

# Ethical standards for the ICTD/ICT4D community

A participatory process and a co-created document

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## ABSTRACT

We recommend reading this poster in combination with the full ethical standards document: <http://shura.shu.ac.uk/18402>. ICTD/ICT4D research is multi-disciplinary, multi-stakeholder and based in different cultural contexts, yet in recent years, calls have been heard to agree minimum ethical standards across this field. This paper documents the participatory process we co-facilitated in response to these calls on behalf of the community, and presents the resulting document as collectively agreed set of minimum ethical standards, to be reviewed and updated in years to come. We call on journals, conference organizers, reviewers, ethics committees, institutional review boards and funders to uphold these standards and support their implementation.

## CCS CONCEPTS

**Social and professional topics**~Codes of ethics • *Human-centered computing* • Information systems~Information systems applications.

## KEYWORDS

ICTD Ethics, ICT4D Ethics, ethical standards, participation

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## 1 Introduction

At the ICTD2015 Conference, in one Q&A after a paper had been presented in plenary, a member of the audience raised serious ethical concerns over the paper that had just been presented. In the ensuing discussions, both inside the lecture theatre and in corridors afterwards, it became evident that while individual disciplines contributing to ICTD/ICT4D had their own ethical guidelines, there was no shared written ethical code which could have been applied to help in the arbitration of this question. There was not even sufficient ongoing discussion of ethical issues, even though reflections on ethics in the field have been published, e.g. [5, 9]. In the closing reflection session of that conference, one of the authors called for developing “minimum ethical standards” in a participatory way, across disciplines and stakeholder groups, and proposed to present these back to the ICTD/ICT4D (henceforth ICTD) community at a future event. We then both volunteered to lead this process, with one of us coming from computer science and the other from the social sciences.

As coordinators of this process we were joined in this endeavor by co-facilitators, including Melissa Densmore, Linus Kendall, Colin Stanley, Kecia Bertermann, Bill Tucker and Tigest Shewarega Hussien. The process included participatory workshops at the ICTD2016 and ICTD2017 conferences, regional workshops and online interactions in between. We would like to thank co-facilitators and participants at each of the workshops, as well as the online contributors.

ICTD is often conducted by multi-disciplinary teams and in multi-stakeholder partnerships. Hence, there is no one set of ethical standards of one discipline, nor a set of practices of a particular stakeholder community, that can be assumed as a “universal norm”. There is a need for multi-disciplinary and multi-stakeholder rule-setting. Another key difficulty for all ethical discussions is the speed of technological change, which means that any ethical standards have to be constantly monitored and updated. In this paper we report back on this co-design process of defining minimum ethical standards for ICTD and draw attention to the outcome document, which will remain a “live document”.

We argue that these standards should be used to clarify what are acceptable or unacceptable practices in the context of ICTD by: researchers planning or reflecting on their work; by conference programme committees, journal editorial boards and similar bodies. They could also inform discussions ethics committees or

institutional review boards who are less familiar with the particular issues associated with ICTD. This paper explains the process and offers some initial reflections. The approach is replicable and it may prove useful not just to the ICTD community, but to other interdisciplinary fields facing similar challenges.

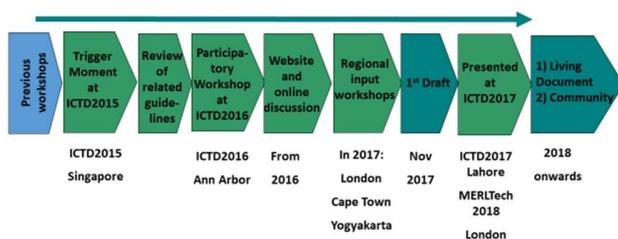
## 2 A participatory stance, a living document

From the outset we adopted a participatory approach for a number of reasons. Firstly, the diverse, inter-cultural, multi-disciplinary and multi-stakeholder nature of the field requires that a range of perspectives needed to be reflected, and explored through dialogues in co-production. Secondly, we recognized that a process which mirrored this diversity could improve the perceived legitimacy, acceptance and adoption of the resulting standards. Thirdly, since the ultimate aim was the improvement of ethical practice in ICTD, using a participatory process provided an opportunity for awareness-raising and collective reflection.

Our intention is to offer the joint ethical standards document as a “living document” which can remain under constant review and can be adjusted as technologies evolve and new ethical challenges emerge. However, since it is our hope that the journals, publishing bodies and conference committees in ICTD will consider formally adopting these standards, it is necessary to provide “frozen versions” of the document, published using a creative commons licence, to make it possible to refer to it. Version 1.1 was published on the website in Nov 2017 for review, and in parallel to this publication at ICTDX (2019) we are publishing Version 2.0 on the website and at our institutional repositories which are archived. We invite readers of this paper to see the guidelines at: <http://shura.shu.ac.uk/18402>.

## 3 A process for discussion

Figure 1 shows an overview of the process that was followed in developing the standards.



**Figure 1: Overview of the process of developing the standards**

### 3.1 Learning from existing guidelines

Recognizing that there was no value in ‘re-inventing the wheel’, our starting point was to identify existing sets of guidelines that might be particularly relevant or informative for ICTD researchers.

On that basis, we proposed an open workshop (held at the ICTD 2016 conference at the University of Michigan, Ann Arbor, USA), in which conference participants were asked to review eight

existing sets of guidelines to identify content that might be useful to include in a set of standards for ICTD. The set of standards selected to be reviewed to begin the process aimed to provide a spread of relevant disciplines across sciences, engineering, humanities, and social sciences and a variety of perspectives from the very detailed guidelines typical in biomedical research to more general perspective such as the initial ideas for the Principles for Digital Development. The specific guidelines chosen for the 2016 workshop were: the code of ethics for community informatics researchers [3]; the Association of Internet Researchers’ guidance on Ethical Decision-Making and Internet Research [2]; the ethical guidelines of the Developing Areas Research Group of the Royal Geographical Society [6]; the Canadian Tri-Council Guidance on Research Involving the First Nations, Inuit and Métis Peoples of Canada [8, chapter 9]; a guide to ethical principles and practice in community based participatory research [4]; chapter 4 of Nuffield Council on Bioethics report on Ethics of Research Related to Healthcare in Developing Countries ‘The Ethical Framework’ [7]; UNICEF’s Principles for Innovation and Technology in Development [10]; and the American Anthropological Association’s Principles of Professional Responsibility [1].

Thirty three participants (including the two organisers) attended this two hour open workshop at the conference, with colleagues from academia, funders, publishing, business and NGOs present. The participants worked in mixed groups and were given printed copies of text (enlarged and printed on A3 paper) taken from the source guidelines. Initially, they were asked to undertake, in groups, a simple analytic / editorial task by reading the guidelines and using coloured highlighter pens to identify ideas that they considered to be: Green/Yellow highlighting: Valuable and relevant ideas that should be included in minimum standards for ICTD. Red/Orange highlighting: Items that seemed inappropriate for a set of standards for ICTD; Blue/Purple highlighting: Items that might require more debate within the ICTD community to decide what guidance should be given.

Following this exercise, participants were asked to cut up the paper and cluster the text snippets that they had extracted around a set of headings we had predetermined drawing on headings used for other sets of guidelines. This involved sticking the extracted texts to flipchart-sized topic pages that were located on walls around the room. The exercise also allowed participants to propose potential new headings that might be required for ICTD. Further, each participant could use coloured sticky notes to contribute new ideas, concerns or comments to each section.

Thus output from this workshop was a new set of headings, and for each heading, a set of statements that were variously recommended for inclusion, exclusion or further discussion.

### 3.2 Sharing results online

We were well aware of the time limitations and geographical limitations that make it hard for interested individuals to engage actively in the process of developing the standards. To mitigate this we created a website using the Wordpress content management system [link blank for review] where we could share findings as the project developed. This was used to report back on progress, as a

discussion platform and as a repository for sharing resources related to ICTD Ethics. Using the Wordpress site and Google Docs allowed us to report on the discussions as they evolved, and to open up our textual data and coding process for scrutiny.

The site does allow for comments to be made (by anyone holding a wordpress account which can be obtained without financial charge), however no comments have ever been made directly via the Wordpress site. Online participants did engage in GoogleDocs by commenting on the first draft of the guidelines (see step 6) which were shared on the Google Docs platform, with links from the Wordpress site.

### 3.3 Transcribing and categorizing results

Our next step was to convert the paper-based data from the workshop into an electronic document. Comments on sticky notes were transcribed. Text under each heading that had been drawn from existing sources and highlighted in colour was placed in a table for each heading, with the source document identified. The colour-coding was also duplicated using the word processor's highlighting feature.

We were then able to separate the collated data into three additional documents consisting of a) 'endorsed' positions, b) positions that were 'proposed for rejection' and c) a set of statements that were 'raised for discussion'. These four documents were shared on the website to invite commentary.

### 3.4 Coding & Clustering

After reviewing the endorsed positions and the positions proposed for rejection to find any significant disagreements, our focus moved to the issues that were identified as requiring additional discussion by the ICTD community. Of the nineteen headings, thirteen had some issues raised for debate, and there were only six headings where no issues were raised. The headings where there seemed to be general agreement were: Findings, Reporting and Dissemination; Vulnerable Populations; Action Research Benefits and Compensation; Links to Companies, Organisations and Consultancy; Action Research (sustainability); and Power, Responsibility.

To stimulate focused discussions, the authors conducted a new, bottom-up clustering of the set of statements raised for discussion. Our aim was to identify a smaller number of thematic areas to focus on in subsequent discussions. The six topics identified were: A) Automatically capturing and analyzing (big) data; B) Striking the right balances between privacy, rights to anonymity, rights to acknowledgement, openness of data, maintenance of records for historical purposes and protecting participants; C) The meaning and practicalities of genuinely informed consent; D) Whether to recommend or mandate particular high level design principles (e.g. design for sustainability) and if so, which principles; E) Ensuring 'fair shares' of the benefits from research and innovation activities (including rewards for innovative ideas, retaining rights over local knowledge, compensation to participants etc.); F) Promoting ethical practice and appropriate oversight in the research, practitioner and donor communities.

For each of these topics, the authors wrote an introductory text for the website section, setting out the problems and ethical tensions highlighted by the previous exercises, and indicating some background resources.

### 3.5 A series of discussion workshops

Having identified this focused range of specific topics for discussion, we then conducted a series of three interactive discussion workshops with existing clusters of ICTD researchers and practitioners. These workshops, held over a 5-month period in 2017, were with: the London ICT4DMeetup, a non-profit network of practitioners and researchers (approximately 20 members participated in the workshop, mostly practitioners from NGOs or non-profit IT organisations); the Cape Town ICTDevers group, a network of researchers, students and practitioners based in the city (with approximately 20 participants, mostly researchers or students), and delegates at the IFIP WG 9.4 Social Implications of Computers in Developing Countries conference in Yogyakarta, Indonesia, (with approximately 40 participants who were mostly researchers).

All workshops followed a similar format, consisting of a presentation of the project, followed by breakout groups to discuss each of the specific topics, using flip chart paper to capture ideas and observations. Using the six topics "raised for discussion", in the first workshop (in London) the discussions were conducted in two rounds of three themed discussion tables which participants could join and thus each explore two topics out of the six. However, based on the experience of the length and depth of discussions in London, the subsequent workshops consisted of a single round with a breakout table for each of the first five topics, followed by a plenary discussion around the cross-cutting issue of implementing ICTD ethical standards. In each workshop, discussion groups gave a report back into a plenary session which was video recorded to inform the development of the standards. The flip charts were also photographed.

### 3.6 Developing and discussing draft guidelines

We used the outputs from the full series of workshops, together with existing guidelines from other domains, and relevant literature in ICTD Ethics, to draft a document setting out a possible set of minimum standards for ICTD Ethics. We published the draft document using Google Docs, under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License, allowing anybody to make comments or suggest modifications. We shared a link to the draft document through the website and publicized on relevant mailing lists and via social media. Eleven individuals commented directly by adding notes and suggestions to the draft. This draft was also used as the basis for an open session discussion at the ICTD 2017 conference in Lahore, Pakistan (involving approximately 30 participants with a mix of practitioners, researchers and students) and at a session at the MERL Tech 2018 conference in London, UK (involving approximately 25 participants who were mostly practitioners). At each session participants were given the opportunity to review and critique the draft and suggest additions or revisions.

The comments raised in these discussions highlighted a variety of areas where readers thought the document should be developed or clarified. These were:

- the treatment of informed consent, particularly in cultures that are more collectivist rather than individualist in their decision making;
- the treatment of both personal data and big data, which was informed by concerns around data management in NGOs responding to the EU General Data Protection Regulations (GDPR); and
- a concern about striking the right balance between avoiding the risk of vulnerable people being exploited in research, and the need to still involve vulnerable groups, address their concerns in research, and to support their voice.

The final document, Version 2.0 is a revised draft that responds to these recommendations and comments.

#### 4 Reflections on the process

Development of these minimum standards was conducted without external funding and based on volunteer labour from academics, practitioners, researchers and students. Different knowledge cultures will ascribe different value to this participatory process as a source of legitimacy. A participatory process offers a chance of a learning process, and for the experiences and perspectives of diverse stakeholders to inform the content. However, we operate in unequal systems of knowledge production and data access. This poses an intrinsic risk to any rule-setting linked to communities of researchers, since these communities are already structured by the vastly unequal political economy of e.g. global higher education, including its conference practices. Some contributors to our efforts had relatively stable professional positions, and had funding to attend workshops and events allowing them to contribute significant amounts of time and effort. Others were in more precarious and marginal positions, limiting the time and effort they could expend, and their opportunity to engage in deep face-to-face discussions. The #ICTDEthics project sought to mitigate some of these factors through remote participation, decentralized workshops and online discussion for a, but there are still significant limitations to the reach and inclusiveness of such mechanisms.

An important extension to the work would be engaging research participants and “researched” communities themselves in developing and reviewing these standards. This could be an important step but participation is time-intensive and appropriate mechanisms should be found to compensate people for their time and for their knowledge. Funders who would like to see interdisciplinary research communities develop joint ethical standards may want to support similar processes to this one with resources to support wider stakeholder inclusion.

In practice, ICTD researchers and practitioners will encounter many unexpected and unforeseen situations where they will need to choose their next action without being able to refer to documents, or seek advice from an ethics committee. Individuals’ choices in action will be framed through interpretation of their previous learning and reflection. Co-creating this document allowed

members of our community to come together and reflect on our own practice, and the document itself could be used as a basis for future learning activities.

#### 5 Implementation

In order for the ethical guidelines to drive changes in practice, we propose that they should be:

- Integrated into the curriculum on ICTD and related academic and practitioner training courses;
- Consulted in ethical review and approval processes in universities, government, NGO and business organisations undertaking research in this field;
- Treated as a benchmark when examining undergraduate, Masters and PhD research projects;
- Used as a minimum standard in peer review for publication in conferences and journals in our field.

For this to be attainable, we need a culture change:

- Towards an expectation that publications drawing on empirical data should make explicit the approach that was taken to research ethics. As the document states: “Data obtained in a way that is incompatible with these guidelines should not be published”.
- Towards an expectation by funders and grant application reviewers that research ethics are considered within projects and an approach to ethical governance is made explicit. As the document states: “Research that is incompatible with these ethical guidelines should not be funded”.

#### 6 Outlook

This was a radical experiment in collaborative rule-making. It is characterized both by its collective achievement and its limitations. Over 120 people opted to give up their time and ideas to input to help shape these standards. The scope of the engagement was diverse, multi-country and open in nature. Engagement could have been extended further with additional resources, allowing for more diverse voices and greater depth of discussion.

With this process we responded to a call arising from within the ICTD community to agree some minimum ethical standards to which research could be held accountable. After this joint effort, these minimum standards now exist. However, we hope that individual thoughtful ICTD practitioners and researchers will hold higher ethical aspirations and no pressure should be exercised to “correct down” to these minimum standards. Instead, open, respectful and ongoing discussion of ethics and sharing of good practice should be a key part of our life in the ICTD community.

We thank all who contributed and hope that the journey and the output of the minimum ethical standards process will serve as an important step towards effective self-regulation of the ICTD research community in all its diversity.

#### REFERENCES

- [1] American Anthropological Association, 2012. Principles of Professional Responsibility. Retrieved 20<sup>th</sup> July 18, 2018 from <http://ethics.americananthro.org/category/statement/>

- [2] Association of Internet Researchers, 2012. Ethical Decision-Making and Internet Research: Recommendations from the AOIR Ethics Committee. Retrieved 20<sup>th</sup> July 18, 2018 from <https://aoir.org/reports/ethics2.pdf>
- [3] Udo Awerweg and Susan O'Donnell, 2007. Code of Ethics for Community Informatics Researchers. *The Journal of Community Informatics*, 3(1). Retrieved July 18, 2018 from <http://ci-journal.org/index.php/ciej/article/view/441>
- [4] Centre for Social Justice and Community Action, Durham University National Co-ordinating Centre for Public Engagement, 2012. Community-based participatory research. A guide to ethical principles and practice. Retrieved 20<sup>th</sup> July 18, 2018 from <https://www.dur.ac.uk/resources/beaton/CBPREthicsGuidewebNovember2012.pdf>
- [5] Andy Dearden, 2013. See no evil? Ethics in an Interventionist ICTD. *Information Technology and International Development*, 9(2), 1–17.
- [6] Developing Areas Research Group, 2003. DARG Ethical Guidelines. Retrieved 20<sup>th</sup> July 18, 2018 from <http://www.darg.rgs.org/darg-ethical-guidelines/>
- [7] Nuffield Council on Bioethics, 2014. The ethics of research related to healthcare in developing countries. Retrieved 20<sup>th</sup> July 18, 2018 from <http://nuffieldbioethics.org/wp-content/uploads/2014/07/Ethics-of-research-related-to-healthcare-in-developing-countries-1.pdf#>
- [8] Secretariat on Responsible Conduct of Research, 2014. Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans. Retrieved 20<sup>th</sup> July 18, 2018 from <http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/chapter9-chapitre9/#tphp>
- [9] S. Revi Sterling and Nimmi Rangaswamy, 2010. Constructing informed consent in ICT4D research. In *Proceedings of the 4th ACM/IEEE International Conference on Information and Communication Technologies and Development*. <https://doi.org/10.1145/2369220.2369264>
- [10] United Nations Children's Fund (UNICEF). Principles for Innovation and Technology in Development. Retrieved 20<sup>th</sup> July 18, 2018 from [https://www.unicef.org/innovation/innovation\\_73239.html](https://www.unicef.org/innovation/innovation_73239.html)