phones, computers and the internet – are often seen as accelerators of development processes. In certain circumstances they can play a critical role in achieving results for the most marginalized communities and the most vulnerable children, mothers, and families. The use of mobile phones to promote effective birth registration systems in Nigeria and Uganda are such examples.

By supporting positive gains in human development, ICTs can ultimately contribute to meeting MDG targets and goals. However, rising inequalities in a large number of countries have also meant that ICT innovations do not always benefit populations equally, often leaving behind the most marginalized members of society. While ICTs could, for instance, help overcome the lack of information and communication access, the slower diffusion of mobile phones often observed in rural and remote areas and the privileged access of technologies to men over women, may have impeded their potential benefits and could even have exacerbated pre-existing inequalities.

The UNICEF Office of Research – Innocenti initiated a study in collaboration with the ICT4D Centre at Royal Holloway, University of London to explore further the manner in which ICTs can strengthen development interventions for children. The study also examines the interaction between ICTs and existing inequalities in different dimensions including gender, ethnicity, age, education and the rural/urban divide.

This review of recent literature and expert opinion expands the dialogue on key challenges, opportunities and best practices in assessing the role of ICTs in furthering the development agenda for children. Previous successes and indeed mistakes and failures – a common outcome in the brief history of technology diffusion for development – are also important learning opportunities to support UNICEF programmes and goals for children in a growing number of countries.

The report serves as a reminder that innovation efforts should not be thought of as magic bullets. But introduced with the requisite regard for local mores and conditions, they can be important catalysts for development affecting all areas of children's lives.

This brief study represents a contribution towards a culture of openness and learning in identifying and scaling technology for development to support UNICEF programmes and goals for children.

Marie-Claude Martin



Director, UNICEF Office of Research – Innocenti

## Preface

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This report is, to our knowledge, the most comprehensive mapping to date of the work that has been published documenting child-related ICT for Development (ICT4D) projects and programmes. But it is more than that: by interviewing 35 experts in this area asking for their practical wisdom and experience while offering optional anonymity, the report also gathers extensive expertise which has so far not been published. What emerges are differing views, but also an emerging consensus on more participatory practice, more reflection on context, more attention to intermediaries, and a burning need to continue the uphill struggle to focus publicly-funded innovation work on marginalized groups which are much less likely to become the beneficiaries of market-driven innovation.

Many other key messages emerge from this report, which reflects the depth of expertise gained after decades of experience in technology and development, and over a decade of digital ICTs for development work for children. Policy rhetoric, actual practice and scholarly commentary can often be seen to diverge, but at their best initiatives such as these interweave the virtues of practitioner experience, academic rigour and the power of policy. Our hope is that this report will serve as a cornerstone for an ongoing, fruitful and dynamic debate on rapidly evolving technological trends and good practice in leveraging ICTs to innovate for child-focused development.

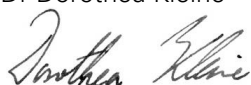
For those new to the field of ICT4D we hope to offer sufficient background to contextualise the findings, while even experienced ICT4D scholars and practitioners will find new aspects. In particular, they will discover a refreshing newly emerging “common sense” in ICT4D which is far less top-down and much more attentive to user-centred design of projects, programmes and technologies. Colleagues from the field of child-focused development will find much information on technology-related innovation in their field. Building these bridges across different areas and forms of knowledge is vital if we are to make rapid progress towards better life chances for marginalized children.

We would like to thank the 35 respondents who offered up their time pro bono to give us their views on child-related ICTs, to the 26 participants in the ICT4kids Open Session at the ICTD2013 conference in Cape Town, South Africa, who commented on some early findings, and to the four formal reviewers of the report. We thank members of the ICT4D community, and the children and development community for their generous contributions to the joint effort which is at the heart of this report.

On our extended research team we would like to thank Oliver Parsons and Lindsey Evans who contributed transcriptions, and Andrea Jimenez Cisneros who conducted the second round of coding once codes had been agreed between researchers. Further, we’d like to thank our partners at UNICEF, Patrizia Faustini and James Elder for the excellent collaboration on this report. Their commitment to supporting us in ensuring the highest standards in scholarly rigour and academic freedom for this report, as well as their genuine interest in the outcomes, whatever they might be, meant that we could combine the strength of academic research with the powerful network and dissemination opportunities that UNICEF has.

Finally, since this is intended to be a cornerstone in an ongoing debate, we invite colleagues to check the resource website that accompanies this report (accessible via the website [www.ict4dc.org](http://www.ict4dc.org)) to contribute further resources to be made available there. The opportunities are truly exciting, the collective learning continues.

Dr Dorothea Kleine



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