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COLLABORATIVE RESEARCH
PARTNERSHIPS IN THE COMMUNITY
Digital Divas and Doing IT Better

Working with community partners on research projects where the community members are part of the research team presents its own challenges. The challenges include the possible mismatch of expectations between academic team members and community members, as well as in defining the different roles people play, and managing the process. This paper reports the experiences and insights gained from working with community members involved in two research projects. The two projects were the Digital Divas project, involving the creation of a girls' only information technology (IT) elective which has been implemented in a number of schools, and the Doing IT Better project that involved building IT capacity in the Victorian community service sector. Two community members from each of the projects are collaborators in this paper and provide the community perspective on this kind of research. Issues around concordances and discordances of academic research processes with a community's own ways of knowing, creating, managing and disseminating knowledge and information are discussed. The roles of community expertise, along with expectations regarding relationships and interactions are also explored.

Keywords community informatics; organizational studies; ICTs

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1. Introduction

Research undertaken in a community setting presents the academic researcher with a variety of challenges. If research is constructed as a partnership with the community, a more inclusive stance needs to be adopted that replaces the usual approach of the community as the *subject* of the research, often in an unequal relationship, where power and knowledge remain in the control of the researcher. Methodologically, there are a range of existing approaches, which can be broadly grouped under action research, in that, they try to avoid privileging the researcher and give voice to the community. Action research is a participatory, reflective and progressive process of solving problems, undertaken within a 'community of practice', to improve the way the community addresses their issues and solve their problems. Since the first use of the term action research by the Tavistock Institute in the 1950s, action research has been used to bring about changes to practice and research (Mumford 2001). This has been emphasized by McKay and Marshall (2001) who argue that research is not a by-product of problem-solving, but that there is an imperative in action research for two concurrent cycles: a problem-solving cycle and a research cycle. They also contend that the agendas for both cycles need to be clearly articulated at the start of the intervention.

Despite the definitional problem of 'community', the fact remains that there are formal and informal entities that are known as community-based organizations that are often funded, by government or other sources such as philanthropic foundations, to carry out different socially ameliorative activities (Lyons 2001). Thus, engaging with the community to conduct research differs in many respects to research undertaken in an industrial, commercial or government organization.

A dominant theme in community-based research is the need for a dual agenda for change (Bailyn & Fletcher 2003) that addresses the needs of both the research and the community with whom he or she is engaged (Stoecker 2005). The dual agenda works against creating or reinforcing unequal power relations in the research relationship and avoids tokenism (Head 2007). In this paper, we discuss two projects that were initiated by academic researchers, but involved significant interaction with community organization partners in the research design and process. We present a *confessional* account of the projects (Schultz 2000) through the voices of the academic and community partner researchers for the Digital Divas and Doing Information Technology (IT) Better projects. This accounts for the conduct of the projects' emphasis – the participatory role of the community partners. The choice of projects has been deliberate to highlight the diverse nature of the 'community' and the challenges of community-based research. However, the unifying theme in this paper is the methodological approach adopted in these projects. We argue that this approach

to research with the community represents a form of collaborative research (Linger 2006), and extends our understanding of action research within a community context.

The Digital Divas project is a curriculum-based intervention programme designed to stimulate girls' interest in IT as an independent discipline leading to a greater proportion of females in IT in the future. The project was funded by the Australian Government (Australian Research Council grant) and industry. The project community includes the Australian Computing Society (ACS) professional body, represented by Jo Dalvean, the Victorian Department of Education and Early Childhood Development (DEECD) the Government body responsible for education in Victoria, represented by Brooke McNamara. Catherine Lang is leading the academic contribution on the project. The project is on-going at the time of writing.

Doing IT Better was a 3-year project in Melbourne, Australia, that took place between 2007 and 2010. The project was fully funded by an anonymous donor and was designed to assist the Victorian community service sector organizations build IT capacity. The project was a partnership between researchers at Monash University and Victorian Council of Social Service (VCOSS), a state-wide body responsible for representing the interests of not for profit, community sector organizations and advocates for the sector with funders and policy-makers. Larry Stillman initiated and implemented the project, including sourcing the funding. This project differs from the Digital Divas in that the project community was represented both by the project partners and the individual community organization where interventions were undertaken. In this paper, the community is represented by Jinny McGrath of Springvale Community Aid and Advice Bureau (SCAAB), a community welfare organization, and Rhonda Collins of Latitude, a youth homelessness organization.

In the following section, we present an overview of research in a community setting. This is followed by a discussion of the research approaches undertaken in these two projects. The findings section presents the voices of the participants and their motivations behind each project. This provides the perspectives of each team member according to expectations and reflections on each project. The reflections and lessons learnt are followed by the conclusion, with some recommendations for future consideration by anyone considering establishing this type of research project.

2. Collaborative research: action research in a community setting

Action research emerged in the 1940s from the work of Kurt Lewin on group dynamics and general theory of how social change occurs (Lewin 1947). His focus on the relationship between perception and action allowed the researcher

to be visible and to have an explicit impact on the situation. His work was adapted into the socio-technical systems approach in the UK, especially in the work of Mumford (Mumford & Weir 1979) and Checkland (1981). The Scandinavian adaption was framed by interventions to democratize the workplace (Baskerville & Wood-Harper 1998). Other approaches to action research include Argyris and Schön's 'action science' (1978), where the researcher is the investigator, subject and consumer. Action research as understood in Information Systems research is a form of qualitative research in which the researcher engages with the client organization to resolve the client's problems, with both researcher and client learning through this process (Baskerville & Wood-Harper 1996). The intervention is problem-solving rather than transformative. The commitment to organizational learning and theory building, rather than the application of predefined solutions, distinguishes action research from consultancy practice.

Intervention is premised on an understanding that a complex social system cannot be simplified for the purpose of study and needs to be considered as a whole entity. Underpinning the intervention is the development of a shared understanding to construct a framework that will inform action; the 'Weltanschauung' (Checkland 1981). This is a cyclical undertaking as action needs to be based on understanding while understanding arises from action. This implies that the goal and values of the community and academic researchers must overlap to a significant degree if they are to achieve a shared understanding of the problem space. The re-conceptualization proposed by McKay and Marshall (2001), involving two concurrent process cycles, represents a more reflective analysis of the implications of action research that can address the quality of both research and problem outcomes.

However, research with community has specific demands that require adaptation of the action research approach. An intervention needs to be transformative, to include learning and reflection, as the issue that is the subject of the intervention is usually a complex, systemic problem that does not lend itself to the usual responses available to the community organization. A more problematic aspect of the intervention is McKay and Marshall's dual cycles. The dilemma for community organizations is whether they have the capacity to engage in research that is outside their direct spheres of operation.

The collaborative research model proposed by Linger (2006) extends the action research approach to accommodate research with the community. The central feature of collaborative research is the creation of a negotiated space in which activities are conducted by both community and academic researchers. Those activities draw on the operational and theoretical knowledge of the partners. The outcomes of this collaborative research are not necessary problem solutions but tangible artefacts, concepts and frameworks that can be reinterpreted back to the primary constituency of the partners. For the academic researcher, the collaboration results in refinements to theory within the academy

(Baskerville & Pries-Heje 1995). Since the collaborative outcomes are grounded in a concrete situation, they ensure that the evolving theory remains relevant. For the community partner, the outcomes can be transformed into specific activities, projects or strategies that have specific, but broad, relevance to their community (Dennis 2001; Truex 2001; Kock *et al.* 2002).

The importance of the collaborative space derives from the various perspectives of the collaboration. From inside the collaborative space, the academic researcher views collaborative research as an opportunity for theory testing or development, while the community researcher is engaged in reflective practice. The external view of collaborative research is a form of 'skunk works', a term used for projects primarily concerned with innovation and/or experimentation, for the community and applied research for the academy (Linger 2006). All these perspectives are valuable to the research partners as the collaboration provides an important forum for learning. For the community organization, the collaboration provides a relatively low-cost exploration of relevant issues and a forum for productive engagement with academics on an equal footing, and an opportunity to be exposed to current academic theory. For the academy, the collaboration provides the means to apply theory to practice, to gain knowledge of community practices, identify issues within the community, and to learn from the community (Linger 2006).

Collaborative research shares some characteristics with participatory action research in that community members are also researchers rather than subjects (Whyte 1991). However, participatory action research is motivated by an emancipatory interest and seeks to establish change and/or learning as a self-maintaining process (Argyris & Schön 1991). Collaborative research extends the emancipatory interest of participatory action research to address sense-making both from an organizational and a theoretical perspective (Weick 1995).

3. Research approach

The Digital Divas project percolated from an outreach programme that began as a marketing and awareness operation with minimal research objectives. Previous research clearly indicated that IT was not considered by the majority of students as a valid career path. The challenge was to understand what an enjoyable and engaging curriculum experience could be so that students would reconsider their future options to include IT careers or courses. The research component of the project involved building a coalition between the professional bodies, academic institutions, and educational authorities who were all concerned about the gender imbalance in the IT workforce.

The Doing IT Better project arose from the recognition that the not-for-profit sector is just as dependent on IT as other sectors of the economy. The problem is that this sector has few resources to address their technological

capability. Thus, the problem was not actual implementation of IT solutions, but to address the issue building the capability of the sector as a whole. From an academic perspective, the agenda for the research cycle focussed on establishing a better theoretical relationship between existing Community Informatics theory, concerned with IT use in the community sector, and Information Systems theory. (Stillman & Linger 2009). To make individual interventions transferable across the sector, the problem-solving cycle of the project was directed at the development of a consultative and community-focused methodology for implementing IT. On the other hand, the research cycle recognized the limited resources available to community groups to undertake significant direct engagement in research, including the capacity to undertake specialized research outside their own areas of expertise.

With this paper, we are adopting a form of meta-analysis of the two projects in order to understand the issues, motivations, and practicalities of undertaking community-based research. Our approach to this analysis is to leverage the individual experience of the research partners to provide a 'self-reflexive account of the research process' (Schultz 2000, p. 4). This form of reporting draws loosely on the *confessional* (Van Maanen 1988) or *vulnerable writing* (Behar 1996), a genre used in ethnographic research. While our research is not ethnographic, our objective in this paper is well served by exhibiting the authentic voices of researchers to reveal their practices. Our meta-analysis draws on the researchers subjective, idiosyncratic and situated accounts to explore a framework for collaborative research.

The meta-analysis was not a feature of the research agenda for either project but the value of such an analysis was recognized *post facto* across the projects. The confessional enterprise was constructed by the academic authors, triggered by our attendance at a workshop on community-based research held at Monash University in 2009. The enterprise involved the development, by the academic authors, of themes to inform the reflective process, sharing these themes with community research partners and discussing these themes within each project and across the projects, as well as with other researchers working in communities. The themes focused on the following:

- the motivations for the development of the project and individuals' motivations for becoming involved in the project
- expectations both from a personal and work perspective
- concerns about involvement and what involvement would mean
- how the project was managed in particular what may or may not have worked
- the experience and contribution of each partner
- learnings from the experience.

All authors were asked to use these themes to structure their account of the projects. The integrity of each contribution was maintained throughout the

development and editing of the paper, with the academic authors taking responsibility for the overall presentation of each project. Each author had access to project material, but as the accounts are *confessional*, rather than factual, they draw mainly on the author making sense of their experience in the project. Although authors were encouraged to discuss their reflections with other project participants, they remain a personal statement of the author's experience of the project.

4. Voices from the coal face

4.1 *Digital Divas*

4.1.1 *Motivation.* The Digital Divas project is the product of over 20 years research into the under-representation of women in the IT discipline (Lang 2010). It was modelled on a UK-based programme, Computer Clubs for Girls (CC4G), which aimed to encourage female students to consider careers and courses in computing and addressed a similar decline in numbers in the UK (e-skills 2000). In Australia, women currently occupy less than 20 per cent of places in the IT courses offered by higher education institutions and as of 2009, held only 18 per cent of IT jobs (MMV 2010, p. 9). At the secondary school level, there has been a marked downturn in girls' interest in IT courses and careers. For example, in 2001, 36 per cent of all students who satisfactorily completed a final year IT unit were female. That percentage had declined to 18 per cent in 2010 (VCAA 2010). The declining interest of girls in IT was a concern shared by both the academic and community partners.

The Digital Divas programme began as a single-sex elective unit embedded in the school curriculum initially implemented at one secondary school in Melbourne in 2008. The programme has now been introduced to 12 schools across the state. The curriculum is designed to encourage students to actively participate rather than remain passive onlookers, which is often the observed behaviour of girls in mixed gender IT classrooms (Margolis & Fisher 2002). The curriculum materials, the website and the design of the programme are the result of collaboration between the academic and community partner researchers.

By recounting the history of the project that led to *Digital Divas*, the development of community interaction in this instance is better understood. In 2006, the synchronicity of the CC4G project exploring an international partnership, funding for an international speaker at the conference, and a growing network developed across the industry and the government through the Victorian IT for Women Board, facilitated the first Australian trial of the programme, and a lunchtime club. Volunteers were drawn from the Swinburne University's Women in IT group to incorporate an informal mentoring aspect and encourage

university students to participate in the programme to enhance its influence on student perception changes.

Through several iterations, the Digital Divas Club was established to incorporate the best strategies of the CC4G programme while adding three features to make it unique and relevant to the Australian education environment. First, it was included in the regular school curriculum with a unique set of materials designed specifically to focus on female student interests as well as current issues. Second, an active informal mentoring aspect was added to the programme which linked university students currently undertaking an IT degree (Expert Divas) with each school. Finally, the programme ‘closed the loop’ between doing things on the computer and what an IT career could entail by bringing guest speakers into each classroom. The Digital Divas Club programme operated in 11 schools across the state in 2011, and more importantly, each school that started with the programme continued to run it in their curriculum each year. Digital Divas has caught the interest of print and television media, that publicized the programme Australia-wide (see, digitaldivasclub.org) highlighting the importance of promoting IT courses and careers to students. The community research partners contributed to the design and running of the programme as well as the design of the materials.

4.1.2 *The department: Brooke McNamara.* The eLearning Unit of the DEECD where I work provides information, advice, resources, and professional learning opportunities to support school’s planning and implementation of eLearning in their curricula. Integrating IT can help teachers and leaders expand learning possibilities to create effective contemporary learning environments where students and teachers use technology purposefully and flexibly to improve student learning outcomes. Members of the eLearning Unit have historically supported programmes and organizations that aim to increase a girl’s interest and participation in IT.

4.1.2.1 *Expectations.* I am a senior project officer in the unit and my personal educational background of women working in non-traditional fields meant that the Digital Divas project matched my personal and professional interests. I expected that the project would provide research that would be used to inform educational policy on what has ‘worked’ to get girls interested in IT. There was also the expectation that resources developed would be shared with the whole state, highlighting the great work that the teachers and girls have done.

The value to the DEECD community of the Digital Divas project will be through the sharing of resources on the departments’ school network. This will provide teachers with examples of the research, curriculum and student work that have been created through the project. The findings from the research will provide insights that can be used to inform policy and programmes. The

DEECD community may learn new strategies to influence girls' career choices so more enter non-traditional fields such as IT.

4.1.2.2 *Reflections.* I am very supportive of the approach that has been taken for Digital Divas as I have found that a key element necessary for the programmes to be successful in schools is the support of a school's leadership team, and provision of time and funding for professional learning. It is very hard to get schools to participate in programmes that they see as additional to their core work. Unfortunately, there is a lesser focus on 'women's issues' that there once was, which makes it very difficult to get support for these types of programmes and may limit them to a small interest group.

My involvement came late to the project after most of the planning had been undertaken and to date most of the community partner contribution has been a limited administrative, supportive role rather than in the research. I would have liked to be more involved as well as more informed of the progress of the project. Updates have been limited to the Advisory Group Meeting once every 6 months. I have attended one school event and visited one class running Digital Divas. I was very impressed by the girls, so it would have been worthwhile to see more of what was happening in schools. I have suggested that monthly updates via email would be a good way of keeping in contact and highlight upcoming events.

On reflection, my ability to provide schools with resources such as Macbooks, Netbooks, iPods, iTouches and digital cameras has been under-utilized. I am keen to see more of the research findings to enable me to contribute by providing my insights. I am keen to share the recommendations from the research that may show evidence of a shift in girls' interest and take up of IT subjects.

4.1.3 *The professional society: Jo Dalvean.* I am a Certified Professional Member of the Australian Computer Society (ACS) and I have been a member of the ACS Women's National Board since January 2009. I am also a founding member of the Victorian ACS Women's Committee and with previous appointments to Equal Opportunity committees at the University where I work. I work as an IT, Multimedia and Project Manager. I have developed interactive websites and CDs for business and education and I have extensive experience in creating online systems and environments.

4.1.3.1 *Expectations.* I volunteered to represent the ACS on the Digital Divas project because the topic was very relevant to the computing industry, and the information, discoveries and results needed to be known as widely as possible. Having been involved with women and IT through the ACS and my workplace was a further motivation for my participation. On a personal level, I wanted the experience of contributing to a research project. My expertise is

in Web design and development and I, therefore, volunteered to develop and manage the website for the project.

Initially, I was worried that my skills would not be used, and that I would be taking up too much of the academic researchers' time. I was also concerned about the amount of time I would need to meet the needs of the project. Now that my employment is within a specific research project, I can see many similarities between it and Digital Divas. My contribution has been to develop and support the Digital Divas website. In this role, I manage the look of the website, its content and presentation, much the same as a newspaper editor manages their product. The researchers have provided the content and the web designer carries out the behind the scenes programming and organization. Initially, in the early stages of the project, my contribution was that of technical advisor and students employed by Swinburne managed the website. The progression of the students to full-time employment left a vacuum in the expertise and background knowledge and I volunteered to step up to the editor role in early 2011.

Initially, I had issues because I was employed at a University which was not a partner in the project (that is, the work I was providing was on behalf of the (ACS) industry group rather than as an employee). My employing University was conflicted about having an employee collaborating on a project in which it was not a partner, while at the same time it needed to boost its knowledge of, and participation in, activities that promoted women in technology. As a result, I had difficulty officially securing time to spend on the project and eventually left the position.

4.1.3.2 *Reflections.* Working with the academic researchers in the Digital Divas team has been a valuable experience and the knowledge gained has helped me in my new role as a Project Manager of another funded research project.

The top two similarities that come to my mind are firstly the division of work among the group is different from the typical way work is divided in a workplace, and secondly, the need to keep all lines of communication open to industry and government funding bodies, to each other, to the schools and participants. I now see why research collaboration repositories, websites and portals are so important as well as the need for a 'script' that can be rolled out in response to requests for information from various stakeholders.

I feel very involved and a part of the project and am grateful that my offer of time has been welcomed and used. The project members are responsive, flexible, and willing to accept new information from an 'outsider', as an example, in addition to the twice-yearly advisory board meetings I have attended other meetings and remained in email contact with research participants. I now have an official role in the project, as web editor and mentor. I have also visited one of the participating schools and provided the names of IT professional women for interviews and for classroom talks. I redesigned the Digital Divas flyer and teacher's

resource book to provide a more professional look. My communications background is the area of expertise where I have been most useful, and my ACS contacts are the secondary benefit to the project.

I believe that there is an intellectual freedom in the Digital Divas project that I have not seen in a workplace. It appears that in the academic environment opportunities to provide ideas that are accepted and used are not as rare an experience as I have observed in a commercial workplace. I am impressed by the support, flexibility, innovation and change of direction for the duration of a research project. The experience has been very positive, and I am now considering becoming a researcher as a result of my involvement.

I recommend that industry groups and societies review their strategic priorities and invest time and funds to research projects with similar objectives, if only for the networking benefits. The information reported back to the industry group assists with defining its own objectives. The ACS meets with government representatives who invariably ask about female participation, so we can report on our involvement in the latest research. In dollar terms, the ACS contributed funds that would not be sufficient for an advertising campaign yet it receives benefits outweighing such a campaign.

4.1.4 *The academic: Catherine Lang*

4.1.4.1 *Expectations.* My expectation of community partnership in the project was limited. I believed that a lot of the workload was embedded into my role and I was concerned about the welfare and workload on community partners and, therefore, did not actively seek participation in events. While I interacted with Jo and Brooke at advisory group meetings, I initially took their offers of assistance as little more than polite conversations. The assumption made was that their two organizations would be interested solely in our findings and results, not active participants in the research process. Brooke was less vocal in her offers of help and did not persist in offering assistance to the same extent that Jo did. In Jo's case, I did not readily act upon her offers of assistance, again because I thought that as a volunteer she would have less time to be 'hands-on' in the project, particularly, since the project was part of my research workload.

It took quite a few conversations before I realized that Jo's offers were genuine before I capitalized on her technical knowledge. She now has the role of 'web editor' and manages the look and feel of the Digital Divas portal. This is her area of expertise and I defer to Jo's opinion regarding changes and improvements to the site. While I employ the web programmer, it is Jo who directs the work that needs to be completed at the back end of the portal. Jo's active involvement has resulted in a cleaner and more usable portal for our many Digital Divas schools.

4.1.4.2 *Reflections.* Unfortunately, the resources that the eLearning Unit hold that could have been made available to schools have not yet been taken advantage of. Despite this, even with a recognized budget and time constraints, this community partnership is strong and has seeded a network of possible future collaborations.

I had no perception that Brooke wanted more active involvement, despite knowing her interest in gender and education. I was reluctant to overload her with extra work because I believed that her role with us was advisory and administrative, and have only recently begun to capitalize on her wish to be more actively involved in delivering the programme to schools.

On the other hand, the Digital Divas project has benefited greatly from Jo's active and professional leadership, particularly in her generous mentoring of the Expert Divas and her management of the web portal.

4.2 *Doing IT Better*

4.2.1 *Motivation.* Many community-based welfare and social support organizations are now dependent on IT systems – in the same way as government and commercial organizations – to support basic organizational functions as well as service delivery for vulnerable and disadvantaged people. The motivation for the project was to determine how to build the capacity to exploit IT in the Victorian community service sector.

Limited financial resources and a shortage of IT skills and know-how in the sector have left most agencies struggling to both plan for, and actually use IT in ways that are most affective for their forms of social welfare and community support activity. The project was consequently premised on the understanding that improved IT capacity will improve organizational efficiencies, enabling more resources to be directed to the community service sector's core business of providing direct service delivery and advocacy. The same issues had been highlighted in a national report by the Australian Productivity Commission as part of a general overview of sectoral needs, but the *Doing IT Better* project focused on IT issues in particular (Productivity Commission 2010).

A key strategy of *Doing IT Better* was to engage in intensive case studies with different community-based organizations, operating in urban and regional settings. The organizations included inner urban, urban and regional services that worked with drug and alcohol users and their organizations; low income and multicultural families and their communities; homeless youth or those in contact with the criminal justice system; disabled customers on the public transport system; women's health and information services in regional Victoria and community services advocacy in rural and regional Victoria.

In many cases, new projects and successful funding applications have followed their involvement with the *Doing IT Better* project. Findings from the

case studies also guided the project's choice of topics for an increasingly well-attended seminar series on different strategic and technology issues held by the VCOSSs.

4.2.2 *The Advice Bureau: Jinny McGrath.* At the time of the project, I was the manager of the SCAAB. Springvale is an outer suburb of Melbourne. We provide information, support and targeted community services for around 15,000 clients a year in a highly diverse Melbourne community which includes many newly arrived refugee families with high needs for social support.

4.2.2.1 *Expectations.* SCAAB had a DOS-based clients records system that was over 20 years old, and our staff (paid and voluntary) had little if any knowledge and skills in records and information management, whether electronic or paper records. This was despite the fact government required reporting to multiple databases for funded programmes. There was considerable duplication in record keeping, and clients were being asked the same information over and over. Overall, there was no picture in the organization of the how clients moved through the system or how to mine data for different purposes, such as client care by different teams, advocacy, or community and policy development. For example, someone would come in for emergency relief, and SCCAB would not necessarily have a note on the card that they had seen the settlement team or financial counsellor, but their status – they were finished or so on – was missing. We had to report to the funding body, but it was hard to get a holistic picture of what the organization was doing with clients. Consequently, my motivation for participating in this project was to improve internal information processes but as well, to get a better picture at what was happening in the organization.

Initially, SCAAB was expecting Monash brains and expertise to help find a pathway through the challenges that the organization faced. SCAAB felt it did not have much expertise in dealing with technology. When dealing with an issue in an area like information management, which is so unfamiliar to many people in community organizations, there is a need for internal leadership. I also felt that I did not have a good understanding of technological issues, but had a good understanding of change processes, the organization as a whole, and a vision for the organization even though I am not a technical specialist. This was a vision that I wanted to see happen, particularly in terms in efficiency and effectiveness in terms of IT.

SCAAB did not have anybody in the organization with the required IT expertise. This is what Monash University provided – a source of external credibility, leadership and expertise that would work with the organization, and not impose upon it.

4.2.2.2 *Reflections.* What worked with the Doing IT Better project was that it was a community development approach as a partnership with us as SCAAB learnt and identified multiple needs, one step at a time. In fact, for SCAAB, what happened was more than a plan alone (which came at the end), but an engaged process. For example, on top of the IT-focused research, training needs were identified, and a small survey was carried out.

Unlike consultants who can just come in with a plan, I feel that Monash was responsive and provided and SCAAB was very much part of this. For example, SCAAB needed to investigate what sort of Client Record System was needed, and Monash went off and looked into that. In my opinion, action research like this provided a kind of 'point of confluence' for different factors. As an example of this 'confluence' funding opportunities became available through the state government and both the Monash team and SCAAB realized that this could be a way of connecting communities and reducing social isolation, using new technologies. The process is something like a like a caramel sweet. Doing It Better sweetened and stretched our capacity to understand what was possible with IT, while SCAAB expertise was mostly about community development. Working with Monash opened up knowledge about things like Records Management, and being able to find out where the organization was earlier was very important to us.

However, an organization like SCAAB needs to go through all the steps of consulting, working with staff, gaining trust and so on before getting into something so difficult and challenging as considering IT issues. So while it took a lot of patience on the part of Monash, the process also increased SCAAB's skills, knowledge and capacity. For example, when consultants working with the State Government drew up a technical concept diagram for the potential new project, SCCAB knew more and had confidence because of the Doing IT Better project. We had learned to ask the right questions and use the right language – or at least better understand the information systems language, through the project.

Initially, I was a bit concerned about how to bring 30–40 people on board. It took our commitment, and the commitment from Monash staff, to work this through. Interviews were an important part of this process. Ideally, in any project process like this there is a reference group, but people were limited with time, so this did not happen and I consequently had a key role in working with the project. But to act as a counterweight to this, it was significant that many interviews were conducted with staff – this let people privately open up. Reporting back in workshops was important because people felt that their efforts, things that they had said had been heard, and there were some possible solutions, and that was magnificent for us. The other really important thing is the ability for the consulting organization such as Doing IT Better to be there over a period of time. That is very important because even for small organizations,

change in community organizations is often a slow process. It is not necessarily slow because people are slow, but things are naturally held up by other priorities, or the need to follow the process with meetings and so on.

With the caramel metaphor in mind – being able to form and reshape (and perhaps have some good sensations), the process of working with Doing IT Better let people in SCAAB see what the possibilities were. What also added strength to the project was the fact that as a form of participatory action research, Monash was prepared to help us look for new funding opportunities which have in fact been successful. The project let us see things in a way that made sense to us in terms of our needs and priorities and the way that we expressed them.

4.2.3. *Personalized services: Rhonda Collins.* I am Manager of Latitude. At the time of the project, I was the programme coordinator of a small organization starting a process of amalgamation. Latitude provides personalized services, including emergency housing to young people who are, or are in danger of becoming, homeless. Many have also had problems with the criminal justice system and are high-needs clients. Latitude is located in the Western suburbs of Melbourne, but is merging with other services into a distributed service network. Mandated accreditation via the Homelessness Assistance Service Standards programme and legal reporting requirements also drove the need for information accuracy, in addition to frontline advocacy work. In early 2009, Doing IT Better made contact with me, and a joint consultation plan was developed. While activities were spread out, they were actually only based on several key meetings – workshops with staff – and phone and email contact, these meetings and their emphasis on participation and collaboration had a strong effect on the organization.

4.2.3.1 *Expectations.* When put in contact with Doing IT Better, I did not consider my organization in the slightest way IT savvy but knew that something had to happen because of amalgamation needs. I was clear about the mission of the organization, but also open to change in areas that were not working well. Because we knew so little about IT, we saw engagement with the project a way of being able to pick up some handy hints on how to work better, but there was no bigger picture in mind. I know from my personal interest and leadership experience that change and the learning process were important, but I also regarded an engaged and trusting process with employees as vital. The adoption of an information management platform, Huddle, described below, is an example of this use of trust as well as better understanding through an engaged and participatory process.

Because there were only a small number of staff engaged in the consultation process with Latitude, there were only five or six meetings with staff, including individual interviews, as well as exchange of emails and phone calls. What was

particularly important was a brainstorming workshop held by *Doing IT Better* because it allowed us to see exactly where they were at in terms of their information and technical capabilities. The close involvement was very important, as it was perceived as a whole and inclusive process. For example, the participatory mapping exercise on butchers' paper (the key workshop that was conducted) – really alerted Latitude as to how much we needed to change our information processes and systems. It enabled us to think outside of the technology as simply boxes and wires, and enabled us to enter into the broader system approach – with an ongoing conversation – that continued during team meetings. This 'sold' a new understanding inside of our heads. This is not the same as handing out a sheet of paper because that process of collectively working together, drawing, annotating, got us to think.

The hands-on approach at the start of the project was vital. What is interesting is that it *felt* that Monash spent more time with Latitude than they *actually* did. It enabled a small group to become involved with a definite interest in problem-solving, and I became particularly aware of the need for an on-line information collaboration solution that did not put a drain on the resources of a small organization. A Monash volunteer who became involved with the organization as a result of the *Doing IT Better* project directed us to an online platform. His involvement with us was vital, as it gave us the confidence to give it a go.

4.2.3.2 *Reflections.* The online tool works for us and matches our needs perfectly. It has become the organization's virtual office accessible from anywhere, that allows the setting up of workgroups, conversation groups, document history tracking, a calendar function and so on, all critical in an organization with a high level of accountability for vulnerable clients. Huddle has been transformative for Latitude, including the committee and staff. While the choice of the online platform took place after the meetings with *Doing IT Better*, the awareness engendered by engagement with the project set everything in place to achieve this adoption of a new, online technology. Because we were amalgamating two sites, I knew there would be an issue about how to standardize and manage information. In the past, information was stored on separate computers and there were real issues about version control and so on. Latitude is also subject to legal requirements as an incorporated association and effective communication with the committee of management is also necessary. Staff took it on board very quickly – it was driven by me and another staff member who had IT responsibilities and everyone embraced the new platform quickly.

4.2.4. *The academic: Larry Stillman*

4.2.4.1 *Expectations.* I came to the *Doing IT Better* project with an expectation that the project should contribute to social justice outcomes for organizations and this affected my approaches to the partners discussed here. I was also

aware that this broad goal needed to be kept in mind, even though much of the work on an implementation was much more mundane and concerned with day-to-day solutions that helped organizations work better. My approach was based upon my past experience with community-based organizations where ideology ('social justice') needed to be tempered with practical problem-solving. I was thus aware of the importance of the 'process' and the ownership of outcomes in any methodology that was intended to enlighten and bring about change through social-technical work. As a matter of course, I was aware my approach had to be flexible, given the differences between organizations in terms of their culture, management style, and goals

4.2.4.2 *Reflections.* My expectations for community-based research were more or less confirmed through engagement with SCAAB and Latitude and other community organizations, each of which has its own particular *Weltanschauung*. SCAAB is an organization that, based on my past experience, takes community development processes seriously and the language that came out in the interview reflects a deep practice knowledge of how this happens: vision, leadership, responsive, trust, credibility, and action research. This is the stuff of effective community development. *Doing IT Better* was not exempt from the demand that it earns its *community* credibility and trust with the organization and this was a key theme that needed to come through in numerous meetings. This desire for dialogue can be a challenge to academics who think they can easily present a definitive answer, or that shortcuts can be taken. In fact, the decision to cooperate or not is very dependent on attaining credibility and trust.

This kind of collaborative work is challenging and demands constant self-reflection because it takes time; organizations have their natural delays and other priorities, and these cannot be ignored. Thus, learnings which I got from the *Doing IT Better* project were rich and deep, because we were engaged in a long process through which we became attuned to an organization's culture. It reinforced my view that getting 'inside' an organization is a sensitive, and sensitizing project.

With Latitude, there was less explicit discussion about the need for process and credibility, perhaps because it was a smaller organization in terms of its physical facilities and its singular focus on young people in crisis. The workshop where we engaged them in a conversation about the connections that existed in the organization and the possibility for improving them was very important in demonstrating that we were interested in collaboration. In a small organization where the focus of energy is dealing with young people in the most difficult of circumstances, we were also very careful to be as empathetic as possible to their organizational needs and not push for any particular solution.

There is also a need for a researcher has to engage in considerable self-restraint even when the answer seems obvious; the organization needs to own the process and take action on its own behalf and feel a sense of pride and ownership.

5. Lessons learned

The case studies described in this paper demonstrate the complexity of community partnerships in research. The challenge is to set aside preconceived ideas, never to assume that everything will go according to plan or that answers are obvious.

5.1 *Communication*

Ideally, all partners need to clearly articulate the level of interest and activity they expect and desire from their involvement in a project. Taking collaborative research seriously means mutual communication is critical, even when it is difficult and a challenge for all involved. Such interactions lead to significant mutual understandings and establish relationships that open new possibilities for action to achieve aims and objectives of the project. This highlights the need for regular face-to-face contact as well as electronic communication and the need to invite involvement from all partners. But there is also a need to recognize that the pattern of communication over the life span of the project will change. For example, in the Digital Divas project, initial school contact involved at least a visit twice a month and regular conversations with the teacher and principal. As the project progressed, this level of involvement with stakeholders and schools declined. In the *Doing IT Better* project, various workshops maintained the communications process.

5.2 *Learning*

Communication needs to be an on-going process that incorporates learning, by all partners, and the ability to change tack on the basis of such learning. There are many dimensions to this learning; from mutual appreciation of partner expectations, to the technical details of the capability of IT 'solutions', to an understanding of the research process, to a recognition of cultural and social constraints. Project outcomes are important, but to the partners, their experiences in the project are also valued for what they have learnt and the potential to apply these new insights into their own domains.

5.3 *Opportunity*

Integration of community and academic cultural style appears to be critical to collaborative research, but this integration also needs to take account of the dangers of tokenism or over-assertion of academic power or privilege by way of skills and knowledge. If successfully carried out, close engagement with community organization becomes embedded as a guide for effective change

strategies. However, such change is often triggered by chance influences that cannot be predicted, but when they happen they need to be used. This means that community and academic researchers need to always be able to identify productive opportunities to let things emerge and happen. But such opportunities can only be exploited if the research partners understand the context and situation of the opportunities. This means getting ‘inside’ the organization, for the academic partners, and acknowledging the research imperative, by the community partners. This demonstrates a mutual interest in collaboration but also acknowledges that negotiating the project requires researchers to be open to the social and cultural aspects of the research setting.

5.4 *Negotiation*

Community participation means that negotiations cannot be ignored. It may be a challenge for academic researchers, who ‘know’ a simple solution and want to demonstrate its impacts, to undertake consultative processes. For the community researcher, the challenge is to trust their academic partners and to critically examine the theoretically informed ‘solution’ with them. There is also a recognition that the issues confronting community organizations are inevitably complex, are socio-technical in nature and are not amenable to simple solutions. Through staged interactions, significant understandings and relationships grow and new possibilities for action emerge. Taking each partner at face value and working collaboratively to achieve the common goals results in a stronger more effective project outcome. Importantly, negotiations also allow the community to take ownership of both the issues and the way they are addressed.

Negotiation in a community context requires iterative processes such as collaborative workshops. Such processes promote conversations that surface organizational and academic imperatives, and open the space of possible actions for improvement, as well as demonstrate the mutual interest in collaboration. This is in contrast to the typical research methods, involving a one-off intervention. In the Digital Divas project, Catherine Lang perceived her role as gate-keeping during the initial phases of the project. This is a typical, but unintentional, attitude of academic researchers who do not have any expectations of the collaborative process. When community researchers became more actively engaged in the project and collaboration was evident, the gate-keeping role was no longer required.

6. Reflections

In this paper, we have focused on the conduct of the projects and have not explicitly addressed the impact of the projects on either the community organizations or academic disciplines. We have presented the accounts of IT-mediated change through the voices of academic and community partners. While both projects

discussed in this paper were quite different, the similarities in engagement between academic and community partners are evident. Synergies were created with each member of the group working towards a successful and measurable outcome. Nonetheless, gaps in motivation, communication and objectives were evident on occasion.

Each project represents an opportunity to address organizational and research outcomes. This duality is central to a productive collaboration that represents a dynamic between cooperation and competition (Badaracco 1991; von Krogh & Roos 1996), a dynamic that does '... not presuppose that collaborative actors necessarily believe that their objectives are positively linked. They only believe that by participating in and contributing to the common action they can promote their individual goals' (Iivari & Linger 1999). This perspective of collaboration raises important questions around trust, power, and the ability to negotiate, on an ongoing basis, the nature of the collaboration and its outcomes (Tjosvold & Tjosvold 1995; Huxham 2003). While community partners and academic researchers respect each other's positions, their success in achieving their organizational and research outcomes depends on regular and open clarification of project deliverables and outcomes, as well as the processes to achieve these objectives.

Community partners often invest money as well as time in research and this investment cannot be taken for granted. Academics need to remember that they are not the gatekeepers of research and that community partners are experts in their own domain and are working to their own agendas and constraints. Their contribution has to be recognized, acknowledged, appreciated and incorporated into the research process. Positive relationships result in alliances that are beneficial for both academics and community partners. In this regard, the challenges facing academics in community-focussed research are confirmed by other research (Head 2007), concerning the challenges of community engagement and partnership for government, where there is a need to develop common directions and objectives (thus, a common project); the need to build trust and partnership; the need for mutual adjustment (and as noted in this paper, through dialogue and negotiation); the need for shared or facilitated leadership (the whole principle of collaborative research partnerships), and the need to be aware of fatigue (in the case of the community sector in particular), as well as the impact limited resources have on commitment to the project.

Our experiences with both projects highlight the characteristics of collaborative research with community organizations. The project is a collaborative enterprise in its own right; it has defined outcomes, scope and boundary (Linger 2006). A distinctive feature of this collaboration is that the definition of the project is a continuous process of negotiation between the community and academic partners. This communication process also includes creating a cultural identity for the project that is consistent with the imperatives of

research and the values of the community. It also means that research methods are adapted to be consistent with the values and identity of the project. A critical factor in collaborative research is that the outcomes of the project have intrinsic value, but the significance of the project lies in how the partners interpret these outcomes in their own domains. For community partners, this means how they use their experience in the project to influence their activities in their community organization. For the academic partners, the value lies in being able to transform their project engagement into a theoretical and/or methodological contribution to their academic disciplines. All these are characteristics that are expressed in the collaborative research model as articulated by Linger (2006).

The projects discussed in this paper highlight the dialectical nature of collaboration; the synergy of working together and the fragility of this process. Huxham (2003) uses the concepts of the collaborative advantage and inertia to express this dialectic. Collaborative research is by definition complex, ambiguous, and uncertain (Huxham & Vangen 2000). It cannot be assumed to be a normative, deterministic methodology that can be applied (imposed) in any situation. Rather, it is an approach that is characterized as an on-going process of negotiations, shifting power structures and continuously changing agendas. Collaborative research means never making assumptions and being responsive and alert to the enormous variety of challenges and insights that are found working with the community.

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