Final Technical Report

of the

Amy Mahan Research Fellowship Program to Assess the Impact of Public Access to ICT

by

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14 May 2012
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Basic Project Information

Project title: Public Access to ICT Research Fellowship Program

Grant number: 104714-11914100-014

Recipient: Universitat Pompeu Fabra Barcelona, Spain

Commencement date: 1 September 2009.

Original Completion Date: February 2012 (18 month duration)

Completion date: 30 April 2012 (2 extensions granted)

Introduction

The first six months - September 2009 through February 2010 - of the Amy Mahan Research Fellowship Program were dedicated to the selection of the grantees. Activities during this early implementation period are described in an interim report submitted on March 2010.

In all, 12 research teams were awarded a fellowship. Award winners came from 12 countries (Table 3), representing Asia (4), Francophone (1) and Anglophone Africa (2), the Middle East (1), Latin America (3) and the Caribbean (1). Local institutions supporting the research included 6 universities, 3 research institutes, and 3 Non-Governmental Organizations (NGOs). Gender was not a selection criteria, but gender balance was nearly achieved with 5 women and 7 men selected as Fellows.

This report covers the period between February 2010 through 30 April 2012, during which the capacity building and research activities of the 12 research teams took place. Of the 12 grants awarded, only eleven completed their research program satisfactorily. The Uganda grant award was terminated early because the Principal Investigator left the support institution and no replacement was found (within a reasonable amount of time) to take over his responsibilities.

In preparation for this report we conducted a brief survey of Principal Investigators to determine whether their perceptions regarding the program’s effectiveness. The questionnaire used is reproduced in Appendix B. The findings of this survey are presented in connection with the program’s outputs and outcomes.

The Research Problem

According to the Global Impact Study’s literature review, research on public access to ICTs has tended to focus on process outputs as opposed to long-term development outcomes (Sey and Fellows, 2011). Reliable rigorous independent impact evaluations are scarce, in striking contrast with the enthusiasm that these initiatives continue to generate.

Also missing has been a comprehensive systematic body of knowledge regarding what works and what does not work. There is an urgent need for independent rigorous evaluations that help us understand what are the key determinants of success and failure in public access to ICT initiatives, where and under what
circumstances should governments and donors invest in providing access to ICTs, and what policy instruments they should use or avoid.

To some extent, the difficulties experienced by past studies in assessing and attributing impact to public access venues, stem from the limited time that these facilities have been around. By now, ten years after their emergence this limitation is becoming outdated. Furthermore, there is little in the impact assessment literature to suggest there might be idiosyncrasies in the ICT4D domain that would invalidate the adaptation of impact assessment frameworks from other disciplines to ICT4D research (Souter 2007).

**Research Capacity Development**

Addressing the need for more and better ICT4D impact assessment studies implies a complimentary need to ensure that sustainable production of knowledge and research in this domain will continue to advance in the future.

In the context of public access to ICT and impact assessment, a sufficient research capacity needs to be developed and maintained. One way to do this is to recognize that sustaining research capacity is a valuable enterprise in a country, discipline, and sector.

This approach concerns two important issues: building and strengthening the supply side of the research capacity community (those who provide/ facilitate the scientific and methodological learning opportunities); and on the demand side, enabling those who have acquired capacity to continue to use it in the widest possible way (Bernard 2005). Following this approach and given the level of investments and proliferation of public access to ICT venues in the developing regions of the world, it is important to nurture and support the development and strengthening of the local research capacity for assessing the impact public access to ICT within these regions.

**Program Objectives**

The overall objective of the Program is to deepen and strengthen the capacity of emerging scholars in developing countries to carry out rigorous research in the area of public access to ICT, while simultaneously increasing the availability of high-quality research in the subject area coming from the developing regions of the world.

The specific objectives of the Program are:

1. to manage a competitive research grant program that sponsors scientifically rigorous research that results in practical recommendations to help donors, governments and other stakeholders (NGOs, firms) enhance the sustainability and impact of Public Access to ICTs.

2. to encourage emerging scholars from developing countries to address priority research questions identified in the field of public access to ICTs.

3. to provide guidance and mentorship to improve the quality of research on public access to ICT conducted by emerging scholars in the developing countries

4. to increase the availability of high-quality research in the area of public access to ICT coming from developing country scholars.
5. to sponsor the development of and help strengthen international networks of researchers investigating issues related to public access to ICT.

**Methodology**

**Research**

The 12 participating research teams were asked to pursue three objectives: to assess impacts with rigor, to acknowledge the reach and limitations of their findings, and to draw recommendations of practical use for policy design.

Within this broad framework, Cybercafés located in urban areas and mid-size towns are considered in the China, Jordan, and India chapters; rural telecentres in the Cameroon and Malaysia chapters; and comparisons across venue types are examined in the Argentina, Chile, Peru, Rwanda and Thailand chapters. Mixed approaches to data gathering were used in most studies, but qualitative approaches were dominant in Argentina, Chile, Thailand and Peru, and quantitative approaches in China, India, Jordan, Malaysia, and Rwanda. Research teams were multidisciplinary: in Thailand it had expertise in anthropology, sociology, gender studies, and human rights; in Chile, in communications, culture and gender analysis; in Argentina, in sociology, anthropology and social communications; in Malaysia in education and instructional technology.

The study of different contexts enables the appreciation of differences in policy concerns, and the extent and under what conditions lessons from one setting are applicable elsewhere. Multidisciplinary approaches bring new perspectives and insights. Quantitative methods let us assess the extent of a phenomenon, while qualitative approaches enable a deeper, more nuanced understanding.

Variety in settings and in data and conceptual approaches is an ideal in development impact studies that is seldom achieved in practice because of the high investment and coordination costs involved. The Amy Mahan Research Fellowship Program made it possible to pursue this comprehensive multidisciplinary approach.

**Capacity Development**

The research fellows and their teams were treated like peers. One International Advisor was assigned to monitor the progress of each team, and to give support as needed. Grantees were expected to produce high quality work. They were encouraged to keep in touch with their advisors, and to request assistance as needed to address specific problems as these inevitably arise in the conduct of research.

The Program Manager monitored progress, from time to time identifying gaps in assistance that could be addressed through consultancies or special studies. He also provided complementary technical support to the research teams.

The program’s mentoring system was flexible by design. It recognized that individual advisors are top scholars with many other responsibilities, which means that at any point in time they may or may not be able to help Fellows for reasons beyond their control. The system also recognized that advisory needs of researchers are time sensitive and cannot always wait until their advisor has time to address them. Furthermore, these needs may be highly specific, and individual
advisors, no matter how qualified in their own field, may not necessarily be the most suitable provider of the assistance needed. This is why, by design, grantees received technical advice or support from their advisor, from another advisor, from a consultant or from the Program Manager, tailored to the specific needs and time requirements of each team.

**Activities**

Program activities are linked to the inputs used and these are listed in Table 1. The main input was the research grant, which enabled each of the research teams to conduct field research activities needed. Other activities are: training events, consultancies, country visits and special studies.

The Training and Research Planning Workshop was the only training event planned beforehand. It took place at the start of the program and was used to review and refine the research proposals and help Fellows understand the program’s scope and meet their advisors and the Program management team.

A second training event was the participation in the London ICTD Conference on December 2010. Funding from Amy Mahan resources to enable ICTD Conference attendance was awarded on a competitive basis to those Fellows (lead or assistant researchers) who: i. submitted a paper for consideration by the Postgraduate strand at ICTD 2010, and ii. applied for a partial or full travel scholarship from ICTD 2010. In all, 5 Principal Investigators (Argentina, Malaysia, China, Rwanda and Thailand) and 4 Assistant Researchers (2 from Peru, 1 from China and 1 from Thailand) participated. The occasion was also used as an opportunity to review progress with participating Fellows, through individuals and at a special meeting of Amy Mahan Fellows and staff participating in the Conference.

Country visits were planned as part of the mentoring system. Ideally the International Advisors were to make these visits. In practice, where the specialized expertise was needed or where the International Advisor was not available when the assistance was required, either a consultant or another advisor or the program manager, made the visit to try to ensure timely support to the research teams.

The visit of Stephen Pace, a specialist in grounded research was used as an opportunity to enable interaction between the Chile and Argentina teams and with the International advisor of the Chile team.

Special studies were conducted in India, to try and understand why there were so few women users of Cybercafés in Uttar Pradesh; and in Jordan, to correct processing errors done by the original consultant hired locally.

**Outputs**

**Research**

Ten of the twelve countries which have completed the studies will get their research published. One grant was terminated early due to the departure of the principal investigator. Another study is not included in the publication because while the grantees made a worthwhile effort, bringing their study to publishable quality would have required more time and resources than were available.
The studies completed are to be published in a book titled *ICT and Social Change: The Impact of Public Access to Computers and the Internet* (See Appendix). They cover urban cybercafés in 7 countries (Table 2), but also looked at telecentres in both rural (4) and urban settings (4). None of the grants awarded proposed the assessment of impacts in libraries, which is unfortunate because there is at least one exemplary library experience (Salas et al 2005, Roman and Guerrero 2005) and there may be more. We also found and studied urban public access support centers, PASCs, in two countries, Argentina and Thailand. These are not public access venues and are not numerous, but PASCs appear to be playing a noteworthy complementary ICT skills training role in specific urban settings. A mix of quantitative and qualitative analysis was used in all countries, but the dominant approach was qualitative in four countries and quantitative in the other six (Table 2).

The three studies in Argentina, Chile and Peru are also to be published in a separate Spanish language volume.

**Capacity Development**

Training events had a strong component directly linked to capacity development. Otherwise, capacity development was not treated separately from research. All researchers at one time or another need the support of peers. Our program could make a difference because all studies covered the same topic, public access assessment, and also because funding was available to help cover the cost of high level specialized technical support.

At the end of the project the Research Fellows were asked to assess the effectiveness of the capacity building approach used and its various components by completing a short questionnaire.

Table 3 summarizes the perceived effectiveness of the two training events and its main activities. Eight Principal Investigators assessed the workshop in Barcelona as “very useful” and the other four as “Useful overall”. Of the five grantees who attended the ICTD conference, three rated the overall experience as “very useful” and the other two as “Useful overall.”

Table 4 summarizes Principal Investigator’s perceived effectiveness of the mentoring system used. We did not ask Fellows to evaluate individuals, but the system as a whole. The Principal Investigators’ perception of the mentoring system is summarized in Table 4. Seven of them rated the overall performance of the system as “very useful” and the other 5 rated it as “Useful overall”.

We planned for at least one visit to each of the research teams by an advisor, a consultant or the program manager. Unfortunately, this was not arranged in the case of India, Jordan, Uganda or Jamaica. Principal Investigators who benefited from these visits found them “useful overall” (2) or “very useful” (6). The Uganda team felt that a country visit “would have made a BIG difference”. The other two teams without field visits, Jordan and India considered that such a visit would have been useful, but was not indispensable.

Table 6 acknowledges the importance of training among peers and exchanges between the grantees. Seven Principal Investigators felt that the program had provided sufficient opportunities for exchanges between grantees, but five considered there were “only a few” opportunities. Four benefitted “a lot” from these exchanges, another four benefitted “some,” three benefitted “a little” and one “did not benefit.” We managed to provide for a visit by the Argentina team...
leader to meet with the Chile team. This was a unique instance, but both participants indicate they benefited “a lot” from this exchange.

One fruitful unplanned form of peer-to-peer collaboration arose out of the Malaysian team leader’s visit to ICTD 2010. During the event she met an Australian student who was also working on the same public access venue in Malaysia and they joined forces in their assessment of Rural in Malaysia.

Policy and Practice

Public agency leaders (national and international) have little incentive in having their programs scrutinized. Government sponsored evaluations, when carried out, are closely supervised, often by the same staff charged with implementation. Disparate evaluation methodologies are used (Rothenberg-Aalami and Pal 2005, Bhatnagar and Singh 2009). Reports are steered to favorable findings. Negative information is declared “confidential” or “for internal use only”. Lessons learned tend to be glib, of limited value for program design.

A comprehensive systematic body of rigorously acquired knowledge regarding what works and what doesn’t has been missing. The studies completed by the Amy Mahan Research Fellowship Program go a long way filling this research gap.

Outcomes

Research

The program’s research outcomes are the research studies completed by Amy Mahan Fellows. They are to be published by IDRC in book form. A summary of the book’s structure and content is contained in the Appendix. The value of these studies to the research community will be perceived more clearly once the book has been published and disseminated.

For now, we asked Principal Investigators about the extent of their satisfaction with the study they were able to complete with support from the Amy Mahan Research Fellowship. Their responses, tabulated in Table 7, showed that 10 of the 12 respondents were “very pleased” and another two were “satisfied”.

Capacity Development

Overview of Mentoring System Benefits

The trainees benefited differently from various aspects of the mentoring system.

At an elementary level, we impressed upon grantees who committed plagiarism even if unintended, of the severity of the transgression and the importance of giving credit to the original authors whenever using words that were not their own.

Other grantees (e.g. Cameroon, Rwanda and Malaysia) learned to use theoretical concepts and theories of change to assess the impact of ICT interventions from their respective advisors (Ramata Thioune in the case of Cameroon and Rwanda; Erwin Alampay, in the case of Malaysia), as well as by opportunely timed field visits to Cameroon and Rwanda by Abiodun Jagun (at a time that their Int. Advisor, Ramata, was unavailable to visit these teams).
Chile's team, who used grounded theory in their research, benefitted from the visit by Steven Pace, an expert user of grounded theory in ICT research (Pace 2003), discussing methodological issues and their research findings. The Argentina team leader also benefited from a brief visit by Pace to Argentina (see Box 1).

In Thailand, the team leader benefited from the visit of Raul Pertierra, an anthropologist specialized in ICT research. Furthermore, Prof. Pertierra detected issues with the financial management of the Thailand project and was the first person to encourage the Thailand team leader to address them. Ultimately, with assistance and guidance from the Program Manager, the Thailand team leader managed to overcome these obstacles and successfully complete the research.

Having an expert in survey and statistical methods who was also part of the Global Impact study team was an invaluable resource to the the mentoring system and the program manager. Other than directly monitoring the work of the Jordan team, George Sciadas provided technical support, as needed, to the teams conducting surveys and engaged primarily in quantitative work (i.e. Jordan, China, India, Rwanda, Malaysia, Cameroon).

Having a gender specialist as Ramata Molo Thioune was also very valuable. She was used not only in reference to the two teams she helped supervise, Rwanda and Cameroon, but also as a resource person on whom the program manager and other research teams drew when conducting gender analysis.

In China, where cybercafés are often depicted by officials and the media as corrupting of youth, it was useful for grantees to exchange views with experts with different frames of reference who understand that these issues are not “either or” propositions. That some users, even those who play videogames sometimes also learn, that those who become obsessively engaged with Internet use do so for very powerful psychological reasons, and that the addictive tendencies observed in some users may be due to conditions precedent to their use of technology.

**Self-assessments**

Anne Bernard 2005 defines 5 capacity building categories that IDRC projects may help facilitate. These are the capacities to: i. conduct research; ii. manage research; iii. conceive, generate and sustain research; iv. use research results – in policy making and implementation, program development and management, development/sector practice, and to facilitate contributions to other research activities; and v. create or mobilize research links to systemic policy formation or change, and to promote system changes.

We asked the 12 Principal Investigators to assess the program’s capacity building effectiveness in relation to Bernard’s first three categories. The last two categories are important but not very susceptible to “self-assessment”. The definitions given by Bernard for each of these three categories were specified in our questionnaire completed by Principal Investigators (Appendix B). Grantees were asked to rate whether the program had had no effect on their capacities, or increased them a little, some or greatly. Their responses are tabulated in Table 7.
Of the 12 Principal Investigators surveyed, 10 considered that the Amy Mahan Program had “increased greatly” their capacities to conduct research and to conceive, generate and sustain research; and 8 considered that their capacities to manage research had increased some.

We asked three Principal Investigators, to give details on how the program had helped build these capacities. Their responses appear in boxes 1, 2, and 3.

**Box 1. Capacity Building Impact of Amy Mahan Research Fellowship Program**
by Sebastián Benítez Larghi, Argentina Principal Investigator

**Capacity to conduct research**
In Barcelona we were able to outline, together with Francisco Proenza and Hernán Galperín and the other mentors and collaborators (Frank Tulus, Roxana Barrantes, Robert Fishman) the study’s logical model and integrate the appropriation paradigm with impact assessment; and approach the study’s objectives with an effective methodology using quantitative and qualitative instruments. Consequently, I was able to collect a large amount of data. This was also made possible by an important research team with members trained in different disciplines.

**Capacity to manage research**
The main thing I gained was experience leading a research team. It was great to "manage" the different capabilities of each member according to their specialations and backgrounds. It was also gratifying to have initiated some of the team members in the conduct of research (e.g. Ponce de Leon Jimena and especially Miguel Gaztañaga).

It was the first time in my career I acted as Principal Investigator responsible for all research components, from design and implementation to budget decisions. It enabled me to become an active participant in our research institution. I could now negotiate various issues regarding resources and administrative matters with Faculty authorities.

The program was also key in stimulating to communicate results beyond the boundaries of the academic field, especially in communicating to policy makers. I had never done this before.

**Capacity to conceive, generate and sustain research**
Having a well-supported program like the Amy Mahan Research Fellowship Program, backing us, gave us the confidence to:

Submit articles to national and international journals or compete to participate in international conferences in English, or submit proposals to competitive grants such as: i. SIRCA II IDRC and Nanyang Technological University of Singapore internationally and ii. PICT 2011 (Science and Technology Projects) of Argentina’s Science and Technology Agency. ([http://www.agencia.gov.ar/spip.php?page=convocatorias_articulo&mostrar=1390](http://www.agencia.gov.ar/spip.php?page=convocatorias_articulo&mostrar=1390)).

We won both awards, and I am now Project Manager for both projects.

Our Amy Mahan Research study also served as presentation card that led to my being hired by the Ministry of Education, the Organization of Ibero-American States, and Educ.ar, as a consultant to evaluate model 1 to 1 "Equality Connect Program."
Box 2. Capacity Building Impact of Amy Mahan Research Fellowship Program
by Nikos Lexis Dacanay, Thailand Principal Investigator

**Capacity to conduct research**
Through the Amy Mahan research project, my capacity as a researcher has been enhanced. True to the spirit of qualitative research methodology, my research team entered the field with a simple hypothesis (access to and use of Internet public access venues by ethnic migrant women in Thailand shape empowerment) which we were ready to abandon as we kept our minds open to other possibilities of public ICT usage by our informants. When we entered the field, we were overwhelmed by the plethora of information. It was initially difficult to sift through the data that we gathered, and we had a hard time organizing them. Through the communications with our advisers Dr. Erwin Alampay and Dr. Raul Pertierra and with Amy Mahan manager Dr. Francisco Proenza, we were able to manage the data effectively by sticking to our research framework. When we re-entered the field, we only focused on getting the information that related to our hypothesis. Through our exchange of ideas with our advisers, we were also able to build on our theoretical framework and to generate policy recommendations.

**Capacity to manage research**
The Amy Mahan project has given me the opportunity to manage a research project and to be guided along the way. It was my first time to manage a research project and to lead a team, and the advices that I got from my mentors – from the execution of the project’s work plan to the financial aspect - were very helpful. In supervising a team, I had the opportunity to work with a group of competent young researchers who were conscientious. While I privilege an anthropological lens in analyzing our research data, my team mates commended me for my democratic approach to accepting ideas and recommendations from them, and for letting them have as much liberty as possible in analyzing the data using their own academic disciplinary lenses. The new research project that I am managing has been smooth sailing because of the lessons that I learned from managing the Amy Mahan research project.

**Capacity to conceive, generate and sustain research**
Through the countless discussions with my mentors and research team during the Amy Mahan research project, I have developed a keener sense of the complex realities of my informants and a greater ability in theorizing about these realities and in forming new ideas about their access to and use of ICTs. For instance, in discussing with Dr. Pertierra on theories of gender empowerment, we realized that the common rhetoric about the migrant women workers as “marginalized” is problematic because of their agency in overcoming the social and political barriers that they face. Dr. Alampay has provided invaluable inputs in thinking through attributions of empowerment and in simplifying our theoretical constructs.

The guidance that I received from my mentors has helped me in improving my ability to analyze the data with a policy framework. For example, Dr. Proenza was instrumental not only in clarifying the ideas and terms that we used in our research but also in guiding us while we built our policy recommendations about on the synergy of cybercafé and public access support center.

In terms of the technical qualifications of the research methodology, Dr. Proenza made sure that proper standards were followed.

Because of my experience in having a close exchange of ideas with my advisers and with Dr. Proenza, I was able to develop a better analysis of the conditions of my informants, both theoretical and policy related. The experience overall has helped me generate a new research project [with SIRCA] that now expands on the Amy Mahan research.
Box 3. Capacity Building Impact of Amy Mahan Research Fellowship Program
by Nor Alias, Malaysia Principal Investigator

Capacity to conduct research
The Amy Mahan research fellowship experience increased my capacity to conduct large-scale research and enhanced my knowledge of impact research. I had not been directly involved in these kinds of research before. The project manager was and still is very helpful, so is the advisor. I feel supported in my effort to learn new ways of doing research. I am especially thankful for the opportunity to meet other research groups- the different foci and methodologies brought in by the research groups give me new insights to ICT4D research.”

Capacity to manage research
This is another aspect of research that I improved on from my experience as Principal Investigator. The challenges I faced when dealing with people - my own research group members, the RIC personnel, the ministry etc. all contributed to my increased capacity to plan and gain confidence in managing a large-scale research with different groups of participants. I believe i am now better equipped with skills associated with collaborating with those from other organizations.

Career development

We asked Principal Investigators if they had received any promotions, awards, scholarships, rewards or other recognitions of achievement that they felt were positively influenced by their participation in the Amy Mahan Research Fellowship Program? Four team leaders answered affirmatively (Box 4).

Box 4. Self-Assessed Impact on Career Development

Argentina
“It helped me to obtain a new grant (SIRCA II). It helped me to get a promotions in my university and in the CONICET.” [Consejo Nacional de Investigaciones Científicas y Técnicas]

Chile
“While the scholarship did not lead to a specific award or benefit, the research experience has been valuable for my career advancement. It has strengthened my academic work and has enabled me to prepare various publications. Completing the study also strengthened my capacity to conduct and manage research, which has been useful in my present doctoral dissertation work, as well as a professor in a University level Research Workshop. Our study also amplified my knowledge and enabled me to participate more actively and effectively in a public policy forum in the field of communications.

We are now disseminating our findings in national and international conferences, and among government officials and agencies engaged in public access policy.

Thailand
“I was able to get a research grant from SIRCA II Nanyang Technological University, which is an expansion of the research project that I did for Amy Mahan.

I applied for and was accepted to MA program on Sustainable Development ICT4D track from University of London Royal Holloway. The Amy Mahan research project was a deciding factor in my acceptance.”

Uganda
“Two of the research teams members completed their Master’s research in a record time due to the experience they had gained from the Amy Mahan activities. Another member acquired a Pan-African scholarship to undertake his second master's degree in business administration - he is completing in July this year.
Overall Assessment and Recommendations

Implementation Challenges

Delays

While the mentoring system was effective building research capacities, it was also time consuming and made it necessary to extend the project for a total of 14 months. Even after these two extensions it is only now that a first draft of the book’s manuscript has been completed. This has meant postponing the publication of some of the studies that were ready early on, until the work of other grantees was finalized. For example, three of the studies were ready about nine months before the remaining studies were completed.

What accounts for the delays experienced? First, the grantees are in general qualified young scholars, but some are also inexperienced in rigorous research writing subject to peer review. Second, the research and writing expertise varies widely across teams. This has made intensive handholding frequent and necessary. Thirdly, some delays are inevitable, and are part of the research process. Fourthly, while the mentoring system was flexible, it has its limitations.

Detecting significant errors in research is essential. If the Amy Mahan Fellowship Program was exclusively a research project, the additional review and handholding effort required would be unwarranted. A peer review process would only need to determine that there is a problem and reject the submission. Given our capacity building mandate, we have sought to help grantees identify and overcome problems. This requires patience and time.

The Jordan study was delayed because the initial consultant hired to process the data did not do the job properly and the work had to be done over again.

The India study suffered delays, not for lack of capacity on the part of the scholars involved, but precisely because our findings showed that only 3% of women were using Cybercafés. We could have left our findings there, but opted instead for pursuing the issue and undertaking a follow-up survey to address the issue.

Notwithstanding the flexibility used in mentoring, it is not always feasible to hire outside professional help to overcome these challenges. At some point we considered hiring a high level professional to help with the technical edition of the program’s book, but discarded the idea after realizing that bringing up this person to date with the program’s approach and the studies would be just as time consuming as having the Program Manager assume this work.

Quantitative Analysis

Some capacities cannot be easily imparted to grantees within the short time framework of a program such as ours. This is the case of qualitative data analysis techniques – e.g. regression, discrete dependent variable analysis. Either the grantee or a member of team had these skills, or their advisor or the project manager assumed responsibility for this part of the analysis.

In other instances, the mentoring staff did not have the skills to supervise and make a suitable review of worthy efforts by grantees to conduct a particular kind of quantitative analysis. To be specific, we did not include in the book a paper prepared by the China team that applied Structural Equation Modeling.
techniques, in part because the concept of “willingness to pay” has its own shortcomings, but also because our own inexperience applying SEM constrained our capacity to critically review and help the China team improve their paper.

Report Writing

Some grantees needed hardly any assistance while others needed much more support and handholding.

The studies from Argentina, Chile and Peru were first written in Spanish and subsequently translated into English by consultants. The Cameroon study was first written in French and subsequently translated into English by the Program Manager. Some studies written in English required a substantial amount of technical as well as English language editing.

Even researchers that hardly needed help benefitted from the mentoring system. According to Argentina’s Principal Investigator, “I already had considerable experience writing scholarly papers. Nevertheless, I received considerable help. Steven Pace’s visit, for example, helped me apply the Grounded Theory paradigm in analyzing the data. Project participation also helped me gain confidence writing in English.”

Principal Investigators’ Recommendations

Our survey asked Principal Investigators to give us recommendations for improving future programs. The eight responses we received appear in Box 5.

<table>
<thead>
<tr>
<th>Principal Investigators’ Recommendations for Improving Future Programs</th>
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<tbody>
<tr>
<td><strong>Argentina</strong></td>
</tr>
<tr>
<td>“I am really very pleased with the program. It would be useful to have a final meeting between all the program participants to share and discuss different research results before writing the book.”</td>
</tr>
<tr>
<td><strong>Chile</strong></td>
</tr>
<tr>
<td>“It is important in this work to generate more instances of exchange between different scholars. In the case of Chile in which we shared with Argentina, the analysis became much more profitable at the time of sharing our findings. It also potentiated by regions is a very good alternative, but perhaps focus or generate power exchanges to the final moment would be a good opportunity. The look of the teams together synergistically can enhance much more the product of the book. It is vital to underline the role of leadership of the entire Amy Mahan team, as this imposes the rhythm and the seal of the final work. I value the delivery process and commitment Francisco Proenza.”</td>
</tr>
<tr>
<td><strong>China</strong></td>
</tr>
<tr>
<td>“I found consultant visit very useful in conducting our research. I think it could be even better if the program could organize some lectures and seminars across different teams. This may give us more opportunity to learn from and interact with consultants as well as teams which sharing similar research situation or method with us.”</td>
</tr>
<tr>
<td><strong>Jamaica</strong></td>
</tr>
<tr>
<td>“There is need to improve in the area of mentoring. Clear directions on what to do needs to be given to researchers in time. There is also the need to increase flexibility in the whole mentoring process. Some teams suffered lack of close monitoring and in-time guidance, while strict instructions with time line kept coming without considering the peculiarity of the teams.”</td>
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</tbody>
</table>
Program Manager Recommendations

The Mentoring System

We are quite satisfied with the mentoring system used and its effectiveness building capacity in the conduct of high quality research. Having the program manager supervised all of research teams, while relying on advisors and consultants that support individual teams is a sound approach. The selection of high level International Advisors to support each of the individual team is critical. They must be high-level experts, even if in practice this means they will not always be available to help at the precise time they are needed. The key is to allow flexibility in the use of resources and to set aside funding to hire consultants to provide specialized help if and when needed. Our program did not make such provision, but savings in some activities enabled us to redirect resources for such purposes.

Three specific types of expertise are very important. We found it very useful to have in our team advisors specialized in survey design and implementation, and in gender analysis. We further recommend that future programs consider having as one of their advisors a professional specialized in quantitative multivariate analysis.

An analytical writing workshop, directed at helping grantees analyze and write up their findings, would also be useful. However, as long as there is wide diversity in the preparation of grantees and, consequently, in the pace at which the various research teams advance, the timing of such a workshop is bound to be problematic.

Overcoming Implementation Delays

Various approaches could be used to help future programs overcome the implementation delay challenges described previously.

First, we recommend that a greater amount of time be dedicated to the selection process. Instead of six months, as we had, could have been extended to eight or 10. One drawback of this recommendation is that some potentially capable but
inexperienced scholars could be prevented from benefitting from the capacity building benefits of the program.

Second, by focusing on the specific needs of a region (e.g. Latin America) the homogeneity and nature of the research support needs could be made more uniform and relatively more manageable. We do not recommend that this option be pursued, because it would reduce the richness of experiences that has proven to be very valuable in our program.

The simplest way to overcome implementation delays is to have each grantee submit his or her publication to a suitable journal as soon as their study has been completed. This would enable each grantee to work at their own pace without having to wait for the other studies to be completed. Such an option was considered for the Amy Mahan Fellowship Program, but was discarded because we felt that having a single volume consolidating our findings would make a uniquely valuable contribution to the public access policy literature.

**Peer to peer exchanges**

We agree with Principal Investigators who recommend that future programs provide for greater exchange and interaction between research teams. The visit to Chile by Argentina’s Principal Investigator was fruitful and to the satisfaction of both research teams. Participation in ICTD London was another opportunity given grantees to meet and exchange ideas.

It would have been very useful to have a final meeting of all grantees, prior to the drawing of the final manuscript. In practice, however, it would have been difficult to schedule such a meeting given the broad range in dates of completion of the studies.

**Institutional considerations**

We are quite satisfied with the reporting and institutional support given by the Universities and research institutes to the 9 research teams.

Our experience with the three NGOs supporting the other three research teams was mixed. The performance of one NGO was fully satisfactory. In the case of another NGO, the project manager quit in middle of the research effort, and the institution found it impossible to replace him in a suitable period of time. Discussions over financial accounting with the third NGO were complex and protracted, perhaps due to a weak financial position.

From a technical standpoint, one reason why research institutions and universities functioned well as partners is because they generally work at arms-length from agencies engaged in public access policy. In this respect, two NGOs in the project functioned well. Neither of these two NGOs works as advocates of telecentres or public access. The other NGO, on the other hand, has the fostering of networks of telecentres as one of its mandates. Had it continued its Amy Mahan research study, it might have required special efforts by the mentoring system to encourage the research team to distance its analysis and findings from its everyday advocacy work.


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</tr>
</tbody>
</table>

**Training Inputs**

Workshop
ICTD - London Conference
Individual meetings
Group Meeting

**Mentoring Inputs**

International Advisors
- Erwin Alampay
- Kentaro Toyama
- Hernan Galperin
- Ramata
- Abiodun Jagun
- Roxana Barrantes
- George Sciadas

Consultants & Special Studies
- Martin Hagger
- Raul Perttierra
- Steven Pace
- India Women Survey
- Jordan data reprocessing

Country visits
Peer to peer assistance
- Argentina visit to Chile
- Malaysia work with Malaysian student

AR: Argentina; CM: Cameroon; CL: Chile; IN: India; JO: Jordan; MY: Malaysia; RW: Rwanda; PE: Peru; TH: Thailand; UG: Uganda; JA: Jamaica
Table 2. Distribution of Venues Studied, by Rural-Urban Status and Type of Venue, and Main Data Analysis Approach Used

<table>
<thead>
<tr>
<th>Region / Study Country</th>
<th>Urban</th>
<th>Rural</th>
<th>Public Access Cyber</th>
<th>Tele</th>
<th>PASC</th>
<th>Main Methodological Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Africa and Middle East</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cameroon</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>1015 secondary students from 5 Telecentres</td>
</tr>
<tr>
<td>Rwanda</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>418 white collar workers</td>
</tr>
<tr>
<td>Jordan</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>336 users of 24 Cybercafés</td>
</tr>
<tr>
<td><strong>Asia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>975 Users of 22 Cybercafés; 964 Nonusers of Internet</td>
</tr>
<tr>
<td>India</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>100 Women Users of 2 Cybercafés; 100 Women nonusers</td>
</tr>
<tr>
<td>Malaysia</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>299 Users of 15 centers</td>
</tr>
<tr>
<td>Thailand</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>34 Burmese migrant women</td>
</tr>
<tr>
<td><strong>Latin America</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argentina</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>1 Cybercafé, 2 PASCs</td>
</tr>
<tr>
<td>Chile</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>2 Telecentres</td>
</tr>
<tr>
<td>Peru</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>9 Community-based Organizations</td>
</tr>
</tbody>
</table>

A public access venue is a public space where any visitor may access computers or the Internet. It may or may not charge a fee. Cybercafés and telecentres are public access venues. A cybercafé (Cyber) operates on a commercial basis. A telecentre (Tele) is funded by a donor, an NGO or by the government. A public access support center, PASC, is not a public access venue because use of its equipment is not open to the public at large. A PASC generally has a target population (e.g. migrant women in Thailand, urban youth in Argentina) to which it offers training in the use of computers or the Internet.
**Table 3. Perceived Effectiveness of Training Events**

<table>
<thead>
<tr>
<th>Barcelona Workshop</th>
<th>Negative Effect</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Useful overall</th>
<th>Very useful</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To what extent were the following workshop activities useful to you and your study?</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Peer review of your proposal</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Special presentations made during the workshop</td>
<td>5</td>
<td>7</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Were orientations you received during workshop useful in planning your research?</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv. Was the administrative assistance you received during the workshop useful?</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Rate the workshop’s overall usefulness to you and your research project</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICTD 2010 Conference</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Usefulness of ICTD London Conference in respect of the following:</td>
<td>4</td>
</tr>
<tr>
<td>i. Present your paper on Amy Mahan research progress and receive useful comments</td>
<td>1</td>
</tr>
<tr>
<td>ii. Meet other professionals that helped you in your Amy Mahan research?</td>
<td>1</td>
</tr>
<tr>
<td>iii. Meet other professionals with similar interests that could help you professionally</td>
<td>1</td>
</tr>
<tr>
<td>4. How useful did you find the Amy Mahan group meeting at the end of the workshop?</td>
<td>3</td>
</tr>
<tr>
<td>5. How useful were the individual reviews with project manager &amp; advisor?</td>
<td>3</td>
</tr>
<tr>
<td>6. Rate usefulness of your experience at ICTD Conference to your Amy Mahan research?</td>
<td>2</td>
</tr>
<tr>
<td>7. Rate usefulness of ICTD Conference experience to your professional and career development?</td>
<td></td>
</tr>
</tbody>
</table>
Table 4. Perceived Effectiveness of Mentoring System

<table>
<thead>
<tr>
<th>Did your team get the help needed at the time that you needed it?</th>
<th>Useless, too late</th>
<th>Some delay but useful</th>
<th>Satisfactory</th>
<th>Precisely when needed</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>5</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Negative effect</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Useful overall</th>
<th>Very useful</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>8</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>6</td>
<td>12</td>
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<td></td>
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<td>4</td>
<td>5</td>
<td>11</td>
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<tr>
<td>1</td>
<td>3</td>
<td>7</td>
<td>11</td>
<td></td>
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</tr>
</tbody>
</table>

How helpful was the advice you received with respect to:

i. Conceptualization & theoretical formulation of research study?
   1 | 3 | 8 | 12

ii. Preparation of questionnaire & planning of survey & data collection
   2 | 4 | 6 | 12

iii. Analysis of the data collected
    2 | 4 | 5 | 11

iv. Writing of research findings
    1 | 3 | 7 | 11

How would you rate overall performance of mentoring system?

5 | 7 | 12
Table 5. Perceived Effectiveness of Country Visits by Advisor, Consultant or Program Manager

<table>
<thead>
<tr>
<th>How helpful do you feel that having an advisor, consultant or the program Manager visit your country and have discussions with your team?</th>
<th>Negative effect</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Useful overall</th>
<th>Very useful</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>It would have made no difference</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It would have been useful, but was not indispensable</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you feel that the fact that an advisor, consultant or the program Manager did not visit your country affected your research study?

The teams that did not have country visits were: India, Jordan, Uganda and Jamaica.
Table 6. Perceived Effectiveness of Interaction and Exchange Between Grantees

<table>
<thead>
<tr>
<th></th>
<th>No opportunities</th>
<th>Only a few</th>
<th>Enough</th>
<th>Many opportunities</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you have opportunities to meet and interact with other Grantees?</td>
<td>5</td>
<td>7</td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Did not benefit</td>
<td>A little</td>
<td>Some</td>
<td>A lot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much did you benefit from interaction with other Grantees?</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Did not benefit</td>
<td>A little</td>
<td>Some</td>
<td>A lot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer to peer visit of Argentina Grantee to Chile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
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<td>2</td>
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</table>
Table 7. Assessments by Principal Investigators of Capacity Building and Research Activities of the Amy Mahan Research Fellowship Program

**Capacity Building**
To what extent has your participation in the Amy Mahan Research Fellowship Program increased your **capacity to:**

<table>
<thead>
<tr>
<th></th>
<th>No effect</th>
<th>Increased a little</th>
<th>Increased some</th>
<th>Increased greatly</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Conduct research?</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Manage research?</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Conceive, generate and sustain research?</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td></td>
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</tbody>
</table>

**Research**
Are you satisfied with the research study you have been able to complete with support from the Amy Mahan Research Fellowship?

<table>
<thead>
<tr>
<th></th>
<th>Not satisfied</th>
<th>Satisfied</th>
<th>Very Pleased</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you satisfied with the research study?</td>
<td>2</td>
<td>9</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
Book Summary

Shared public access to computers and the Internet has universal appeal as an effective low-cost way of providing widespread access to technology, information and knowledge in developing countries. In urban areas public access venues take the ubiquitous form of Internet Cafés. Where commercial sustainability is challenged, i.e. in rural or marginalized urban communities, public access venues are commonly known as telecentres and arise as a result of interventions sponsored by governments, donors and NGO advocates. Practically all developing countries have public access policies, usually explicit although sometimes by default. Yet research on the social and economic impacts of public access is sparse and scattered. Little is known about the nature or extent of the purported benefits, or the conditions under which they are realized or thwarted.

Three themes emerge from our research. First, most users benefit from public access by enabling people to achieve common personal objectives, such as learning, communicating with family and friends, enhancing work skills and job prospects (Rwanda), and having fun and entertaining themselves (China). Not all impacts are positive. Overuse can adversely affect school performance (Cameroon) and personal life spheres (China). Second, public access venues have important social impacts. They enable users to expand their social networks and build up social capital (Malaysia, Jordan), facilitate social inclusion (Argentina), and make it easier for rural grass roots organizations to build up specific capacities such as interacting with external agents (Peru). Third, although women and underprivileged groups can benefit significantly in important ways, their access to the most ubiquitous type of venue, cybercafés, is frequently limited, often severely, in many countries. The reasons include cultural expectations on women (Chile, India, Jordan), commercial practices that make some venues hostile to female clients, and outright discrimination (Thailand, Peru). This is a major obstacle that must be overcome if the reach of public access benefits is to be widespread and equitable.
**Niche**

This book is the first systematic assessment of the impact of public access across cultures (10 countries in 3 continents), for a variety of venues operating under different settings, for the purpose of informing public policy.

Participating research teams shared three objectives: to assess impacts with rigor, to acknowledge the reach and limitations of their findings, and to draw practical recommendations. Within this broad framework, Cybercafés located in urban areas and mid-size towns are considered in the China, Jordan, and India chapters; rural telecentres in the Cameroon and Malaysia chapters; and comparisons across venue types are examined in the Argentina, Chile, Peru, Rwanda and Thailand chapters. Mixed approaches to data gathering were used in most studies, but qualitative approaches were dominant in Argentina, Chile, Thailand and Peru, and quantitative approaches in China, India, Jordan, Malaysia, and Rwanda. Research teams were multidisciplinary: in Thailand it had expertise in anthropology, sociology, gender studies, and human rights; in Chile, in communications, culture and gender analysis; in Argentina, in sociology, anthropology and social communications; in Malaysia in education and instructional technology.

By studying different contexts we appreciate differences in policy concerns and the extent and under what conditions lessons from one setting are applicable elsewhere. Multidisciplinary approaches bring new perspectives and insights. Quantitative methods let us assess the extent of a phenomenon, while qualitative approaches enable a deeper, more nuanced understanding.

Variety in settings and in data and conceptual approaches is an ideal in development impact studies that is seldom achieved in practice because of the high investment and coordination costs involved. The research behind this book has been made possible by the Amy Mahan Research Fellowship Program, a competitive research grant initiative funded by Canada’s International Development Research Centre (IDRC), implemented by Universitat Pompeu Fabra, Barcelona, in collaboration with scholars from Universidad de San Andrés, Buenos Aires and the University of the Philippines, Manila, and South Africa’s LINK Centre at the University of the Witwatersrand, Johannesburg, and partner institutions from participating countries.

**Audience**

The audience for this book includes donors, public access leaders, managers, and public officials who want to learn of the benefits and challenges of public access to computers and the Internet, and are looking for guidelines to improve the design of public access interventions and ICT for development policies. A second equally important audience includes researchers, teachers, students, facilitators, consultants and analysts (NGO and public sector) interested in supporting inquiry, planning and evaluation processes that examine practical policy concerns.

The publication will serve as standard reference on public access. It reports on scholarly research and is written in simple language readable by a broad spectrum of policy makers and researchers.
Organization

The book’s core presents the results of field research in three parts. Part I covers public access impacts on users as individuals, Part II on society and networks, and Part III on women. The book also has an overview chapter at the beginning, and a concluding synthesis of findings and recommendations at the end.

Part I. Impact on Personal Achievement and Well Being

Part I begins with an assessment of Cybercafé users in an Arab country, Jordan. It presents the findings of a survey covering 336 users of 24 randomly selected Cybercafés in Amman. The study finds overwhelming positive perceptions of impact in users’ lives in two areas: communications and social networking, and improving education and learning; and less widespread but positive impacts in a third area, income and employment.

The second chapter in this part examines the impacts of ICT training in public access venues on job skills and employment in Rwanda. A purposive survey was taken of 418 white collar and office workers who occupy positions likely to involve the use of basic computer skills (e.g. secretaries, receptionists, customer care officers, administrative assistants, finance officers and human resource managers, and public access venue employees). Eighty seven percent in this group have “getting a new or better job” as an objective for wanting to improve their ICT skills. Two thirds consider that knowledge of the Internet plays a very important or an important role in the job application process and 41% took an ICT skills test during recruitment for their present job. The skills acquired from public access venues differ and affect job prospects differently depending on venue type, location, competence of instructor, the duration of the training, and the sex of trainees. The training model used by government-sponsored telecentres appears to be most effective and its expansion should be considered.

The next two chapters cover China, the country with the world’s largest Cybercafé user population. Surveys of 975 Café users and 964 non-users were conducted. The objective of the first China chapter is to understand user motivations and assess whether personal objectives are fulfilled and the extent to which achievement is affected by Internet Café use. User life goals are not very different from those of non-users. The goal that is most highly cherished by both users and non-users is to “learn more knowledge”. Young (< 35 years old) urban male Internet Café users, and urban male and female student users report statistically significant higher achievement than their non-user cohorts for this top priority goal. Young (<35) urban male users and female urban student users also report higher achievement than nonusers for the goal “have fun, entertain myself.” Urban female users report higher achievement for the goal “keep frequent contact with those who don’t live nearby,” and “relax, relieve tension.” As users gain experience using the technology part of the “enthusiasm” in their sense of accomplishment appears to wane for the goals “keep frequent contact with those who don't live nearby” by urban females, and “have fun, entertain myself” by urban males and urban female students. These are significant findings suggesting that non-users are missing out in their achievement of goals they themselves cherish and, in the case of learning and communicating, are instrumental and valued by society. In the second China chapter we find that Internet addiction is not as widespread as is often reported in the media, and identify some of the features of users and use practices that seem to increase the risk of overuse.

In the coming years Internet Cafés will remain critical access venues for Chinese people, especially rural communities and migrant workers. Most top-ranked goals
are autonomous oriented, suggesting that ICT and cybercafé use is an autonomous-oriented activity for most users and non-users. China is rapidly becoming a modern society, but some of its present policies to stymie and limit use of cybercafés are controlling and undermining of autonomous motivation and are bound to fail. They also threaten adaptive activities and motives such as gaining new knowledge the psychological needs of users and, by implication, their psychological wellbeing.

Part I ends with a review of a quasi-experiment in 5 rural communities of Cameroon, where Télécentres Communautaires Polyvalents (TCPs) are the only place from which students can connect to the Internet. The self-reported academic performance of 1015 secondary school students interviewed in these 5 TCPs is used as a yardstick to compare the performance of students who know how to use the Internet and those who do not. Key to academic success are long hours of after-school study and a motivation to learn, but those students who study hard and are motivated to learn get Internet skills in the TCPs in larger proportion than underachievers. The evidence further suggests that, beyond study effort, having access to the Internet gives mid and upper secondary students a performance edge. On the other hand, spending too much time at the TCP thwarts academic achievement.

Part II. Facilitating Inclusion and Enabling the Build Up of Social Capital

The first chapter of Part II examines the ways in which Argentina’s low-income urban youth use new technologies in their daily lives. Three public access support centers located in the county of La Matanza are considered: i) a public access support center that provides training and is run by a local grassroots organization; ii) a Community Technology Center run by an organization with government support, and; iii) a cybercafé. The study’s main finding is that public access venues and community centers contribute to the social inclusion of youth in poor urban environments. They also satisfy training needs that are not met by market-oriented institutes or formal schooling. Cybercafés are also valuable, mainly as spaces of sociability and contact where young people put into practice what they learn in the community centers, and where the main activities are centered on communication and entertainment over the Internet. Women are less frequent visitors of the cybercafé and therefore derive fewer benefits from its use than men. We recommend the establishment of ICT training centers in marginalized communities, where high rates of alienation by young people are observed. We also encourage the strengthening of links between these spaces and the school environment, as well as the promotion of greater participation of women, especially in cybercafés and in job training programs.

In Malaysia we consider social connectedness among users of the country’s 42 Rural Internet Centers (RICs). Social connectedness, defined as the “feeling of belongingness, being linked to and related to a network, community or group that one trusts and interacts with”, is a building block of social capital. When a socially connected group establishes trusting relationships they often find ways to cooperate in joint activities that are beyond the possibilities of individual members. We examine a total of 300 responses to an online survey on connectedness and find that most RIC users feel a moderate degree of connection and 27% report a relatively high degree of connection with their social network. Nearly 20% of respondents feel significantly connected with community leaders.
Part II concludes with an analysis of the impact of public access on the organizational capacity of nine grassroots organizations located in a rural district of Peru’s Andean region. Public access venues such as telecentres and cabinas públicas (i.e. Peru’s cybercafés) help make communication processes more effective and facilitate meetings and coordination. These impacts are greatest when the venues have links to the objectives and goals of the organization, and when those actors that facilitate information flows with external agents use the Internet to search for funding opportunities. Some organizational skills are more likely to be impacted by information technology (e.g., those related to links, leadership, infrastructure and external communications) than others (e.g., supervision, monitoring and evaluation of plans). The promotion of public access venues as part of universal Internet access initiatives should consider the inclusion of rural organizations as part of their goals and not just the provision of access at the individual level, and initiatives seeking to foster a more productive use of technology by grassroots organizations should focus on developing those capacities that are most impacted.

Part III. Impact on Women

Limitations on access by women surfaced in previous chapters whenever cybercafés were the subject of study. In China, men account for 73% of survey respondents and females for only 27%. In Jordan, male users make up 76% of the sample and women only 24%. The original focus of our India study was cybercafé user objectives; but once we found only 12 females in our 300-user sample (4%), it became evident that the important societal impact was the exclusion of women from these types of venues. Even acknowledging the limited representativeness of our samples, these figures are alarming, because cybercafés are by far the most prevalent type of public access venues worldwide.

We begin this Part considering why cybercafés are off-limits for most women in mid-sized towns of Badhohi, Uttar Pradesh. A supplementary survey of 200 women, 100 users and 100 non-users, shows that most women in Uttar Pradesh are poor, female, frequently illiterate and have minimal participation in the formal economy. The caste system is firmly entrenched and the society is conservative and generally restricts the movement of women outside the family or the immediate community. Females in these mid-size towns generally have little decision-making autonomy or power within the households or control over the use of financial resources. It is mainly working women and girl students who come out of their homes. Others rarely come out of their homes, do not talk to strangers and are always guarded by male family members. The environment at the cybercafé is generally considered hostile to women, as these venues tend to be often crowded with young men. Hence, women and their family members do not feel comfortable with the notion of women visiting cybercafés. When interacting with outsiders, it is male family members that reply on their behalf. Illiterate females primarily engaged in household activities, generally felt that cybercafés were not useful to them and were not interested in taking part in the survey. Those who do use cybercafés tend to be better off, educated women from higher castes, and find them very useful. There is an urgent need to increase literacy and to enhance awareness of the benefits of the technology among women as well as among male family members, and to implement programs giving incentives to cybercafé operators that make their venues more welcoming and accommodating to women.

The second chapter in this part examines the impact on women of public access through Chile’s urban Quiero Mi Barrio telecentre network. The study is based on interviews of men and women in two centers, each located in relatively new neighborhoods created as part of government sponsored housing. There is a
general appreciation by interviewees of the positive impact of these centers on their communities. These facilities are perceived to be particularly valuable for children and young people, as a place where they can learn and do their homework now close to home, as part of their environment and available at no cost. Adult women also appreciate the digital literacy training imparted in these venues. Impact appears to be highest for women because their options to access the Internet from other venues, e.g. cybercafés, is more limited than is the case of men. The analysis suggests that the State should strengthen urban neighborhood telecentres to better serve women’s needs, encourage greater participation of women, and help women develop digital skills, realize their aspirations and meet every day needs.

Part III concludes with an assessment of the impact of public access on women migrants from Burma in the Thai border town of Mae Sot. The migrant population outnumbers Thai’s in border towns like Mae Sot, but is excluded from Thailand’s ICT development plans. Migrant women in Mae Sot have nevertheless benefitted indirectly from two types of venues that facilitate public access in Mae Sot: cybercafés and two NGO operated centers that provide ICT skills training to members of migrant organizations and access to computers and the Internet to their students. These facilities enable dislocated ethnic peoples with families, relatives, friends, and work partners living outside Mae Sot (i.e. Chiang Mai, Bangkok, inside Burma, and in resettled countries) to access the Internet, which for them represents a doorway to a wider space for maintaining and expanding social relationships beyond the geographical boundaries of Mae Sot. Physical distance is partly overcome by the proximity of virtual relationships. Through email and video chat using Skype, Yahoo messenger, and Gchat, the women in Mae Sot are able to repair kinship ties and extend their familial obligations as daughters, sisters, cousins, and nieces who are physically distant. Women migrants also use the Internet as virtual cultural headquarters, providing a space for cultural expression and entertainment. The women express themselves online in their ethnic languages when using email or chat, either in Burmese fonts (which they download online) or in English alphabet. The websites of the community based organizations advocating for migrants are in Burmese and ethnic languages. The women are also active participants in cultural entertainment – downloading, uploading, watching, and listening to Burmese ethnic music videos and celebrations/festivals.

Use of Internet Cafés by migrant women in Mae Sot is in practice limited, by direct discrimination of some Thai operators, as well as by the women’s own fears of being detected as illegal migrants by Thai police, which could lead to their being detained, harassed or even deported. Access to computers and the Internet is feasible only for migrant women who have their own computers and home connections, or who connect from their place of work (mainly community based organizations), or from a few Thai owned cybercafés that are friendly and accommodating to the needs of Burmese migrants. Programmatic ICT education needs to be developed and implemented through the cooperation of NGOs, private sector, and the Thai state. There should also be a concerted effort to influence the Thai government to change migration policies and have ICT policies for marginalized non – Thais living in Thailand. Without these changes in place, the welfare of migrants and ICT penetration among migrants cannot progress significantly.
Extent

The total length of the book is about 150,000 words, divided in three main parts: Impact on Personal Achievement and Wellbeing (38%), Facilitating Inclusion and the Build up of Social Capital (25%), and Impact on Women (19%). The two chapters introducing the volume and summarizing findings and policy implications account for about 17%. The book contains many tables and a few figures. Ideally the book would use two colors throughout, with a few color illustrations and photographs.

Submission

A manuscript of the book is available for review.
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Lead Editor

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# Appendix B: Questionnaire to Assess Effectiveness Perceived by Amy Mahan Research Fellows

## Workshop in Barcelona

1. To what extent were the following workshop activities useful to you and your research study?
   
   i. Peer review of your proposal

<table>
<thead>
<tr>
<th>Counterproductive</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Useful overall</th>
<th>Very useful</th>
</tr>
</thead>
</table>

   ii. Special presentations made during the workshop (François Bar, Frank Tulus, Robert Fishman, Willem Saris, Bruce Girard, Ramata Thioune, etc.) and assistance of resource persons during the workshop useful to you and your research?

<table>
<thead>
<tr>
<th>Counterproductive</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Useful overall</th>
<th>Very useful</th>
</tr>
</thead>
</table>

   iii. Were the orientations you received during the workshop useful in planning your research.

<table>
<thead>
<tr>
<th>Counterproductive</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Useful overall</th>
<th>Very useful</th>
</tr>
</thead>
</table>

   iv. Was the administrative assistance you received during the workshop useful to you.

<table>
<thead>
<tr>
<th>Counterproductive</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Useful overall</th>
<th>Very useful</th>
</tr>
</thead>
</table>

2. How would you rate the workshop’s overall usefulness to you and your research project?

<table>
<thead>
<tr>
<th>Counterproductive</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Useful overall</th>
<th>Very useful</th>
</tr>
</thead>
</table>
**London ICTD Conference**

The questions in this section should only be answered by Argentina, Chile, China, Malaysia, Rwanda, Peru and Thailand.

3. Was your participation in the London ICTD Conference useful in respect of the following:
   i. Present your paper on Amy Mahan research progress and receive useful comments
      - Counterproductive  Irrelevant  A little useful  Generally useful  Very useful
   ii. Meet other professionals that helped you in your Amy Mahan research?
      - Counterproductive  Irrelevant  A little useful  Generally useful  Very useful
   iii. Meet other professionals with similar interests that could eventually help you professionally
      - Counterproductive  Irrelevant  A little useful  Generally useful  Very useful

4. How useful did you find the Amy Mahan group meeting at the end of the workshop?
   - Counterproductive  Irrelevant  A little useful  Generally useful  Very useful

5. How useful were the individual reviews with the project manager (and in some instances with your advisor) to you and your Amy Mahan research program?
   - Counterproductive  Irrelevant  A little useful  Generally useful  Very useful

6. Rate your overall experience at the ICTD meeting in terms of its usefulness to your Amy Mahan research?
   - Counterproductive  Irrelevant  A little useful  Generally useful  Very useful

7. How would you rate your overall experience at the ICTD meeting in London in terms of its usefulness to your professional and career development?
   - Counterproductive  Irrelevant  A little useful  Gen. useful  Very useful

38
**Technical Support Received from Advisor’s, Consultants or the Program Manager**

At various times you received technical advice or support from your advisor or from a consultant or from the Program Manager. We do not wish to evaluate persons who may or may not have been able to help you in specific instances for reasons beyond their control. However, we would like your help assessing the overall effectiveness of the system of "mentoring" used by the Program.

8 How helpful was the advice you received with respect to:

<table>
<thead>
<tr>
<th></th>
<th>Counterproductive</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Generally useful</th>
<th>Very useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptualization and theoretical formulation of your research study?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation of the questionnaire and planning of your survey and data collection procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis of the data collected</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing of research findings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9 Did your team get the help needed at the time that you needed it?

<table>
<thead>
<tr>
<th></th>
<th>Useless, too late</th>
<th>Some delay but useful</th>
<th>Satisfactory</th>
<th>Precisely when needed</th>
</tr>
</thead>
</table>

10 How would you rate the overall performance of the mentoring system used?

<table>
<thead>
<tr>
<th></th>
<th>Counterproductive</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Generally useful</th>
<th>Very useful</th>
</tr>
</thead>
</table>


Interaction with other Grantees

11 Did you have opportunities to meet and interact with other Grantees?

<table>
<thead>
<tr>
<th></th>
<th>No opportunities</th>
<th>Only a few</th>
<th>Enough</th>
<th>Many opportunities</th>
</tr>
</thead>
</table>

12 How much did you benefit from interaction with other Grantees?

<table>
<thead>
<tr>
<th></th>
<th>Did not benefit</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
</table>

13 Peer to peer visit of Argentina Grantee to Chile - Applies only to Argentina and Chile Grantees (all others please skip this question)

How much did you benefit from interaction with Argentina team/Chile team?

<table>
<thead>
<tr>
<th></th>
<th>Did not benefit</th>
<th>A little</th>
<th>Some</th>
<th>A lot</th>
</tr>
</thead>
</table>

Country visits

Some teams had visits from advisors or consultants or the Program Manager. Other teams did not. We would like to determine whether these visits were useful and important or not.

The following countries had visits (or its equivalent): Argentina, Cameroon, Chile, China, Rwanda, Peru and Thailand. These teams should answer question 14 ONLY.

14 How helpful do you feel that having an advisor, consultant or the program Manager visit your country and have discussions with your team?

<table>
<thead>
<tr>
<th></th>
<th>Counterproductive</th>
<th>Irrelevant</th>
<th>A little useful</th>
<th>Generally useful</th>
<th>Very useful</th>
</tr>
</thead>
</table>

The teams that did not have country visits were: India, Jordan, Uganda and Jamaica. Only these teams should answer question 15.

15 Do you feel that the fact that an advisor, consultant or the program Manager did not visit your country affected your research study?

<table>
<thead>
<tr>
<th></th>
<th>It would have made no difference</th>
<th>It would have been useful, but was not indispensable</th>
<th>It would have made a BIG difference. It is a shame it could not be arranged.</th>
</tr>
</thead>
</table>

40
Capacity Building

We wish to know whether you feel that the program helped build your
to conduct research,
to manage research, and
to conceive, generate and sustain research.
These capacities have been defined by Anne Bernard in her 2005 document "Mapping Capacity Development in IDRC."

"The capacity to conduct research: This refers to the technical, disciplinary and/or sectoral knowledge, mastery of research methods and analytical skills appropriate to conducting either a current or an evolving research investigation. Specifically, it includes capacities to:

- work effectively within a research paradigm;
- conduct technical/scientific lab work at a level of expertise and independence appropriate to the research activity.
- conduct fieldwork (social, biological) data collection and analysis;
- communicate ideas to, and collaborate with, peers and supervisors; and - interpret and present results appropriate for policy/practice users."

16 To what extent has your participation in the Amy Mahan Research Fellowship Program increased your capacity to conduct research?

<table>
<thead>
<tr>
<th>No effect</th>
<th>Increased a little</th>
<th>Increased some</th>
<th>Increased greatly</th>
</tr>
</thead>
</table>
Anne Bernard 2005 defines the **capacity to manage research** as follows:

"..the professional knowledge and practical experience of management principles, processes and procedures within the research context appropriate to conceiving, initiating, facilitating implementation and ensuring monitoring of a research activity, program or institution. Specifically, it includes capacities to:

- negotiate research activities appropriate to available/potential human and infrastructure resources in the program, organization or wider environment;
- identify technical and fieldwork requirements of the research;
- develop and oversee execution of workplans, including monitoring and assessment systems;
- select, direct and supervise researchers, support staff, resource people;
- facilitate internal co-ordination and external liaison;
- plan and execute efficient, transparent and accountable finances; and maintain or write technical reports.

17. To what extent has your participation in the Amy Mahan Research Fellowship Program increased your **capacity to manage research**?

- No effect
- Increased a little
- Increased some
- Increased greatly
Anne Bernard 2005 defines "The capacity to conceive, generate and sustain research as ... the sophisticated and comprehensive disciplinary, sector or problem area expertise, coupled with strong and experienced-based knowledge of the field, appropriate to engaging with, inventing and exchanging new ideas and to generating research. It includes capacities to reconceive a development problem in ways which account for its interaction with other problems and sectors, and to present the problem in ways that reach beyond the immediate moment and/or local conditions. It includes being able to perceive the importance of the specific issues within the context of the wider whole. Specifically, it includes capacities to:

- analyze and synthesize complex ideas and data;
- perceive problems or issues in researchable terms;
- challenge existing research paradigms, and create new ones;
- formulate theory and concepts, think laterally;
- initiate first-order questions and set them within a research design;
- generate/implement data gathering, analysis and synthesis procedures;
- articulate implications of results in policy and/or use-oriented terms;
- serve as independent/senior resources regionally and globally on matters of theory, policy and practice; and
- manage teams of researchers, co-ordinate networks, generate/catalyze research and exchange activities.

18 To what extent has your participation in the Amy Mahan Research Fellowship Program increased your capacity to conceive, generate and sustain research?

<table>
<thead>
<tr>
<th>No effect</th>
<th>Increased a little</th>
<th>Increased some</th>
<th>Increased greatly</th>
</tr>
</thead>
</table>
Special Studies. Applies only to India (Women Supplementary Survey); and Jordan (statistical reprocessing of data). Others, please skip this question.

19 Did you feel there was a need for these special studies?

________________________  ______________________
No                        Yes

20 How would you rate the outcome of the special study?

________________________  ______________________  ______________________  ______________________  ______________________
Counterproductive        Unnecessary          A little useful     Generally useful     Very useful

Satisfaction with research study completed

21 Are you satisfied with the research study you have been able to complete with support from the Amy Mahan Research Fellowship?

________________________  ______________________  ______________________
Not satisfied             Satisfied           Very pleased
**Professional awards or rewards**

22 Have you received professional awards, promotions, scholarships, rewards or other recognitions of achievement that you feel have been positively influenced by your participation in the Amy Mahan Research Fellowship Program?

   No  Yes

23 If you answered yes to question 22, please use the space below to give the details of the award and its link to your participation in the Amy Mahan Program:

   (You may continue in separate pages if necessary.)

**Recommendations for improving future programs**

24 If you have recommendations for improving future capacity building programs, please use the space below to explain them in detail.

   (You may continue in separate pages if necessary.)