ACIS 2006 Proceedings

Australasian (ACIS)

2006

Action Research in Practice: Balancing the Dual Imperatives

Peter Marshall
University of Tasmania, peter.marshall@utas.edu.au

Kristy de Salas
University of Tasmania, Kristy.deSalas@utas.edu.au

Judy McKay
Swinburne University of Technology, jmckay@ict.swin.edu.au

Follow this and additional works at: http://aisel.aisnet.org/acis2006

Action Research in Practice: Balancing the Dual Imperatives

Peter Marshall, Kristy de Salas
School of Information Systems
University of Tasmania
Tasmania, Australia
Email: {Peter.Marshall}{Kristy.deSalas}@utas.edu.au
Judy McKay
Faculty of Information & Communication Technologies
Swinburne University of Technology
Victoria, Australia
Email: jmckay@ict.swin.edu.au

Abstract

This paper provides a description of and reflections on an action research project. The project is described from its initialisation and conceptualisation through to the completion of the engagement with the clients of the problem-solving exercise. It is hoped that the reflections on the key issues of the action research project will provide opportunities for discussion and learning among readers.

Keywords

Action research, information systems strategy formulation, business processes, organisational problem solving, action research projects

INTRODUCTION

In undertaking action research, researchers participate in problem solving situations with their clients who need to improve or ameliorate an organisational problem situation. The researchers' aim is to both solve clients' problems and simultaneously attain research objectives. Developing and implementing a suitable solution to, or resolution of, the problem and meeting ones' research objectives are the researchers' dual imperatives in undertaking action research (McKay and Marshall 2001). This paper describes some practical issues and challenges involved in the engagement and problem solving stages of an action research case study. In doing so, the authors hope that insights into the process of action research will be made available to readers.

As described by McKay and Marshall (2001), action research can be conceptualised as two interdependent sets of activities – a problem solving activity ((a) in Figure 1) and a research activity ((b) in Figure 1). Achieving an appropriate balance between the problem solving interest and the research interest is a major challenge for action researchers (McKay and Marshall 2006). The process of the research interest activity in action research will serve as an organising frame for this paper. The paper commences, using Figure 1(b) as an organising frame, by considering the research interests, the reconnaissance and fact finding stage, and planning and designing the research. The issues and analysis of the action steps and the follow-on activities will then constitute the central focus of this paper. The paper then examines a number of the issues and challenges associated with action research.

This paper contributes to the action research literature by giving a personal and direct account of an action research study. First-hand and personal accounts of the difficulties, problems and issues experienced in action research practice are rarely given, although there are some examples such as Cunha and de Figueiredo (2006). This is despite the fact that such accounts can be highly useful to neophyte action researchers such as doctoral students, and despite calls for such exemplars to be published (Avison et al. 1999). This paper will help to redress this gap in the literature by discussing the practical challenges that arose from the conduct of an Action Research project designed to formulate a IS strategy development process for small and medium enterprises (SMEs).
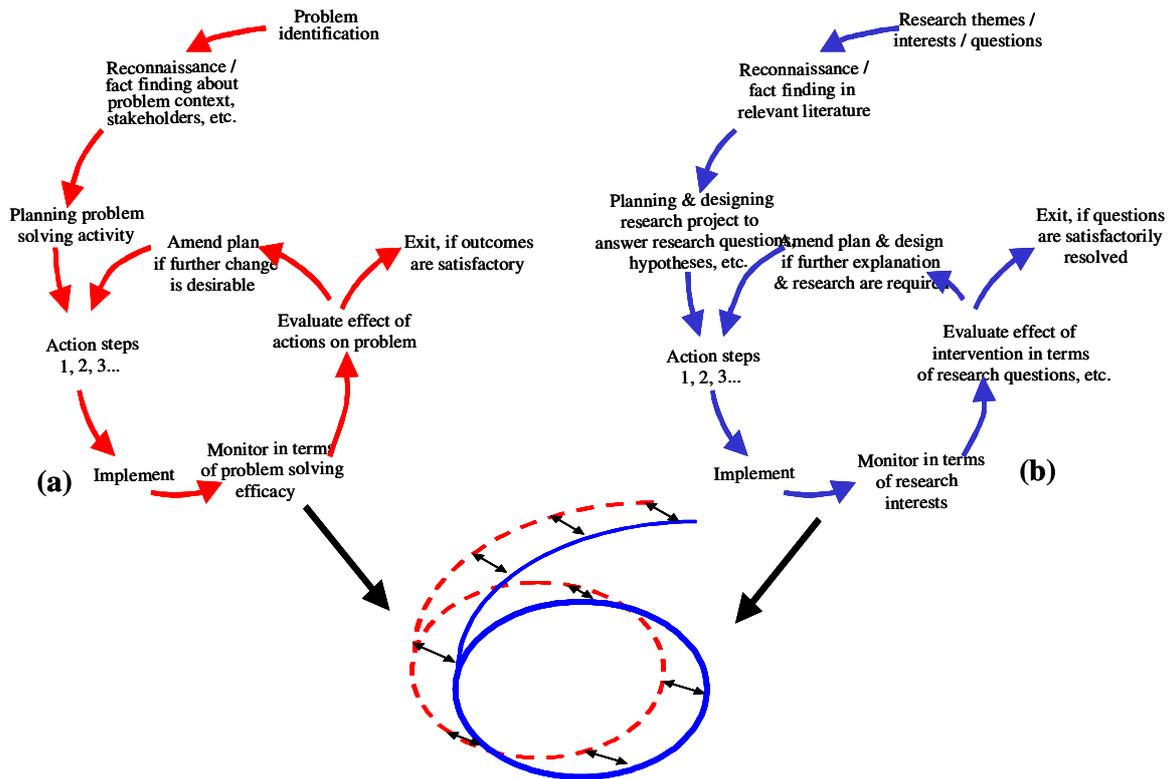
Figure 1: The Dual Imperatives of Action Research (McKay and Marshall 2006)

RESEARCH THEMES AND INTERESTS

A small team of University researchers were concerned that IS strategy formulation seems to be either completely neglected or badly done in SMEs (Levy and Powell 2005, Beheshti 2004, Kyobe 2004). Further, the team were aware that business strategy formulation also tended to be neglected, or at best, was done very informally, even casually, in SMEs (Perry 2001, Jocumsen, 2004). A comprehensive review of the relevant research literature revealed a lack of empirical research into how one should go about determining an appropriate IS strategy for an SME, and thus it was decided that it was necessary to determine an effective IS strategy formulation method for SMEs. It would, of course, be desirable if the IS strategy formulation method also incorporated a way of revising, or indeed generating, a simple business strategy - at least, anyway, a set of strategic goals - that could guide the formulation of an IS strategy.

RECONNAISSANCE, FACT FINDING AND CONCEPTUALISATION

The research team read widely on the topics of business and IS planning, with a special interest in the problems and issues of SMEs. The team also engaged in conversations with local small business owners/managers and key personnel. Research group members gave several presentations on business and IS planning to the managements of local SMEs. In this way, the knowledge of the research team expanded, as did the interest in local business on this issue.

As part of these presentations, a simple, high-level conceptualisation of the relationship between business planning, IS planning and IT planning was presented (see Figure 2 below). Thus, CEOs and senior managers in SMEs were encouraged to recognise the need for a business strategic plan, to shape and inform the articulation of an IS strategic plan, which in turn, shaped and informed an IT strategic plan. However, they were also encouraged to consider that in most contemporary business contexts, an existing IT infrastructure inevitably served to limit, at least in the short term, the sorts of systems and information architecture that were achievable in an organisation, and thus might have an effect, on occasions, of limiting the type of business models and strategy that could be pursued in the short term (Ward and Peppard 2002).
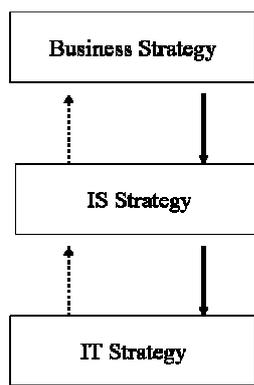
The IS plan essentially indicates the information needs, and the information systems needed to deliver that information for the next three to five years (Ward and Peppard 2002). The IT plan concerns the IT infrastructure and architecture needed to effectively run the acquired systems including, of course, the necessary supporting communications equipment (McKay and Marshall 2004). The critically important link to the business plan is recognition that information systems investments must be targeted at systems that support the achievement of the strategic goals of the organisation. In SMEs this could well be a problem since a clear business plan with a well-developed set of strategic goals may not exist. Thus an effective method for IS strategy formulation in SMEs should include a procedure for revising, or perhaps developing, the set of strategic goals for the organisation.

Figure 2 The relationship between business, IS and IT strategy (Ward and Peppard 2002)

During the reconnaissance activities, it also became evident from the literature that the effectiveness and efficiency of business processes were critical to the concepts of business strategy, competitiveness and performance (Becker and Meise 2003, Edwards and Peppard 1997, Armistead 1996, Armistead and Machin 1997). The importance of business processes to both the formulation and implementation of business strategy was thus considered apposite to our emergent research interests. For example, Neely and Adams (2001) point out that a well-developed business strategy will include an examination of the nature of the set of business processes required to support and realise the business strategy. A given business strategy must, in their view, be supported by a set of efficient, effective and competitive business processes if the strategy is to be achieved. Neely and Adams' view of the pathway to long-term success and high performance in business is shown in Figure 3 below, derived from the performance prism (Neely and Adams 2001).
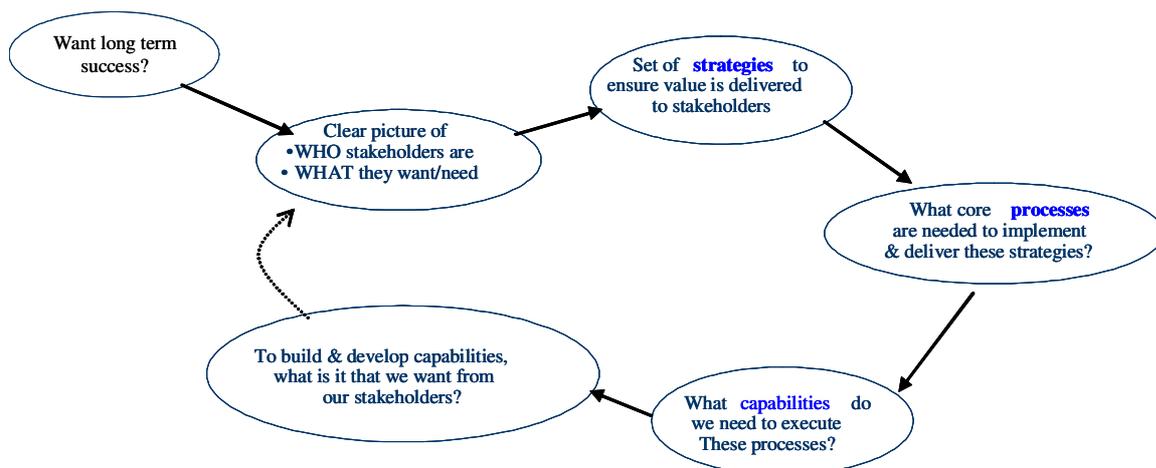

Figure 3: The Logic of the Performance Prism (Neely and Adams 2001)

Neely and Adams (2001) argue that the starting point for long term success is to identify who key stakeholders are for the organisation, and from this, to identify their needs and wants. Thus, a set of strategies is required to ensure that value is delivered to the key stakeholders. This implies a need for efficient and effective business processes to implement and deliver these strategies, thus requiring capabilities (such as information systems and technology, skilled human resources and the like) within or accessible to the organisation to execute these processes.

Whereas Ward and Peppard's work (2002) can be criticised for its lack of recognition of the role and relationship of business planning, IS planning and business processes, a limitation of Neely's work is that scant attention is paid to the potential for limitations to be placed on what is possible given current organisational resources, at least in the short term. Thus existing capabilities such as IS and IT, may limit the processes that can be realised effectively or implemented in the short term. Similarly, the nature and (in)effectiveness of existing processes may limit the rapidity and effectiveness with which new strategies can be implemented, and so on. Indeed, adapting Zack's (1999) depiction of a similar problem with respect to business strategies and knowledge management strategies, we can visualize the strategic needs for business strategies, business processes and information systems via the diagram in Figure 4.

As indicated in Figure 4, a firm's business strategy would include a set of strategic goals that indicate what the firm must do if it is to achieve its vision, goals and objectives through successfully implementing its strategy. Given the firm's capabilities and resources there is then, potentially at least, a strategic gap between what the firm needs to do to achieve its goals and objectives and what it can do. One important aspect of this strategic gap will be the business process effectivity/efficiency gap. This directs attention to the question that asks whether the firm has the necessary business process quality to be able to achieve the business strategy. As shown in Figure 4, if there is a significant business process effectivity/efficiency gap, then this may be due, in part at least, to inadequate IS support for business processes.
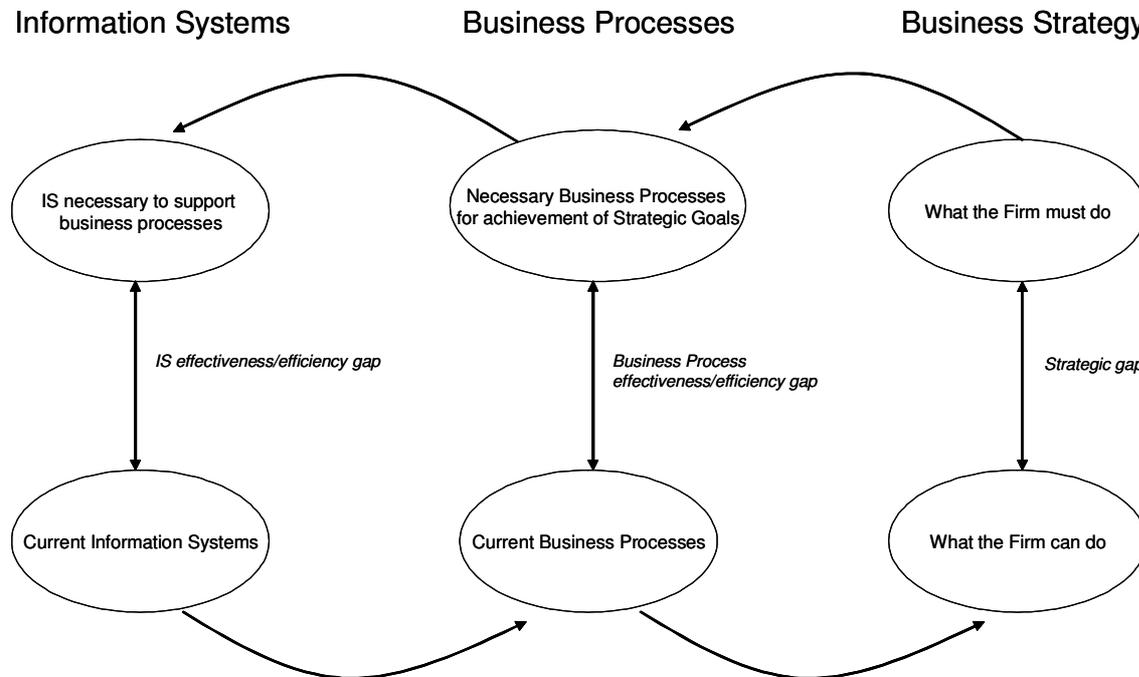

Figure 4: Developing Effective Strategies

The conceptualisations above indicate the reading, reflection, group discussions and deliberations of the reconnaissance phase of the action research. The reconnaissance phase now became more focussed, and Figure 4 became the framework on which the research was structured. The research team began to debate the basics of an approach to IS strategy formulation for SMEs. Given that the approach was to be applied in SMEs, it was thought that the approach should take account of the resource-constrained nature of SMEs, and should reflect the simple can-do culture and approach of most SMEs (Levy and Powell 2005). SMEs lack the staff expertise in strategic planning that exists in many large firms, and do not possess the professional planning experts that also exist in large firms. Further, when it comes to IS, there may be no information systems and technology specialists in the firm at all (Igbaria et al 1998, Musson 2005).

PLANNING AND DESIGNING THE RESEARCH

The research team now felt that it needed to put together the elements of an IS strategy formulation method for SMEs. When this was completed, the team would look for an organisation where an SME management team felt they needed to formulate an IS strategy, but felt challenged by the task.

The research team felt that the reconnaissance activities had shown that both the elements of business strategy and business process competitiveness were significant considerations in formulating an IS strategy. Thus they felt that the IS strategy formulation method must consist of two sub-processes, each with a different but complementary perspective on the problem of determining an appropriate future IS portfolio . One approach would be top-down, ensuring that there was adequate IS support for the attainment of the strategic goals of the company. An essential component of this top-down process would be ensuring alignment between business goals and objectives and IS strategies and investments, with mechanisms required to ensure alignment was achieved on an on-going basis. The other process or approach would be bottom-up, looking at the efficiency and effectiveness of business processes. This approach was essentially to determine that there was adequate IS support to ensure the company had an efficient, effective and competitive set of business processes, and to ensure that business processes regarded as core to the implementation of business strategy and to the achievement of business goals and objectives were both efficient, and appropriately implemented via

information systems and appropriately skilled human resources. The two complementary sub-processes or approaches were as follows:

- determine the set of strategic goals for the company, and then determine the set of IS that support and enable these goals.
- analyse and model the existing core business processes of the company, and determine the IS required to transform these into an efficient, effective and competitive set of business processes, suited to implementing business strategy

The key outcome of an IS strategy formulation process, the future IS portfolio, would be obtained by a simple aggregation or combining of the results from the two complementary sub-processes with a gap analysis to determine the difference between what is already in place and what is required. Because this method was essentially composed of two complementary perspectives on the problem of determining the future IS portfolio, the research team named the method the Dual Lens approach.

Because of its long track record of success in practical problem situations regarding strategy considerations the research team decided that an effective way of determining the set of strategic goals for the organisational was the SODA/Cognitive Mapping approach of Colin Eden and his colleagues (Ackerman and Eden 2005, Bryson et al 2004). The SODA/Cognitive Mapping approach was also considered appropriate for facilitating the deliberations concerning what IS were needed to support and enable the achievement of the strategic goals. This was because this extension to the business strategy is still concerned with managing a strategic conversation among the top management team of an organisation; it is just that at this point the strategic issues are focussed on IS capabilities. Thus one would expect that these IS-focussed strategy considerations would be managed effectively within the SODA/Cognitive Mapping method or approach (Eden and Ackermann 2001).

The research team felt that the business process analysis and modelling exercise needed only to result in broad and high-level business process analysis. This was because the exercise only had to guide management concerning the question of what broad IS capabilities were needed. At the strategic level, highly detailed information systems specifications are clearly not required. Thus it was reasoned, the business process analysis and modelling exercise could be done by a standard systems analysis approach augmented by some appropriate business process modelling software. Given its successful track record in business process modelling, the ARIS modelling approach (Scheer et al 2003, Scheer et al 2006) and software (Davis 2001) was chosen as a specific vehicle for supporting the analysis and modelling in this part of the IS strategy formulation method.

The team decided to facilitate the implementation of such a process in an SME and to learn from this implementation. They thus sought an industry partner with a perceived problem associated with determining an IS strategy. The lessons learnt from the approach would yield information regarding the efficacy of the method or approach and facilitate refinement of the details of the method.

The Organisation

The IT manager for FIN ONE Ltd approached the research team in late 2004 with a view to getting help in determining an IS strategy for FIN ONE. FIN ONE is an Australian financial services company with approximately 80 staff in seven branches and offices across Australia. The company has over $1.2 billion in investment funds under management as well as $750 million in trust assets under management. There was a view among some members of the senior management team in FIN ONE that the current IS portfolio was significantly holding back business performance and threatening the future successful strategic positioning of the company. However, this view was not the unanimous view of the senior management team. Indeed there was serious and bitter disagreement over this matter. Given this situation, the senior management team invited the research team to help resolve this disagreement and determine an IS strategy that would support and enable FIN ONE's business strategy.

The action research engagement began with a set of interviews with the senior management team regarding the current business situation for FIN ONE, the business strategy and the current situation regarding information systems and technology. Over a number of weeks, the research team then worked with senior management to determine the required IS strategy. Finally, the research team attended a senior management meeting at FIN ONE and presented the recommended IS strategy.

THE ISSUES AND CHALLENGES OF CONDUCTING ACTION RESEARCH

In this section, the focus of the paper will be on the important decisions regarding the action research project, as well as the issues and challenges that arose during the project. The objective of this section of the paper is to provide a set of reflections that can form the basis for discussion and learning regarding action research.

There are two broad ways (and obviously many more possible variants) of approaching action research. These are a research-led approach to action research, and a problem-led approach to action research (McKay and Marshall, 2000, Avison et al. 2001). In the case described in this paper, the action research was initiated in a research driven rather than in a problem-driven way. In genuinely research-led action research projects the research interests drive the search for and location of a suitable problem situation. Once a suitable problem has been identified, and hence a site selected, the researchers and participants collaborate, defining and/or clarifying roles, responsibilities, objectives, expectations, and the scope of the intervention wherever practicable. Through informed action (action guided by a suitable conceptual framework) and reflection, satisfactory problem solving and research outcomes are achieved. The action research cycle is completed by lodging the research outcomes and new insights into the public domain for criticism (McNiff et al. 1996). The issues and challenges that will be discussed in the following sections arose in the context primarily to this research-led scenario, although may well be more broadly applicable to action research projects in general

Problem Solving Clients and Research Clients

Considering the dual aspects of action research implies the need to distinguish between two sets of clients. There are the 'clients' of the problem solving activity, members of the organisation in which a problem is perceived to need redressing. In addition, there are the 'clients' of the research outcomes, which in this case, were defined to be the members of the research group and consumers of the published research outcomes. The research clients in this case proved relatively unproblematic, but issues arose surrounding the problem solving or organisational clients.

There is a sense in which organisations do not have problems, the people in them do (Eden et al 1983). Situations are viewed as problematic by people: problems do not 'exist' in the real world to be found and solved, other than through the perceptions of people (Bryant 1989). Furthermore, different people in organisations have different perspectives and constructions of problems, and hence have different viewpoints on what constitute ways of ameliorating and improving problem situations (Eden and Ackermann 2001). Given this, it is important to understand clearly who the clients of one's problem solving activities are, since the framing of the problem will be influenced heavily by the beliefs, attitudes, prejudices and values of the clients (Eden et al 1983, Rosenhead and Mingers 2001). Even among a small group of similar thinking individuals, skilled negotiation will be necessary even to identify and define the problem, let alone evolve and determine an acceptable solution to the problem (Rosenhead and Mingers 2001).

It was decided that the client group for the research described in this paper was the top management team of FIN ONE, as they were the sponsors of the activity. Their set of beliefs, attitudes, prejudices and values regarding the problem situation defined the problem situation for the research team. During the research, a number of diverse issues arose, including the understanding of business strategy by the middle management, the divergence of informal systems and business processes from the formerly defined variants of these, the awareness of senior management of the need for IS training and so on. Thus, it was important to return not only to the problem situation, but back to whether these elements of the problem situation really concerned the problem of determining IS strategy as this was viewed by the top management team. Whether a particular element should be included in the problem scope was clarified somewhat by how senior management saw the problem and its scope. Had the clients been middle management, the identification, determination and scoping of the problem would have been different, as would the problem solution.

At times there was tension between the clients' viewpoint and requirements, and the research team's research objectives. In one situation, the research team wished to use a critical targeting method to identify FIN ONE 's critically important business processes. The idea was that after the use of the critical targeting method, the team would then focus modelling activities on these processes, rather than trying to model all the enterprise's processes. However, the top management team of FIN ONE wished the research team to analyse and model a set of processes of particular interest *to them*. In other words, the top management team felt it knew the critical processes of interest. Given that the research team were solving the *clients' problem*, the research team took as highly significant the clients' view of what was important in that problem situation. Thus, although the critical targeting method was employed with a group of middle managers who had close and direct knowledge of FIN ONE's business processes, the research team eventually put that analysis aside in favour of what the client viewed as important.

The learning that emerges from this is that action researchers need to be very clear on who the client of the problem solving activity is, and whether this is different to the 'owner' of the problem (in the sense of where in the organisation a particularly problem may be directly experienced). Given the complexity of organisational life and the fact that different stakeholders may have, for subjective reasons of all kinds, very different perspectives of problem situations and of what is important in them, being clear on who is the recipient of the outcomes of the problem solving activity is critical. While some action researchers adopting a critical stance

may argue that one role of action research is to bring about emancipation of the workforce (Elden & Chisolm 1993), it was our view that we needed to be mindful of the concept of client throughout our work, and to be clear not to confuse this with other stakeholders in the problem solving activity (Rosenhead and Mingers 2001). Furthermore, differences exhibited within the research team could be attributable to this issue, as they highlighted differences in terms of outcomes, process, and the like.

Leading AR: Managing the Differences

As mentioned above, people have their own perspectives on what the problem is, what activities should be prioritised over others, what is important, and the like. In participating, people have their own objectives as to what they wish to achieve: when these objectives are well aligned, then few conflicts typically occur as to what should happen, and the like. However, with a number of different parties involved in an action research project, managing these differences and achieving a coherent set of activities focussed effectively on both the research and the organisational problem-solving goals is a significance challenge for those leading action research projects.

Within the action research project, we needed to be mindful of the differences in perspective concerning what constituted the problem, and hence ways of ameliorating the problem. It would be fair to say that the CEO's views differed somewhat from other reasonably senior managers. Indeed, the General Manager Marketing and the CFO were strong protagonists of the view that new information systems for trust management, investment management and customer management were vital to a successful future for the organisation, while the managing director was dubious that any investment at all in new information systems was necessary. Thus, within the client organisation there were differences manifest. Within the research team, there were also differences in perspective and objectives (this is discussed further below) as to what constituted the 'real' problem, and hence how we, as researchers should appropriately respond. The situation was complicated still further when it emerged that some of the perspectives held by various researchers were not at all in concordance with many of the perspectives expressed by members of the client organisation. For example, some of the research team felt that middle management had a more informed view than FIN ONE's top management team concerning what business processes were in need of improved and enhanced information system support and improvements in process logic. Needless to say, the top management team did not share this view.

Managing these 'among' and 'between' differences (Valusek and Fryback 1987) and finding solutions, or at least improvements that were culturally and politically feasible were issues of very real concern and were also a challenge to those leading the project since they were a constant source of potential conflict. Whose perspectives and wishes should be prioritized over others? How could these differences be reconciled, given the differing objectives of various affected and involved parties? Action researchers are encouraged to devote effort to clarifying these concerns, as they were a source of frustration, confusion and delay throughout this project.

Issues associated with the Composition of the Research Team

A number of issues arose largely due to the composition of the research team, which, although ostensibly composed of researchers primarily from the Information Systems discipline, was made up of staff from two separate universities, in different geographical locations, with different areas of expertise, knowledge and status. The intention was to leverage these differences in expertise and to thus be able to offer broader and more innovative insights into the problem solving activities. However, a number of issues arose as a result of the diversity within the research team. These are discussed below.

Research Philosophy/Theoretical Orientation

At many points in the ongoing discussion regarding the action research project, issues arose that could only be resolved by clarifying the basic philosophic position or theoretical orientation of the research group. These issues arose in all stages of the research, from the planning and conceptualisation of the research through to making and presenting the findings, and were pivotal in that they were affected by the worldviews and values of the researchers, and hence what they regarded as important and valuable.

The issues concerning matters that had a relationship to team members' fundamental theoretical orientation required vigorous and extensive debate to resolve. For example, a core process map for FIN ONE had been derived with the help of a group of middle managers who had a good operational knowledge of the company. When this map was presented to the managing director, he wished to make the financial planning process more explicit in the map. Since the building of a financial planning expertise in the company was a special interest of the managing director, some members of the research team regarded this alteration as a subjective and highly political and hence a highly undesirable 'distortion' of the core process map. The countervailing view in the group was that a core process map it is not an objective fact waiting to be determined by scientific analysis, but is a social construction, negotiated and built by the key players in the problem situation. Since the managing

director was a (possibly *the*) key actor in the problem situation, the research team considered his viewpoint very carefully.

Similar issues regularly came up in research team deliberations, largely based on differences in philosophical orientation. It was therefore found to be very helpful to clarify and make explicit the theoretical orientation of group members, and to try to evolve a group position on the philosophic basis of the research and hence have a fundamental basis for research planning and decision-making.

Geographical location

The team members were drawn from two separate universities located in different states of Australia. The client organisation was in the same town as one of the universities. Hence, part of the group was in physical proximity to the research site: others were not, unless they travelled by air for some hours. Previous research suggests that in such circumstances, those researchers located close by tend to have a greater personal and intellectual commitment to and interest in the project, whereas those working remotely much of the time trend to have only an intellectual interest in proceedings, and not the emotional commitment to the resolution of the organisational problem (Younglove-Webb et al. 1999). This proved to be the case in this study. For example, detailed planning of the next steps in the research invariably tended to be done by those working locally. This planning work also involved revising some of the proposed steps of the research such as the discarding of the critical process targeting recommendations, so this work tended to be more than routine adjustments. Presentation of the findings to date also tended to be prepared and carried out by the team members working locally. Nonetheless, there was important theoretical and methodological contributions to the action research project made by the members from the remote university.

Given the requirement in action research of a commitment to ameliorating an organisational situation regarded as problematic by its members, then ensuring appropriate levels of commitment amongst the research team is vital.

Different Disciplinary Skill Sets and Capabilities

One of the benefits of teams of researchers is that different members can bring with them and contribute different skills, knowledge and capabilities, all argued to produce better, more creative outcomes (Bryant 1989). However, this in itself poses issues. Members of team were skilled in different areas. Some possessed knowledge and skills in the SODA methodology and cognitive mapping, while others were deliberately selected for their expertise in business process management and modelling. However, what emerged was a clear need, not just to communicate, but also to share and train others in all areas of expertise. This proved frustrating at times, and took substantial resources and time, to get others up to speed in required skills.

For example, many members of the team needed to build capabilities in both cognitive mapping and business process analysis and modelling. Despite education sessions and reading being carried out regarding both capabilities, the lack of these capabilities slowed the research team's work with FIN ONE considerably, causing some angst in FIN ONE about the speed of evolving a first IS strategy. Part of the reason for the apparent slowness of the research team was that cognitive mapping and business process analysis and modelling are not just knowledge-based skills; they are practical skills that need to be practised and experienced. Gaining practical skills, of course, takes time, as the research team learned. However, unless practical skills are of a certain level and quality then there are problems regarding the effective trial and evaluation of the method or solution being tested. Simply put, if a method is being tested and evaluated and the techniques of the method are not effectively applied, then an authentic assessment of the efficacy of the method cannot proceed. Thus the issue of building practical skills alongside theoretical knowledge is an issue requiring careful attention in action research projects.

Added to the need to build practical capabilities, was a requirement to determine how, exactly, those capabilities were to be utilised and adapted to the needs of the research - that is, how should cognitive mapping and business process analysis and modelling be utilised within the IS strategy formulation method. The need to simultaneously build practical capabilities and determine how they should be adapted and integrated within the context of determining a future IS portfolio tested the resourcefulness of the research team. These pressures led to delays in the problem-solving engagement that would not have been experienced if the research team were a polished and highly-resourced consulting team operating a standard and practised approach. Sustained dialogue with the clients of the problem solving activity (that is, the top management team of FIN ONE) was necessary to achieve an understanding of the research team's situation and its need to dynamically juggle and balance the dual objectives and imperatives of action research (McKay and Marshall 2001).

Planning and Communicating the Research and the Engagement

Diversity within a research group is known to complicate internal communication (Pfeffer and O'Reilly 1987). This issue proved to be a concern in this project. But in an action research project, not only must internal

communication be attended to, but the issue of communicating with multiple levels of organisational members is also important, and became an issue of concern within this project.

When the engagement with FIN ONE began, the focus of the research team was primarily on the research methodology and the theoretical issues pertaining to the IS strategy formulation method. However some researchers felt that the engagement plan needed to be articulated clearly and communicated to them at least once or possibly twice a week, particularly when there were changes in direction and decisions to be taken. As a result of these views, research team meetings began to be held more regularly and research plans were written down and communicated more frequently.

Further, senior managers at FIN ONE also felt they needed more detailed plans and milestones from the research team. They often felt that the project was drifting, lacked a clear direction and was not progressing quickly enough (a problem alluded to previously given the need for all members of the research team to learn one another's skills and competencies). However, at times, these feelings were expressed even when the research team had been working intensively with middle management and progressing the research/problem-solving quite effectively, suggesting that an issue in action research can be associated with managing internal communications within the host organisation. The response was to prepare electronically-based and detailed plans built using a project planning tool such as Microsoft Project and provide such plans regularly to all members of the research team and the clients of the problem-solving activity in FIN ONE. This had a very positive effect on the relationship between team and research clients.

It may sound trite to mention the importance of planning carefully and communicating those plans regularly. However, despite the focus of the research team on the need for creative ideas in research, there was, unsurprisingly, found to be in this team-based action research, a fundamental and critical need for an increased focus on good planning and communication, both within the research team and between the research team and the clients of the problem-solving activity.

Listening to the Clients of the Problem-Solving Activity

The action research engagement with client(s) involves a commitment to ameliorating an organisational problem situation in some way that is viewed positively by those client(s). The problem situation for FIN ONE concerned an unsatisfactory situation with respect to information systems and the need to figuratively step back and, in a holistic and reflective way, determine an appropriate IS strategy. In evolving an IS strategy for FIN ONE, and thus pointing the way for an IS strategy formulation method for the future, the research team assumed that the theoretical method that they had determined, focussing as it did on strategic support as well as business process support, would be suitable for senior managers of FIN ONE. Thus, in approaching the business process analysis and modelling exercise, the research team decided to carry out a broad-based high level business process analysis targeted on determining IS needs. It was decided to keep the analysis broad and high-level since when IS applications were purchased as a result of the IS strategy formulation, business processes would be redesigned and altered to fit the new systems. Thus a detailed analysis of the business processes did not seem a good investment of time and effort. The team also decided that, rather than trying to analyse all business processes it should determine those processes most critically in need of analysis and then go on to analyse and model only these highly critical processes.

As mentioned previously, the research team utilised a scoring methodology for determining those processes that most critically needed analysis, modelling and improvement, possibly by better information system support. A "league table" of process criticality was thus developed. When the CFO saw the "league table" of criticality, his view was: *"Well that is very interesting, but I have previously indicated that I felt that the lending management process and the product sales and service process are the ones that need analysis and modelling, and that is what I want you to go ahead and do for me"*. On reflection, it was clear that this had been the CFO's stated view for some time, but the research team had not 'heard' nor seriously reflected on the implications of this view. Given that the CFO was the client of the problem-solving activity, the research team should have been listening more closely to him before commencing the assessment of the criticality of processes. This issue was debated strongly in the research team, and conflict arose due to philosophical and methodological differences (as described previously). Eventually the team went ahead with the analysis and modelling of the processes the CFO wished to be worked on.

Attaining a clear definition of who exactly was the research client(s) was an essential first step in a successful action research project. With that step complete, determining the research client's wishes and objectives were most important in action research and they needed to be taken very seriously. Indeed, listening closely to the client's needs is a key skill in action research. There is, further, an interesting challenge in listening and responding to the clients' wishes, while preserving the research objectives of the research team.

CONCLUSION

In action research studies, approaches and methods in information systems can be investigated within the full rigours of organisational reality. The laboratory, so to speak, is the real world, and actors in the problem-solving activity must bear the full consequences of their plans and decisions. Thus realistic results and evaluations are possible, as is the holistic study of phenomena in organisations, including, importantly, the psychological, social and political elements of situations. However there are many challenges and tensions in action research. Through the implementation of this project, we encountered a number of these issues: many of these were associated with differences in perspective of who the clients were, what the problem was, what constituted an appropriate resolution of the problem, and then a number of communication issues that affected both the organisation and the research team. The authors hope that the discussions, deliberations and reflections on the project described in this paper will lead to increased understanding of the intricacies, subtleties and problems of planning and managing action research projects.

REFERENCES

Ackermann, F. and Eden, C. (2005) The Practice of Making Strategy: A Step by Step Guide. Sage, London.

Armistead, C. and Machin, S. (1997) Implications of Business Process management for Operations Management. International Journal of Operations and Production Management, 17(9): 886-898.

Avison, D., Lau, F., Myers, M. and Axel Nielsen, P. (1999) Action Research. Communications of the ACM, 42(1): 94-97.

Avison, D., Baskerville, R. and Myers, M. (2001) Controlling Action Research Projects. Information Technology and People, 14(1): 28-59.

Becker, J. and Meise, V. (2003) From Strategy to the Business Process Framework. In Becker, J., Kugelar, M. and Rosemann (Editors) (2003) Process Management: A Guide to the Design of Process Management. Springer Verlag, Berlin.

Beheshti, H. (2004) The Impact of IT on SMEs in the United States. Information Management and Computer Security, 12,318-327.

Bryant, J (1989) Problem Management: a guide for producers and players. John Wiley: Chichester.

Cunha, P. R. and de Figueiredo, A. D. (2006) A Tale of Action-Research in Information Systems: Memories of a PH.D. Student. Communications of the Association for Information Systems, Volume 17, pp. 504-523.

Davis, R. (2001) Business Process Modelling with ARIS: A Practical Guide. Springer-Verlag, London.

Eden, C. and Ackermann, F. (2001) SODA – The Principles. In Rosenhead and Mingers (Editors) (2001) Rational Analysis for a Problematic World Revisited. John Wiley and Sons, Chichester.

Eden, C., Jones, S. and Sims, D. (1983) Messing About in Problems: An Informal Structured Approach to Their Identification and Management. Pergamon Press, Oxford.

Edwards, C. and Peppard, J. (1997) Operationalizing Strategy Through Process. Long Range Planning, 30(5): 753-767.

Elden, M. and Chisholm, R.F. (1993) Emerging varieties of action research: introduction to the special issue. Human Relations, 46(2): 121-142.

Igbaria, M., Zinatelli, N. and Cavaye, A. L. M. (1998) Analysis of Information Technology Success in Small Firms in New Zealand. International Journal of Information Management, 18(2):103-119.

Jocumsen, G. (2004) How Do Small Business Managers Make Strategic Marketing Decisions? European Journal of Marketing, 38. 659-674.

Kyobe, M. E. (2004) Investigating the Strategic Utilization of IT Resources in the Small and Medium-sized Firms of the Eastern Free State Province. International Small Business Journal, Volume 22, Issue 2, pages 131-158.

Levy, M. and Powell, P. (2005) Strategies for Growth in SMEs: The Role of Information and Information Systems. Elsevier Butterworth-Heinemann. Oxford.

McKay, J. and Marshall, P. (2000) Rethinking Current Conceptualisations of Action Research. Pacific Asia Conference on Information Systems, Hong Kong.

McKay, J. and Marshall, P. (2001) The Dual Imperatives of Action Research. Information Technology and People, 14(1): 46-59.

McKay, J. and Marshall, P. (2004) Strategic Management of e-Business. John Wiley and Sons Australia Ltd

McKay and Marshall (2006) Driven by Two Masters, Serving Both: The Interplay of Problem Solving and Research in Information Systems Action Research Projects. In Kock, N. (editor) (2006) Information Systems Action Research: An Applied View of Emerging Concepts and Methods. Springer.

Musson, D. (2005) The IT Manager: An Endangered Species. Proceedings of the Sixteenth Australasian Conference on Information Systems, 29th November – 2nd December 2005, Sydney, Australia.

Neely, A. and Adams, C. (2001) Perspectives on Performance: The Performance Prism. Journal of Cost Management, 15(1):7-15.

Perry, S. C. (2001) The Relationship Between Written Business Plans and the Failure of Small Businesses in the U.S.. Journal of Small Business Management, Volume 39, Issue 3, July, pp. 201-208.

Pfeffer, J., & O'Reilly, C. (1987). Hospital demography and turnover among nurses. Industrial Relations, 36, 158-173.

Rosenhead, J. and Mingers, J. (2001) Rational Analysis in a Problematic World Revisited: Problem Structuring Methods for Complexity, Uncertainty and Conflict. John Wiley and Sons, Chichester.

Scheer, A. W., Abolhassan, F., Jost, W. and Kirchmer, M. (Editors) (2003) Business Process Change Management: ARIS in Practice. Springer.

Ward, J and Peppard, J. (2002) Strategic Planning for Information Systems. John Wiley and Sons. Chichester.

Younglove-Webb, J., Gray, B., Abdalla, C.W., Purvis Thurow, A. (1999) The Dynamics of Multidisciplinary Research Teams in Academia. The Review of Higher Education, 22(4):425-440.

Zack, M. H. (1999) Developing a Knowledge Strategy. California Management Review, Volume 41, Issue 3, Spring, Pp. 125-145.

COPYRIGHT