Development, processes and research quality in a development informatics project: impact, outcomes and reflections

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Abstract

This paper discusses a five-year digital equity and transformation project (the Transformation Project) jointly implemented by an Australian University and an International NGO (INGO) in a developing country[2]

The Transformation Project followed a Participatory Action Research (PAR) process through engaging village communities from different geographic locations and local non-government organisations (NGOs), a number of local universities and ICT services contractors. Designed within a long-term flagship resilience project of the INGO in two locations and in another location with another local NGO, the Transformation Project aimed at offering agency to rural women in vulnerable environments through provisioning smart phones, information systems and ICT services using a PAR approach.

While the research partnership has generated a number of notable research outcomes, considerable challenges related to cultural style, communication, power, and management have been identified which can be considered for designing future digital equity and projects in developing country contexts. This is particularly important from the monitoring, evaluation and learning perspectives for development organisations and the research impact perspective for academic institutions.

Within the Transformation Project, the implementation process has resulted in a meaningful change for people in poverty and a change in communications and information system design and implementation. It has also demonstrated how multiple stakeholders can work together to advocate for digital equity and transformation on the part of disadvantaged communities. However, and critically, the research and action process struggled to obtain sufficient high-quality research data from the field and this affected the capacity of the researchers and the INGO to get an in-depth understanding of the project. Such problems reflect different managerial expectations and power relations, different cultural norms and practices, as well as communication issues that as a whole, inhibited a more robust approach to PAR.

This paper explores these issues and their relevance to culturally and institutionally sensitive research processes in DI research. These matters have important implications for the achievement of digital equity and transformation and the use of such information in policy advocacy and research.

Keywords: research partnerships, culture and power, gender, community informatics, development informatics, participatory action research.

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[2] The case is anonymised due to the sensitivities involved.

Introduction

The purpose of this paper is to provide lessons from the field about a 5-year Development Informatics (DI) project that is called The Transformation Project (2014-2019), concerned with the adoption of mobile phones by women in remote villages in a developing country. The particular innovation of this paper is that it addresses the institutional challenges to an INGO of developing a PAR project for DI, through the lenses of PAR, organisational culture, the bundle of information communication and power, and gender. The INGO perspective is important because DI is at the centre of the long-term policy and budget process of the government where this project took place, but it is a perspective that is also worth considering as relevant to projects, including DI projects, in many countries. Less attention is paid in this particular paper to the partner university perceptions.

The Transformation Project aimed to use a participatory action research process (PAR) with village communities from three distinct geographic locations, local non-government organisations (NGOs), a number of local universities and a consultant company which provided call-center services. The paper considers the Transformation Project as bringing about innovation and pressure on established sociotechnical structures and assumptions, particularly in INGOs, though this transformation was not without difficulty and a study of the project's operations, learnings and orientation contributes to a richer understanding of research approaches to DI within the international development space.

While the research partnership generated useful outcomes with respect to the use and understanding of mobile technologies on the part of participant villages and the research partners themselves, in this paper the focus here is on analysing barriers, constraints and difficulties in developing common approaches between the partners. More details about the project can be found in (Frings-Hessami and Oliver, 2022)

While there is a desire to solve complex multi-dimensional problems in Development Informatics (DI) and more generally, international Development in "extended communities" (Donner, 2015, p. 10) there is also a need to engage in collaborative multi- inter- , cross - and transdisciplinary research and implementation. Challenges lie in finding common languages across cultures in an environment where there are linguistic, cultural, power, gender and institutional differences that affect the quality of transformation. These reflect not just practical issues, but different ways of being and doing in the world that can come up against each other. These often subtle, but fundamental underlying structural factors reflect different expectations, assumptions, communicative styles and values about the nature of partnership and action with communities, including how field work and field interviews should be done.

1. Research Review

1.1 Participatory Action Research

PAR has a long-standing tradition in both the developed world and is considered as a most suitable and decolonizing approach to development, including gendered problems because it seeks to empower and bring about change from the bottom up. In Information Systems, PAR is felt to be ideally placed as an empowering research method (Rahman, 1994; Walsham, 2005; Mitev, 2006; Angeles, 2011). It is thus both a methodology with a particular view of the world, but also a practical method, focussing on community process and inclusion (Cecez-Kecmanovic, 2011; Andrade and Urquhart, 2012; Mansur and Rao, 2013; Sahay, Sein and Urquhart, 2017). This means positioning the empowerment and sustainability of communities at the forefront of project conception, planning, and ultimate deployment.

From a practice point of view, PAR can be considered as a continuum of perspectives which determine possible forms of action. These can range from very limited to total engagement with the grass roots in asking questions and finding answers, to full control of the process including attempts at radical social change. Ideally, it leaves skills and knowledge behind in the community for future use by them (Tinkler, 2010; Stillman, 2013).

1.2 Institutional Cultures

International Development, of which DI is an aspect, is regarded here as a form of practice mediated by a ‘‘process of articulating knowledge and power through which particular concepts, theories, and practices for social change are created and reproduced’’ (Chae, 2014, p. 145) Thus we consider the Transformation Project to be an intercultural exchange between (the foreign university, the INGO, the local NGOs and the local communities), beyond the specific space of its PAR intervention. Multiple concepts, theories, and practices for social change come into play, not always consciously, interpreted though difference lenses. Furthermore, going beyond what Heeks and Walsham have suggested (Walsham, 1995; Heeks, 2009), effective interpretive research requires not just the collaboration and participation of "people at the bottom", but the "people in organisations" as well. In this regard, an *emic* approach to culture looks to acknowledging the complexity and variability of cultural dynamics, and considers cultural boundaries as blurred and flowing: one learns from the other, acknowledging difference (Pike, 1954)

1.3 Information, communication, and power

In another study of the INGO devoted to project, it was asserted that all organisations have an information culture, information culture being the values accorded to information, and attitudes towards it, specifically within organizational contexts (Frings-Hessami and Oliver, 2022). Furthermore, it was suggested that such cultures are very difficult to change due to "deep seated cultural preferences", including the forms of discourse used in everyday work. There were serious impacts concerning the use of English by the NGO's privileging of privilege Western forms of knowledge and ways of doing things. Language relations are power relations. Given that nearly all the INGO staff speak English as a second language, this results in "linguistic imperialism" (Phillipson, 1992). However, the form of English used in this country, is highly localized, and often creates communication difficulties with native speakers of English, both in spoken and written forms. "a lot is lost in translation (Frings-Hessami and Oliver, 2022, p. 10). The communications issue is even more exaggerated outside the major cities with local NGOs, where there is even less capacity with English. In a culture like that found in the Transformation Project country, where oral rather than written communication is the norm, outsiders are at a strong disadvantage. This results in communication difficulties in field work that can be compounded when communication needs to be in spoken or written form in English.

There is another, generally unrecognised factor, one that may not be publicly acknowledged in prestige INGOs. At least in this particular country, younger INGO workers, educated in English-medium schools, may not actually speak standard the local language perfectly, and they have less capacity to pick up or understand local dialects. They may also not be able to type well in the local language, making the writing of formal accountability reports in to government a difficult task.

Neo-colonial power imbalances continue to occur in international development, particularly when funding is involved: funding is dependent on particular forms of governance resulting in deference to the source of funding, whether it be government or other foreign donors, where agencies are increasingly regarded as service contractors on behalf of donors and government. Their demands can be privileged over the local knowledge and this affects the independence of INGOs and local NGOs,

1.4 Gender

As in many other countries, women remain in a dependent and exploited situation position due the hierarchical and patriarchal nature of the country, particularly in traditional village settings. The limited freedoms they enjoy are circumscribed by while has been described as a "patriarchal bargain", in which freedom comes at the price of obedience (Kandiyoti, 1988). Thus, in the circumstances of mobile use ability to communicate by phone beyond circumscribed family boundaries is also constrained due to similar norms. Breaching these norms can result in exclusion, family shame, and violence.

The issues of gender also affect the operations of INGOs and NGOs, because they too are part of the local culture and society and they also reproduce, to various degrees gendered relationships. However, the INGO,

due to its internal policies and staff development practices, places a strong emphasis on gender equity within the organization and in its programs, though the local NGOS located in provincial rural settings, still operate through traditional lines of authority, power and gender deference.

2. The Transformation Project as a Case Study

The Transformation Project adopted a middle-ground PAR approach (Stoecker, 2001; Stoecker and Stillman, 2007), where the focus was on action to improve communities' lives without engaging in far broader issues of fundamental structural change that raise a host of significant political and other concerns that are beyond the brief of a DI project. The project thus aimed to help strengthen livelihoods and life opportunities by increasing access to information, knowledge, and practice, rather than go on to then challenge structures of authority and power. The information focus was on localised agriculture information, including crop advice, animal husbandry, and weather-related insight. The NGOs played a key role in training and support of the community. Women farmers were provided with smartphones and phone credit by the project. A call center service was set up to provide agriculture information via voice call and text. Furthermore, there were smartphone apps developed specifically for the project in conjunction with local community development activity.

From its earliest days, the project consulted the village women about their needs and they were modifications were made to the project. Regular monthly meetings were arranged and used as a way for the community to express their voice and to some extent, this was recorded for use in advocacy and in input to policy. These meetings proved to be the most innovative approach done by the project in documenting community voices that can be fed back to project implementation.

However, implementation was continually bound by constraints, including cultural, institutional, and political issues that affected project activity and even geography, since the communities were far away from the INGO, and the university researchers mostly in another country except when on field visits. There were different perspectives amongst the project team on the meaning of participation, as they came from very different cultures and educational backgrounds, from the Western and local academics, INGO local staff, local NGOs staff, community-based organisations coordinators. There were problems not only in communicating in English—even with local academics--and the local language at various levels of the project. This coupled with low quality Skype, Zoom, and even phone calls between Australia and the local INGO international communication was difficult, and even emails were sometimes not well understood at either end. This communication difficulty also significantly affected research quality, in that there were constant difficulties in being able to effectively document what was happening on the ground, since local NGO staff were not trained to be qualitative observers or chroniclers of process, and problems with also encountered with the quality of quantitative survey administration and management.

Added to this complexity, at the grass roots the Transformation Project operated within the village's traditional patriarchy and hierarchy even though the project was aiming to minimise the intersectional disadvantage experienced by women though their lack of access to useful information. More generally the INGO and the NGO were aware of the general political environment, in which the government watches and monitors the activity of NGOs and the Australian university needed to defer to their judgement. There was concern over risky activity which might occur with technology and organisational reputation of all parties. A series of terrorist attacks against foreigners greatly constrained the Australian researchers to either visit the county or go into the field (at times, under police escort, a far from ideal situation in which to conduct free and open research).

Thus, while the middle of the road approach taken may be viewed as somewhat distant from an ideal PAR project, the constraining reality was the reality the team had to work with.

2.1 Research concept co-development

The idea development of the transformation project was driven by the design framework of a long-term and multi-dimensional umbrella project of the INGO. The INGO was already implementing initiatives around

community empowerment, especially women empowerment, through integrating economic, social and environmental dimensions of sustainability. Considering the digital expansion, there was an interest from the INGO to work on digital literacy and inclusion so that their community empowerment initiatives could be strengthened. Through contact with the INGO the Australian University with ongoing wished to engage with the INGO as a collaborative partner and it had a strong interest in PAR based on prior research activity.

Subsequently, the University started to gather ideas for a participatory action research on development informatics within the framework of INGO's umbrella project. University researchers came to the developing country on several occasions to consult with INGO staff, the local NGOs, and grass-roots communities. The University researchers believed that they had sufficient expertise to cover all aspects of the project and "explain" the principles of PAR to the NGO and INGOs, and there were consistent problems with getting to "yes" because of the different forms of English and communication styles. The importance put upon gender equality by the INGO in the context of its country also meant that the Australians needed to put aside their preconceptions about gender relations and how they are manifested in a traditional society.

In fact, the umbrella project of the INGO was multidimensional and needed to look at research impact from various angles including economic empowerment, economic and social sustainability, gender justice, climate justice, cybersecurity and good governance to name a few, and these were issues with which the university researchers were only marginally familiar. This was a learning curve which required deference to the INGO.

2.2 Research Funding Mobilisation

Research funding needed to implement the PAR came up as a reality when the research idea of the project became concrete. The INGO already had funding for its ongoing umbrella project but resources were not available to implement the PAR as a pilot project where NGOs generally engage tangible inputs and several dedicated and shared staff.

The relationship between the Australian University and the INGO was highly collaborative and equal when it came to discussions of costings. At this stage, the University took the responsibility to mobilise entire research funding of the PAR while the INGO's financial contribution was in a co-financing mode where they ensured the resources required for the umbrella project to be implemented in selected research locations. The Transformation Project was in a fortunate situation because Australian University was able to mobilise research funding from a private philanthropic entity which was interested in providing flexible funding with no stringent donor conditions. This was a highly unusual situation for the INGO.

However, there was tension between the Australian University and the INGO's Headquarters. The Headquarters assumed that it had the right to offer some direction to the project despite the flexible nature of the funding. More generally, in INGOs, there is culture of pursuing proven concepts in projects whereas digital intervention related works are relatively new and need to be considered as learning interventions., and university research is about innovation. The University perceived this Headquarters relationship as a neo-colonial relationship, preferring to deal with the INGO directly, but could do little about the situation, even though it interfered with collaboration.

Furthermore, despite the flexible nature of the philanthropy, based on its past experiences with donors, it could be argued that the role of the University in taking the entire responsibility to mobilise research funding for the PAR resulted in a power relationship where the university was not only viewed as the more powerful research partner but also as the direct donor to the research project.

The INGO and its local partners continued with this assumption throughout the project which often created barriers for a more open partnership between the INGO and the University. To take a learning from research funding mobilisation, Universities involved in such development informatics projects should emphasise joint research funding mobilisation or bring partial and smaller research funding under the umbrella of projects already implemented by INGOs and development organisations. This may assist in significantly reducing the power imbalance and universities will be considered more as knowledge partners than donors.

2.3 Project team formation

When funding of the research project was secured, the University signed an agreement with INGO headquarter in Australia. INGO headquarter in Australia had to sign an internal agreement in the INGO office in the developing country location. The INGO country office also had to sign separate agreements initially with two local implementing NGO partners (for PAR to be conducted in two locations) and a range of other non-NGO partners. Such arrangements resulted in four different project teams fully dedicated to the PAR project and this resulted in confusion due to both the language issue, power perceptions and realities and silo effect. Although these four project teams interacted well between themselves with less engagement from INGO Headquarters, the project teams sometimes operate in isolation within the larger organisational setting.

2.4 Management structure

To implement the PAR, a 2-tier management structure was in place where the University and INGO staff were present. The higher strategic decision-making tier had senior level members from the University and INGO Headquarters in Australia as well as the country office who were not engaged in day-to-day project implementation process. This tier took input from the day-to-day project implementation teams and included members from the implementation teams in higher level meetings that happened once or twice a year. The lower project implementation related decision making and project knowledge sharing tier had members of project implementation teams from the University and INGO country office. INGO Headquarters in Australia did not participate in this tier frequently and mostly discussed the issues with the INGO country office separately. Members of the lower tier met frequently and had at least one monthly meeting. At times, this led to confusion about what was going on.

2.5 Project and financial management

Similar to the project team formation and as indicated in the related section above, project management and financial management of the PAR occurred in 4 different tiers. The local NGOs were accountable to the INGO office and had to provide project progress reports and financial utilisation reports while implementing the project on the ground. The INGO Country office had to provide similar kinds of reports to its Headquarters in Australia as the country office implemented additional activities through engaging experts and partner universities along with the local NGOs. As suggested in the work by Hessami and Oliver (2022), such activity, written in bureaucratic English, is a huge and time-consuming task. The INGO Headquarters in Australia then submitted the report to the University on behalf of the country office and headquarter despite not having significant project and financial management responsibilities for the PAR.

The University tried to act as a research partner of the INGO and local NGOs unaware of the extent of the work required for the INGO and NGOs and the multiple levels of reporting. The accountability work also diverted time and effort from actually implementing the PAR component of the project.

2.6 Partnership management

There were diverse partners engaged in the PAR. These partnerships were of both financial and non-financial nature where financial partners provided information services for the PAR in the villages. Non-financial partners were mostly from local universities as they partnered to capture learning and were interested to offer the research forums to the PAR for research communication. In terms of partnership management, the INGO country office played the major role to facilitate discussion with different partners. However, in some cases, value addition in terms of partner engagement in a particular geographic location or for a particular service and communication need was made clear to the Australian University. In fact, the PAR project did not have a clear partner engagement strategy with the broader NGO and research community in the developing country. Despite this, the diversity of partners in the PAR project contributed in profiling the project to wider stakeholders which was beneficial for both the INGO and the University from a marketing perspective.

2.7 Donor management

While discussing research funding mobilisation of the PAR project, donor- recipient- broker- partner relationship is highlighted to some degree. For the INGO country office, navigating in such a relationship was not common and they had to adapt throughout the project period. The INGO country office had to consider the University as a donor as well as a partner while they did not have significant donor expectations from the actual donor unlike their other projects. Due to internal mechanisms, the INGO country office also had to report back to their headquarters in Australia and consider their Australian headquarters as donor, broker and in some cases partner. The University tried to act as a research partner of the INGO and local NGOs but it had to accept the operational modes and cultures of those organisations.

This complex relationship and donor-related perceptions of where power lay resulted in different donor management styles by the INGO and local NGOs. This influenced the objectivity of the research data in some cases as research data reporting was considered as reporting to the donor where data about positive changes was emphasised, though this was not the rationale behind PAR. This problem with quality data being influenced by particular perceptions rather than more objective research principles was also filtered through problems preparing data in English, as already noted.

2.8 Research and knowledge management (including policy engagement)

The PAR project was first of its kind for the INGO designed within one of its biggest projects. The aim was to integrate the learning of this action research project in the larger umbrella project and associated policy influencing works while reflecting in several other projects of the INGO. The INGO achieved some of those objectives due to the research and knowledge management process they attached to the PAR project. The inclusion of women in the digital strategy was strongly seen as positive and no backlash was expected as such and the local country perspective on gender and power issues was a fundamental learning for the university researchers. They gained a heightened awareness of the need for safeguarding communities from a gender and socio-cultural perspective from what one the one hand might seem to be benign and liberating activity in other countries, but in the local context, can bring about shame or worse.

However, the silo situation of the Transformation Project in the INGO was that learning was not always institutionalized and no strong process existed for preserving and sharing it, particularly in the talk-oriented environment of an NGO where typically, there is a high rate of staff turnover as staff seek to be upwardly mobile. When the INGO decided to continue their umbrella project while the PAR project was nearing to end, the INGO integrated knowledge from the PAR project in the new phase of the umbrella project and it influenced thinking in other projects.

The Australian university was largely detached from the institutional requirements of the INGO, focussing on research aspects. However, because of the internal constraints facing the INGO, research and knowledge management from the Transformation Project was not always of the highest quality expected despite the effort put into briefing the INGO and local NGOs. In some cases, researchers and collected first hand data by themselves while INGO and local NGOs supported in getting access to the community and provided translation services. However, the language, cultural, gender and power factors which inhibit unconstrained communication resulted in the uneven capture of qualitative data.

Moreover, even though in-country policy engagement on development informatics based on research and knowledge of the PAR project was one of the objectives of the INGO, it did not happen systematically and significantly. Neither the INGO nor the University continued policy level engagement beyond the PAR project despite continuing to produce research outputs from the PAR project. And while the Australian academics published academic articles, long-term research in a development context, it was not well-understood in some more technically-oriented circles which expected quick project results and project publications.

3. Conclusions

Looking at the Transformation Project from the institutional perspective, recognition of the diversity of partnerships and their cultural and institutional features—such language, power, and gender considered in this paper here, should always be considered in implementing such a DI project. Issues of power inequality and cultural differences need to be sensitively addressed, particularly by outsiders (such as academic researchers) moving into the space of an INGO. A project attached to an institution without an enabling environment that makes for partnership and collaboration may appear to be tokenistic and in fact patronising towards established ways of conducting projects. The gender lens also needs to be taken very seriously by outsiders who may be working with erroneous assumptions: gendering and related power issues affects both the local organisations institutions involved in the research as much as the communities being targeted, though the effects on each may be different.

A clear partner engagement strategy needs to guide the partner engagement so that positive interaction is core to engaging diverse partners. There is also the danger of isolation if an innovative DI initiative such as Transformation Project is siloed off from other projects: it is hard for others to make sense of what it is doing for learnings and knowledge to become internalized and utilized no matter how important the project may appear to those involved in it. Furthermore, for DI projects with a policy impact component, INGO/development organisation should have a long-term institutional policy influencing strategy so that research and knowledge generated from such PAR projects on development informatics could create stronger research impacts. If there is a university research partner focussed on academic results, it needs to be part and parcel of this process producing practical knowledge that is useful to the INGO and its partners.

Moreover, as in this case, although local NGO partners were implementing the PAR in the ground, they need to be part and parcel of up the line management structures, as this has significant communications implications involving language and power if the common language is that of the foreign researcher.

Likewise, donor and reporting arrangements inevitably involve real power and perceptions of power. There needs to be proactivity in should be proactive in minimising negative and disruptive impacts of donor-client relationship on the research activity, such as the tendency of only reporting what succeeds.

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