Postgraduate Research
The ICT4D Collective
Royal Holloway, University of London

I am often asked what the ICT4D MPhil[1] and PhD[2] programmes at Royal Holloway, University of London, are all about. It is not easy to answer, because all research has its own unique character – and every postgraduate student is different! However, this short document seeks to provide an overview of what might be seen as a typical three-year PhD programme that a research student within the Collective might follow. It also provides insights into my own particular style of supervision.

The aims of a PhD thesis

Research is fundamentally about creating knowledge. It is about exploring existing literatures and ideas, and then building on these, usually by doing a substantial amount of empirical research. Examiners of a PhD thus have to say whether a thesis adds to knowledge, either or both theoretically or empirically. In the 80,000 words of the written thesis, the author therefore needs to show that they

- are thoroughly conversant with the key *intellectual debates* in a particular subject area, and can identify key issues from these that will form the focus of their research
- can design a *methodology* to undertake *empirical* work that adds to our knowledge in that research field,
- can then *undertake that research* in a particular place or places,
- can *analyse the results* of that research in the context of the theoretical framework, and
- can then *write* it up clearly and effectively.

Research, though, is undertaken for many different reasons. While supporting highly scholarly and rigorous research, the ICT4D collective is also committed to ensuring that this research is relevant to the needs and interests of poor and marginalised communities. While not all of our research does necessarily have immediate practical ramifications, we are committed to working with people from all different backgrounds to implement research activities that are relevant to their interests. We do research *with* people rather than *about* or *on* people.

The research programme

Doing a PhD takes three years of full time work (at least 40 hours a week), or six years part time (20 hours a week). Every thesis is different, but to complete a PhD successfully on time it is very important to plan carefully ahead. Key stages involved in doing a PhD full-time are usually as follows:

[1] Master of Philosophy – the degree for which all research students are initially registered
[2] Doctor of Philosophy

Timing (full-time)	Activities	Outputs
0 – 3 months	• Exploring the literature • Shaping the conceptual framework • Departmental research training programme • Participation in relevant Master's training	• Literature reviews • Identification of training needs • Conceptual framework for the thesis (note: this will continue to evolve)
3-9 months	• Continuing development of theoretical framework • Relevant practical training • Networking • Development of methodology • Possibly an initial field visit	• Initial chapter outline for thesis • Draft Introduction • Draft methodology
9-12 month	• Finalisation of methodology and analytical framework • Preparation for field work • Continuing reading of relevant literatures • Annual review	• Piloting of methodology • Clear field work plan developed • Revised methodological and introduction completed
12-20 months	• Empirical field research	• Detailed field diary and empirical material
20-24 months	• Preliminary analysis of data • Finalisation of chapter outline • Identification of any additional training needs (especially analytical) • Annual review and upgrading meetings	• Conference presentations • Finalised chapter outline • Upgrade from MPhil to PhD • Writing papers for publication
24-30 months	• Continuing analysis and chapter completion (c. 6 chapters in 6 months) • Completion of one or two papers for submission to journals	• 6 substantive draft analytical chapters completed • Conference presentations
30-33 months	• Revision of chapters • Completion of Figures and annexes • Submission of thesis entry forms	• Final draft to supervisor
33-36 months	• Final completion of thesis	• Thesis submission

This timetable is only indicative, and should not be 'read' in too programmatic a manner. However, for the successful completion of a thesis, it is very important that a clear research agenda of some kind is planned at an early stage, and that a detailed research diary is kept from the earliest days of the research project. Likewise, it is very important that the main deadlines are indeed adhered to. Whilst three years sounds like a long time to complete a PhD, the time passes very quickly, and few

people can write a thesis from scratch in the last three months!

It is much easier to complete a PhD successfully, if people can do their research full-time over a three-year period, living and working as part of the Collective. However, it is not always possible for people to do this, and we therefore do also offer part-time, as well as distance-based, opportunities for those who are sufficiently committed to undertaking research with us, but who are unable to be here all of the time. This requires very considerable sacrifices, and great skill at time management, and there is a separate guidance note on this mode of research. We are also considering developing a specific MPhil programme for those who want to develop a deeper understanding of ICT4D, but not at quite the same level as that required for PhD research.

Training

For the successful completion of research, it is important that any training needs are identified and met at an early stage in the process. For many students, their undergraduate or Master's degrees will have provided most of this training, but for others this may not be the case. All research students are therefore encouraged to participate in relevant Master's courses in the Department that might fill gaps in their previous training or add to their portfolio of expertise.

Additional training in generic research skills, as well as specialist training in particular aspects of research practice is also important. The Department therefore has a comprehensive package of compulsory and optional research training (delivered by the Department, College, and externally) that is designed both to provide students with the necessary skills to undertake research, and also to satisfy the whims of the UK's Research Councils. These sessions provide a valuable opportunity for new postgraduates to discuss a wide range of issues of relevance to their research in a supportive and informal environment. I expect everyone to attend the compulsory elements of this training programme.

So that the research training can be monitored effectively, the College requires that all research students keep a detailed training log, in which they identify their training needs, and record the details of specific training undertaken. This information can also usefully be recorded in a student's research diary.

Supervisory practices

The relationship between postgraduate research student and supervisor is one of the closest academic relationships that exist. I have often been tempted to think that there is indeed a perfect way to supervise students, but whenever I start to feel this way I then discover something new, and realise that every supervisory relationship is different! It is therefore important for supervisor and student to develop their own mutually agreeable ways of working together at an early stage in the research process.

At the beginning of a research programme, the supervisor should be there to help guide and shape the research. The supervisor, should after all be knowledgeable in the field, and should also know what is required for a thesis to be successful. But very rapidly, the research student should become much more knowledgeable than the supervisor about the specifics of the research project. The point that this happens will vary along the three year time-line of a PhD, but should certainly have been achieved

by the end of the first year! It is important therefore to recognise that the relationship between supervisor and student changes over time, and as a thesis progresses, I expect 'my' research students to take much greater responsibility for the entire process! Remember that you are living with your research 24 hours a day, and that your supervisor may have many other PhD students, let alone their own research, undergraduate teaching and administrative duties to do. If your supervisor occasionally forgets the fine details of a particular part of one of your chapters, please therefore be forgiving!

One of the key roles of supervisors is to read and comment on the written work of their research students. Traditionally, I have preferred to receive such written work several days in advance of a meeting. I have then written comments on the text, and go through them with the student at the meeting. Unfortunately, I do not have very good handwriting, and it can take time for people to get used to it – especially if I have been writing on a train! So, I am increasingly willing to write comments and suggested revisions as tracked text on digital versions of files. This is especially useful when a student is sending me material from abroad. In these circumstances, it is all too easy for students simply to hit the 'accept all' key – which I don't like at all, since it misses out on the reflection and debate elements of a supervisory meeting! But, responding digitally does save on the amount of paper and ink used, and so I guess there may be some environmental benefits. As you can see, I am a bit uncertain over this process, and we will have to work out some new acceptable ways of discussing 'texts'!

With respect to the frequency of supervisory meetings, this too can vary. In the early days of a thesis, it is helpful to have quite frequent meetings, preferably once a fortnight. But as a thesis progresses, and a student takes greater and greater control over the process, this frequency can decline. I do, nevertheless, find it useful to keep regular monthly meetings in the diary, so that my research students know that I have set time aside specifically for them. Ideally, I also like to spend some time introducing students to their field locations, and so if the opportunity arises I would hope to spend some time with you in the countries where you are working. When you are abroad, though, I also like to stay in communication with my students, either by regular (weekly or fortnightly) e-mails, or by 'phone (preferably VoIP - Skype). Towards the end of a thesis, much of the time is spent in finalising the written chapters. Generally, I do not like to see 'part chapters', but prefer to wait until entire chapters are completed before I write comments on them. Apart from anything else, it gets very confusing when the same pieces of text are submitted over and over again, partly revised and partly unchanged. In these circumstances, it is very difficult for me to remember what I have already commented on! It is helpful if students use some system of colour coding to highlight the pieces of text that are new, and those that have not been substantially altered. However, ideally each chapter should only take a maximum of a month to write, and it can therefore be useful to have fortnightly meetings once again, so that we can discuss things that arise in the process of writing it.

The College has a formal procedure whereby all research students must complete a form summarising the details of each supervisory meeting that they have. This provides a useful checklist and record of our discussions, and I expect these forms to be completed within 48 hours of each of our meetings.

Peer supervisory meetings
The large number of postgraduate research students that have joined the Collective creates the opportunity to adopt some innovative styles of supervision. I am very eager to try to build a community of researchers working together in the field of ICT4D, since I am convinced that we all have much to learn from each other. Indeed, the comments of your peers may often be more valuable than anything that a supervisor could offer on some issues! There may well also be things that I might say to one research student that are also relevant to another. We have therefore introduced 'peer supervisory' meetings that are held every month in term time for a couple of hours, making nine a year. There is no particular agenda for these meetings, but they are an opportunity to discuss the progress that everyone is making. The only requirement is that everyone should bring to the meeting at least one issue that they would like to discuss. These sessions alternate with individual meetings that I hold with each of my research students on at least a monthly basis. The intention is that we would thus meet fortnightly, alternating individual meetings with these peer 'supervisory discussions'. Should other individual meetings be required, we can add these into our diaries, but I would like to try to get the main meetings fixed in our diaries well in advance, so that everyone knows when they are and can stick to them. Should I ever get called away for a scheduled peer supervisory meeting, I would expect you all to carry on without me – sharing your thoughts and experiences, and offering each other advice and support. It is very important that all research students make every possible attempt to attend these peer supervisory meetings. They should be seen as being equally as important as individual meetings with your supervisor. Always check with me before leaving a supervision that we have both got our next meeting in our diaries! Please note that given my many commitments, if you miss a supervisory meeting, it may not be possible to rearrange it for a considerable time.

Supervisory panels and advisers
The College's code of practice requires every research postgraduate also to have an adviser, whose role is primarily to provide additional personal support, and to be there should postgraduates need someone other than their supervisor to talk with. Advisers also participate in the annual review process. They are usually allocated on the basis of their interests relevant to the research topic of students, and I generally like students to met a range of staff in the Department before we decide together who their advisor should be. Students can also go to the Director of Graduate Studies if they have any concerns or problems with the supervisory process.

One supervisor is unable to provide answers to all of the questions that arise during the course of research for a PhD. I am therefore eager, if necessary, to try to create a formal group of people to whom each postgraduate student can turn for additional advice about their theses. The advisers obviously provide some such support, and colleagues within the Collective may also be able to help. However, by the time students are three months into a thesis, I would hope that we would be in a position to identify two or three other people with real experience in their research topics who could also provide input as required.

Postgraduate digital environment
Online forums can provide a great way to discuss issues that arise during the progress of a thesis. We have therefore created a digital environment using Moodle (http://moodle-ict4d.rhul.ac.uk//course/view.php?id=7) specifically for our ICT4D

postgraduate community, and all postgraduates are encouraged to use this as the main way of communicating amongst themselves. This environment contains sections specifically on supervisory matters, a social space, useful ICT4D resources, tools and practices of ICT4D research, and opportunities. Within each section there are discussion forums, blogs, opportunities for posting resources and links, chat rooms and wikis.

Contributing to the ICT4D Collective (http://www,ict4d.org.uk)
As will be clear from the above, I am committed to the notion of research as shared practices. Although each research postgraduate inevitably writes their own thesis, they should be able to draw on the expertises and interests of all of us working together in the Collective. This is something that I have been eager to encourage at the undergraduate level as well, typified by the way in which the students develop web-sites and annotated bibliographies that have some practical value as part of their course, and also through the contribution of external people to the undergraduate discussion forum. Undergraduates, postgraduates, academic staff and external colleagues all therefore actively contribute to and benefit from the Collective' work. I have tried to ensure that this is as open and non-hierarchical as possible. Do let me know of all of the events and activities in which you are involved so that we can post details on the Collective's site, and please keep your own pages regularly updated. Help us all to drive the work of the Collective forward in exciting and innovative ways. There are also plenty of opportunities to contribute more widely to the Collective's life, through helping on undergraduate courses and participating fully in the life of the Department and College. It is very important that we meet together regularly in the Department, and I expect all of our postgraduate students to attend the Department's and relevant research group seminars, as well as participating in the range of social events organised by the student-led Geographical Society.

Research Diary
One of the most important things for you to do right from the beginning of your research is to keep a diary of all that you do. I do not mind the format in which this is kept, but it is critically important that you have somewhere that you can note down details of meetings held, seminars attended, quirky notes on things that strike you on the way home at unearthly hours of the day or night, people met, references that you suddenly come across, and your day-to-day research experiences. It is also important that you keep a back-up copy of your diary. If you have it on your computer, make sure that it is regularly backed up (use a programme like Personal Backup); if you keep it in handwritten format, make sure that you keep a photocopy somewhere safe!

Field work
Almost all ICT4D research students undertake a sustained period of empirical field research overseas. This places particular demands and challenges on both research student and supervisor. Critical to the success of this field research are having a clear programme, a well formulated methodology, planned fallback scenarios should problems arise, and a strong local support network. Whenever possible (and funding permitting) I always try to spend some time in the field with those research students that I am supervising, usually at the start of the research so that I can introduce them to the field environment and key people who may be of assistance to the research. It is also important to retain contact throughout periods of field research, and e-mail and VoIP greatly facilitate this. Ideally, I like to have a weekly e-mail correspondence with

all of my research students when they are in the field – if only to know that everything is progressing according to plan!

Monitoring Progress

A PhD should be a piece of work that can readily be completed within a three-year period. As supervisor, one of my key roles is to ensure that this is indeed so! This not only means helping research students design a programme that is actually feasible, but it also involves close monitoring of progress. In part, this is done through our regular fortnightly or monthly meetings, but it also requires clear target setting, and ensuring that students deliver on their commitments. The College has an annual monitoring system, which involves a written report, completed training log, and a formal meeting with the supervisor(s), advisor and some times another member of staff. All research students are initially registered for a MPhil degree, and a progression meeting is usually held once an analytical chapter has been completed around 24 months into the research to determine whether this registration should be upgraded to a PhD. Students are also all required to submit an annual feedback form about their supervision and the support that they have had from the Department.

Write, write, write…. and keep on writing….

There are those who think that a PhD should be undertaken in three main phases: thinking about it, doing it, and then writing it up. I disagree profoundly with this model! A PhD should be a continual process of engagement between theory and practice, between ideas and the empirical world, and between finger and keyboard (or pen and paper). I want you to be writing all of the time! In part, this requirement can be delivered through your research diaries, but it is nevertheless very important that you get used to writing substantive pieces of work from the very beginning of your thesis. Whilst it is impossible to make hard and fast rules, you should generally have in mind a model whereby between one-quarter and one-third of the thesis is 'introductory', including establishing the theoretical or conceptual framework, providing a methodology, and setting the context for the thesis. Much of this should be written before you begin your empirical research. So, I will be looking for written reviews of the relevant literature at an early stage of the thesis, and I will be encouraging you to create a thesis outline at a very early stage of the process so that you can see where the various bits you write will fit into the final product. I am very conscious that I have supervised too many students in the past who, for various different reasons, have had real problems in finishing the writing up of their theses on schedule, and I don't want you to fall into this trap. So be warned that I will expect you to be writing from the very beginning of your research. In addition, if you want to get a foothold on an academic career after your PhD, you will need to be submitting papers to major international journals as early as possible, so that these are published by the time your thesis is finished! This requires a great deal of discipline and rigour!

Thoughts from the front line…

This is meant to be a dynamic document that is continually revised in the light of my experiences as a supervisor, and the thoughts of those students whom I supervise. So please do make suggestions about things that should be included, or provide tips of your own on our discussion forum!

Tim Unwin
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(Earlier drafts: 13th July 2005, 25th August 2006)