

Evaluation of the International Network for Post Graduate Students in the Area of ICT4D

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Abstract

In 2006, SPIDER began its support to the International Network for Post Graduate Students in the Area of ICT4D (IPID). The aim of this report is to present an evaluation of IPID, which was carried out between October 2009 and January 2010. Data collection was performed by interviews, document analysis and a web survey distributed to the members. IPID has expanded rapidly since 2006, although it should be noted that many have registered on the web site, but rather few of these can be regarded as active IPID members. It is evident that the IPID network fulfills a need, as there has been great interest in the network. From SPIDER's point of view, the most important contribution is the possibility for postgraduate students to support each other and to connect them with experienced researchers. This aim has been achieved for master and PhD students affiliated with Swedish universities, especially those at Örebro University and Stockholm University/KTH, but only to a limited extent for members in developing countries. Drawing on current opportunities and challenges, I provide the recommendations listed below. I also give examples of how these recommendations could be implemented.

1. Further development of national and international collaboration
2. Leverage collaboration across borders by using technology
3. Increase collaboration with experienced researchers
4. Only rotate IPID coordination if there are apparent benefits
5. Increase collaboration between SPIDER and IPID.

Introduction¹

In 2006, SPIDER began its support to the International Network for Post Graduate Students in the Area of ICT4D (IPID). The idea behind the initial support was to provide an opportunity for PhD students in ICT4D active at Swedish universities to network amongst each other. The network was created to facilitate international networking and collaboration, as well as knowledge sharing among PhD students in the ICT4D field. Today the network includes master students as well.

The IPID objective is to support its members through arranging academic, as well as social activities. Academic activities include attending conferences together, arranging seminars, sharing literature and journals ideas and sources etc. Social activities, which aim to encourage networking, interpersonal contact, communication and collaboration among members, include visits at different universities, and intercultural meetings etc. The coordination staff is hosted by Karlstad University and Örebro University.

The aim of this report is to present an evaluation of IPID, which was carried out between October 2009 and January 2010. According to the Terms of Reference document, my evaluation objectives were the following:

1. To assess the relevance and benefits of the program/network (i.e. appropriateness of the project in relation to the needs of key stakeholders, i.e. post graduate).
2. To assess the effectiveness of the program/network (i.e., the extent to which the program stated objectives are being achieved or can be achieved more satisfactorily in the future).
3. To assess and determine ways to improve the project design, with special focus on the project content and delivery.
4. To assess benefits and drawbacks of the proposed rotation of the IPID administration and coordination.
5. To assess the relevance for/contribution to SPIDER's organization, network and activities.

An earlier draft of this evaluation report was sent to IPID and SPIDER for feedback. It will be discussed during a seminar, where representatives from IPID and SPIDER participated. The report is structured as follows. First, I present the method of the evaluation. This is followed by a presentation of my findings. Finally, I discuss the findings and suggest recommendations for improvement.

¹ The Introduction section uses parts of the Terms of Reference document.

Method and background

Initially, I reviewed the Terms of Reference document and received further information from Cecilia Strand at SPIDER. This was followed by a review of the following documents and websites:

- SPIDER strategy and action plan, 2007-2011.
- What is IPID? From 2 to 200 in 2 years? 2008-02-11.
- Progress report IPID, 2009-02-28.
- Proposal for the International Post Graduate Student Network, 1 July 2009-30 June 2010.
- www.spidercenter.org/PID/index.php
- www.humanit.org/PID/wiki

I have been in contact with representatives from IPID and SPIDER, mainly by conducting interviews and discussions (see Table 1).

Table 1. Data collection from SPIDER and IPID representatives.

Cecilia Strand	SPIDER	Continuous discussions
Gudrun Wicander	IPID	Self evaluation
Lotta Rydström	SPIDER	Semi-structured interview
Mathias Hatakka	IPID	Semi-structured interview
Annika Andersson	IPID	Semi-structured interview

By drawing on the review of documents and interviews, a web questionnaire was designed (see <http://www.surveymonkey.com/s/B6NW8VS>). Both SPIDER (Cecilia Strand) and IPID (Gudrun Wicander, Mathias Hatakka and Annika Andersson) were asked to provide feedback on the questionnaire design. It was distributed to all members of IPID by using their e-mail list. In order to encourage members to complete the questionnaire, Annika Andersson was asked to write an introductory e-mail where she emphasized the importance of answering. The questionnaire was available from Nov 20 until Dec 9. Two reminders were distributed.

Out of the 456 members that were registered Dec 4, 2009, 115 (25%) completed the web survey. This could be regarded as a rather low response rate. However, many of the members do not participate in IPID activities, where typically 15-30 members participate, and these might not perceive themselves as active members of IPID. Thus, my interpretation is that the number of people that perceive themselves as members of IPID is much lower than the number of people that have registered on the web site.

A majority of the respondents (n=55, 57%) had participated in IPID activities, such as conferences, workshops or seminars, indicating that these felt most inclined to respond. The age of the respondents ranged between 21 and 54 years, with a mean age of 34 years. Most respondents were male (n=76, 67%) and PhD students (n=54, 47%). Notably, quite a number of the respondents were not master or PhD students (n=22, 19%). Most of them were aspiring or former master or PhD students, post-doctoral researchers or lecturers/professors.

Many of the respondents mainly live in Sweden (n=29, 26%). Between five and seven respondents mainly live in the UK, India, Bangladesh, Pakistan or Uganda (see table 2). The respondents are affiliated with a very large number of educational institutions, as only twelve universities had at least two respondents. As displayed in table 3, most members were affiliated with Stockholm University (n=14, 13%) and/or KTH (n=7, 6%), or Örebro University (n=12, 11%).

Table 2. Countries represented by five or more respondents (n=113).

	Frequency	Percent
Sweden	29	26%
UK	7	6%
India	6	5%
Bangladesh	5	4%
Pakistan	5	4%
Uganda	5	4%

Table 3. Universities represented by five or more respondents (n=109).

	Frequency	Percent
Stockholm University	14	13%
Örebro University	12	11%
KTH Royal Institute of Technology	7	6%
University of London	5	5%

Findings

The main reason why SPIDER initially decided to support IPID was to support PhD students. By creating a network, it was assumed that the members could give each other support and feedback, and collaborate. It is key for SPIDER that the support would eventually lead to better research on ICT4D. IPID has organized international conferences, which have been held in the UK and Finland, Swedish workshops, seminars and study visits, and has co-participated in organizing other conferences, including workshops in conjunction with other conferences.

An important indicator of the quality of a network is related with its members. It is primarily master and PhD students affiliated with few Swedish partner universities that benefit from the network, because other members do not receive funding. In some interviews, it was mentioned that there might be a risk that including master students hampers the academic quality. However, the master students benefit from learning about current research and they contribute with valuable local and practical knowledge, as many master students come from developing countries and have experience from the ICT4D field.

An item in the questionnaire revealed that most respondents “feel like an active member of the IPID network” (M=3.5, SD=1.1). This could be considered as a rather high mean, considering that many of the members are geographically dispersed and have not met. In an open-ended question in the questionnaire, the respondents were asked to describe the key benefits of IPID. More or less all

answers described one or both of the following key factors: research collaboration and research information. First, the members appreciated the possibility to connect, collaborate and share knowledge with other student members. Second, the e-newsletter was highly appreciated, especially because it provides information on what is happening in the field, e.g. conferences, journals and vacancies.

IPID activities

A rather small part of the members participate in each IPID activity, e.g. conferences, seminars, workshops or study visits. More than half of the respondents (n=55, 57%) had participated in at least one IPID activity, and 3.7 activities on average. About a quarter of the respondents (n=25, 26%) had received funding from IPID, and all of them (100%) maintained that the funding made it possible for them to participate in IPID activities, which they otherwise would not have been able to attend. IPID only funds students affiliated with Swedish universities.

In order to gain an understanding of member participation in the Swedish IPID activities, I asked for attendance lists for 2009. It is evident that a majority of the participants were students from Örebro University and Stockholm University/KTH. For example, during the most recent workshop in Örebro, eight participants were affiliated with Örebro, five with Stockholm/KTH and one student with Lund. According to IPID, this reflects where most of the students on ICT4D are located. During a seminar on mobile development, a vast majority of the 24 participants were master students. Twelve of the participants were affiliated with Örebro and seven with Stockholm/KTH. There were also two students from Karlstad and Uppsala University, and one student from Jönköping. Thus, it is primarily members based in few Swedish universities that benefit from the IPID activities.

IPID organizes an international conference yearly. The 4th conference was organized in collaboration with Royal Holloway, University of London, in 2009. In this conference, mainly European PhD students participated. There are some exceptions, for example, students from Uganda have participated in most international activities. The seminars are dominated by master students, while there are more PhD students at research workshops and conferences.

Members who participate in IPID activities find them very rewarding (see table 4). Note that only members that had participated in at least one activity where asked to assess the statements of table 4. The respondents feel that they receive useful feedback from the different types of participants, i.e. master students, PhD students and senior researchers/teachers, to a similar extent.

Table 4. Perceptions of IPID activities (1=Strongly disagree, 5=Strongly agree, n=49).

	Mean	SD
The activities organized by IPID are rewarding.	4.3	1.0
I have received useful feedback from master students during the activities.	3.7	1.1
I have received useful feedback from PhD students during the activities.	3.9	1.1
I have received useful feedback from senior researchers/teachers during the activities.	3.9	1.0

The respondents were asked to describe how they believe that IPID can be improved in an open-ended question. The most frequent responses were requests for collaboration with developing countries and further web development. First, the members suggested that IPID should be promoted in developing countries, more activities should be organized in developing countries and IPID funding and opportunities should be available to students from developing countries as well. Second, members asked for better web support, e.g. by recording activities, organizing virtual meetings and creating a web community.

Use of technology

A supporting dimension of IPID is the use of technology. Currently, the IPID coordinators mainly uses an e-newsletter to provide information to its members. Up till now, the web site has mainly been a site where IPID coordinators inform about upcoming events. There are also features on the web where members can share information on upcoming ICT4D activities, although they have rarely been used. However, IPID has ambitions to change this situation by creating a collaborative wiki, where members are encouraged to collaborate. In order for the wiki to become successful, IPID is very dependent on that their members contribute actively. IPID has also started to record activities and have made them freely available online.

There is no doubt that the most successful use of technology has been the e-mail newsletter. As shown in table 5, most members do not contribute with information to the web site and wiki, which is not surprising as the wiki was recently launched. Notably, quite a number of respondents (38%) have contributed to the e-newsletter, indicating that there is a willingness to contribute. The IPID members find the e-mail newsletter very interesting and informative, while the perceptions of the web site and wiki is currently less positive (see table 6).

Table 5. I have contributed with information to the following sources (n=85).

	Yes	No
The IPID web site	16 (17%)	78 (83%)
The IPID e-mail newsletter	36 (38%)	60 (63%)
The IPID wiki	11 (13%)	77 (88%)

Table 6. Perceptions of technology (1=Strongly disagree, 5=Strongly agree, n=87).

	Mean	SD
I find the IPID web site useful.	3.7	0.9
I find the IPID e-mail newsletter interesting.	4.5	0.8
I find the IPID wiki useful.	3.4	0.8
I regularly read information available via the IPID web site.	3.2	1.2
I regularly read information available via the IPID e-mail newsletter.	4.5	0.7
I regularly read information available via the IPID wiki.	2.8	0.9

An open-ended question in the questionnaire specifically asked how IPID should take advantage of web technology. By analyzing the responses, the most common suggestion was to develop opportunities for creating personal networks, communities and collaboration. Many mentioned that they appreciate the e-mail newsletter, but that it lacks opportunities for interaction. In particular, it was suggested that IPID could use social media, such as the recently established wiki, discussion forums and video conferencing to support online community, and organize virtual conferences in order to reach members in developing countries. The second most common suggestion was that IPID activities should be recorded and made available online, which IPID recently started doing. Thirdly, respondents mentioned that the IPID web site could offer an online repository of resources on ICT4D.

National and international collaboration

An important dimension of a research network is to stimulate possibilities for new contacts and collaboration. Many members feel that they have become acquainted with new people because of the IPID network and some also feel that they collaborate with new people (see table 7). A correlation analysis shows that members that participate in IPID activities, such as conferences, workshops and seminars, strongly correlate ($p < .001$) with many of the statements, including “I feel like an active member of the IPID network” and “I collaborate with new people because of the IPID network”. Thus, the IPID activities have been of key importance for supporting collaboration among members.

Table 7. Perceptions of national and international collaboration (1=Strongly disagree, 5=Strongly agree, n=87).

	Mean	SD
I have become acquainted with new colleagues because of the IPID network.	3.5	1.2
I collaborate with new people because of the IPID network.	3.2	1.2
IPID is an international network.	4.4	0.7

IPID has organized activities in collaboration with, for example, Ericsson and Sida. We can expect that some of the IPID members will work in companies and other organizations, while others will work as academics, after receiving their master or PhD degree. Thus, activities such as these ones are important to build an awareness of possibilities for further work in ICT4D.

The vision of IPID is to “create an *international network* that can support postgraduate students in the area of ICT4D in their studies and research” [italics added]. This vision is only partly fulfilled, as a vast majority of the members that

participate in the activities are formally affiliated with Swedish universities. The reason for this is that SPIDER only funds these students, something that IPID would like to change. However, one of the items in the questionnaire shows that most members perceive IPID as an international network (see table 7). Thus, although most activities are restricted to members affiliated with Swedish universities, many of the participants are international students, international activities are organized and technology is used to bridge geographical distances. These factors seem to have contributed to that IPID is perceived as an international network.

In the interviews, SPIDER staff emphasizes the importance of international collaboration. IPID mainly maintains national collaboration between Örebro and Stockholm University/KTH, and international collaboration with Joensuu University in Finland and ICT Collective at Royal Holloway, University of London. IPID has initiated collaboration with the special interest group titled GlobDev, which is part of the Association for Information Systems. In doing this, it would be possible to organize events in collaboration with the main information systems conferences.

Contribution to SPIDER

In discussions with SPIDER staff, they emphasize that the most important aspect of IPID is to support increased quality of the research, for example, by arranging activities such as workshops. As revealed by table 4, this seems to be achieved efficiently. SPIDER is essentially itself a network, connecting various actors that contribute to ICT4D. An item in the questionnaire let respondents assess the following statement: "I have learnt more about The Swedish Program for ICT in Developing Regions (SPIDER) because of my membership in IPID." (M=3.4, SD=1.2). Thus, members slightly agreed that they had learnt more about SPIDER because of their membership in IPID. By supporting IPID, these networks have been extended to include master and PhD students, which potentially will drive future ICT4D. Although SPIDER funds IPID, there has been limited collaboration. However, there are some exceptions. SPIDER and IPID promote each other at conferences, seminars etc. In the application process, SPIDER has provided feedback, which have led to refined applications. It can also be mentioned that both parties took part in organizing the Mobile Communication Technology for Development conference in 2008.

Discussion

In this section I discuss areas where strategic decisions need to be made and where there seems to be opportunities for improvement.

Further development of national and international collaboration

A key strategic decision is to decide whether IPID should mainly be a national or an international network. In order for IPID to become *the* national network of ICT4D, it should also work towards integrating other Swedish universities in the network. Although IPID is described as an international network, it mainly supports master and PhD students formally affiliated with few Swedish universities. International collaboration is rather restricted with few international partners, which includes Joensuu University and Royal Holloway, University of London.

IPID is currently developing international collaboration by, for example, having initiated collaboration with GlobDev. From IPID's point of view, it is clear that they want to grow and would like to be able to fund master and PhD students from developing countries in their network. IPID has European members that participate in their international activities. However, on the basis of my evaluation, there seems to be great potential in also making it possible for PhD students of developing countries to participate. This is dependent of significant increased funding. IPID seems to be a unique network from an international perspective and many benefits can be realized through further international collaboration. For example, ICT4D collective has a similar web site and as there is already close collaboration, ways of taking advantage of this collaboration when creating online services could be established.

Leverage collaboration across borders by using technology

A key challenge for IPID is to create a network of master and PhD students, which includes active members from both developed and developing countries. If this is to be achieved significantly more funding is necessary, as it is costly to e.g. organize international conferences, especially when funding for travel expenses etc. are required. In order to address this issue, IPID works actively in taking advantage of technology to support its objectives. Online media could be used to leverage learning and collaboration across borders. This could complement the highly appreciated e-newsletter, mainly used by the coordinators of IPID to distribute information. In doing this, members from developing countries could be supported in moving from peripheral towards more active participation in the IPID community.

There have already been promising initiatives, such as establishing a collaborative wiki and by recording activities and making them freely available. Other interesting suggestions include arranging virtual conferences, workshops and seminars, taking advantage of social media to promote community and establishing an online repository of resources on ICT4D for master and PhD students. A repository can partly be based on the information of the e-newsletter. The e-newsletter could also become more interactive by making it possible for members to directly contribute and discuss issues. This would

require a list server that effectively organizes communication and filters spam. Significant funding would be necessary to develop and maintain such initiatives, and the effort necessary to promote participation should not be underestimated.

Increase collaboration with experienced researchers

The interviewees emphasize the importance of having experienced researchers that participate in their events. They mention the need for feedback and that experienced researchers can introduce PhD students in international networks. Although IPID currently has more limited funding, they have ambitious ideas regarding the establishment a research school, by including master and PhD students from developing countries and to further develop international collaboration. Increased support from senior researchers would be useful to support such developments. IPID has conducted discussion with, for example, Professor Tim Unwin to establish an advisory board or steering committee with experienced researchers. This would also contribute to that IPID becomes less dependent of the current IPID coordinators.

Only rotate IPID coordination if there are apparent benefits

IPID is coordinated and administrated from Karlstad University by Gudrun Wikander and from Örebro University by Annika Andersson and Mathias Hatakka. The rotation of the IPID administration could contribute towards making IPID a more known network on ICT4D in Sweden. Moreover, Gudrun Wikander and Annika Andersson will soon graduate. As participation from other universities than Örebro and Stockholm/KTH is quite limited, another institution could be invited. On the other hand, the network has been coordinated efficiently and there is a risk when moving the coordination of the network. Also, it might be challenging to transfer administrative duties, technical servers etc. Consequently, my recommendation is that the network should only be moved if you are confident that you move it to an IPID member institution that would take on this challenging task ambitiously. There is no doubt that the current coordinators have worked hard to manage IPID, despite limited funding.

Increase collaboration between SPIDER and IPID

There seems to be several opportunities where collaboration between SPIDER and IPID could benefit both parties. SPIDER and its projects can benefit from the competence of the IPID members by, for example, including them in projects. On the other hand, IPID members could benefit from learning about SPIDER projects. In some cases, IPID members are part of SPIDER-funded projects, which is a good way of connecting research and practice. IPID also requests a more clear statement from SPIDER on what they expect, which could partly be based on this evaluation. IPID is very much dependent on SPIDER funding. In the future, IPID would like to continue to work closely with SPIDER but should also collaborate with and receive funding from other organizations.

Conclusions

IPID has expanded rapidly since 2006. It is evident that the IPID network fulfills a need, as there has been great interest in the network. IPID is growing despite that there is no explicit recruitment strategy. From SPIDER's point of view, the most important contribution is the possibility for postgraduate students to support each other and to connect them with experienced researchers. The benefit of doing this is to support future ICT4D research. This aim has been achieved for interested master and PhD students affiliated with Swedish universities, especially those in Örebro and Stockholm/KTH, but not for members located in developing countries. However, it should be noted that most master students enrolled in Örebro and Stockholm/KTH are from developing countries. In table 8, I give examples of how IPID could take advantage of my more general recommendations discussed above, which of course would require funding.

Table 8. Recommendations and examples of actions.

Recommendation	Examples of actions
Further development of national and international collaboration.	<ol style="list-style-type: none"> 1. Make it possible for PhD students from developing countries to participate in the activities. 2. Work towards integrating other Swedish universities in the network. 3. Work towards integrating other international universities in the network. 4. Further develop collaboration with GlobDev and other international research communities.
Leverage collaboration across borders by using technology.	<ol style="list-style-type: none"> 1. Further develop and promote the collaborative wiki. This could include an online repository of resources on ICT4D for master and PhD students. 2. Arrange virtual conferences, workshops and seminars. 3. Use social media, e.g. Facebook, to promote community. 4. Continue to distribute the appreciated newsletter, but make it more interactive by making it possible for users to contribute and conduct discussions.
Increase collaboration with experienced researchers.	<ol style="list-style-type: none"> 1. Further develop collaboration with experienced researchers and invite them to participate in the IPID network. 2. Establish an advisory board or steering committee.
Only rotate IPID coordination if there are apparent benefits.	<ol style="list-style-type: none"> 1. Develop more thorough collaboration with new institutions (other than Örebro and Stockholm/KTH). This could eventually lead to that IPID coordination can be rotated.
Increase collaboration between SPIDER and IPID.	<ol style="list-style-type: none"> 1. SPIDER is suggested to give a clear statement on what they expect from IPID, and provide funding in line with these expectations. 2. SPIDER and IPID could organize a joint conference or workshop. 3. IPID members could be part of SPIDER projects to an increased extent (e.g. as researchers or advisors). 4. IPID should work towards collaborating with and attracting funding from other organizations as well.