

**COLLABORATIVE LEARNING IN
PHD PROGRAMMES: A MODEL
FROM THE DEPARTMENT OF
MANAGEMENT**

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Abstract

This paper presents an argument for a re-orientation of research strategies in Business faculties in Australia universities based on the experience of a cohort of PhD students involved in Action Research (AR) Business faculties have a relatively low participation rate in postgraduate research. Given the highly pragmatic nature of business operations, it is argued that the traditional research methodology of hypothesis testing and data collection may not suit the needs of business as well as it would traditional science. The paper suggests a new model for research in business faculties and addresses two separate issues. The first is the supervision and management of the research project and the second is the subject of the research itself. The paper suggests a combination of AR and what is termed "traditional research".

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BACKGROUND

The project involves five PhD and one Masters students, all of whom are conducting AR in the range of commercial, government and not-for-profit organisations. All are involved in change programmes within their organisations. One primary motivation of the current students was to continue working with people who had been involved in a Masters programme in organizational systems. All hold one Masters degree, one holds two and another holds a PhD in an unrelated discipline. The participants are seeking to develop their roles as academic-practitioners, where the work in their organizations is informed by theory and their research is oriented to action. All wish to see their practice within their organisations being informed by a very strong theoretical base. Much of this theory base is in Systems Thinking and the ideas surrounding double loop and reflective learning. A common goal for all projects is to establish System Thinking, and in some cases System Dynamics, as methodologies within the organisations.

Five of the six students are part-time and one is full-time. Four of the part-time students have projects in their own organisation. The full-time student and one part-time student have consulting roles in a host organisation. It is hoped that this arrangement will provide stability for the period of time of the PhD candidature. However, at the time of writing, one part-time student had taken a redundancy package because it appeared unlikely that he would be able to continue his research project. While this will mean rewriting the departmental research proposal, he has a new position involving AR in a new organisation. However, stability of employment, or the lack of it, will always be an issue for long-term AR projects.

All of the students in this programme have been taught at postgraduate level by the current supervisor and one case at undergraduate level as well. All students were supervised in their masters thesis by the current supervisor and, in addition, all but one worked with some other members of the current learning group in the masters thesis. This suggests a long period of gestation for the student/supervisor/group relationship in developing a common sense of academic, professional and personal commitment to AR. The danger in this, is the formation of a narrow AR "club" which closes off access to other research methodologies. To mitigate this, it was arranged for each student to have a second supervisor who brought a non-AR focus to the work. However, it is argued that the purposeful establishment of AR learning groups may necessarily be a long process involving some developmental work in a group and academic sense and that the level of focus on the methodology is necessary... This further suggests that the path to AR programmes in the future will be by way of establishing groups of students who have an expectation from an early stage in their postgraduate coursework of the possibility of a PhD by AR. It also suggests that academic programmes can build a community of learning around the disciplines of systems thinking and theory, organizational learning and AR methodology.

PURPOSE OF THIS PAPER

The paper presents an argument for the use of AR as a research methodology for PhD candidates. The paper does not argue the case for AR per se and the interested reader is referred to Argyris, (1992), Flood, (2001), Marshall and Reason, (1997), Revans, (1982), Susman and Everard, (1978). The paper provides a case of the development of a PhD group in AR where the students have been working together for two years. As the project constitutes a departure from so-called traditional research methods for the Department, it therefore warrants debate and scrutiny. This paper is designed to begin this debate with an admittedly partisan discussion of the "pro" case. The results are not in, but to delay the debate until they are, will be to wait three to four years and in this time the opportunity to think through a new approach to PhD candidates will have been delayed unnecessarily.

THE PROJECTS

Each project has significant sponsor support at very senior levels. The projects were developed in consultation with the client organisations around issues that had clear corporate need. The projects include

- The use of systemic approaches to integrate strategic planning into learning cycles in a large financial institution. Sponsor is the CFO.
- The transition of a not-for-profit organisation from a volunteer-run organisation to a professionally managed/volunteer driven organisation. Sponsor is the CEO.
- The preparation of a large bureaucracy for "over the horizon" technologies for decision-making. Sponsor is a Deputy Commissioner
- The application of Stafford Beer's "Viable Systems Model" to the control and coordination of OHS systems. Sponsor is a military General.
- The use of Systems tools, especially Soft Systems Methodology in the design and implementation of human resource strategy. Sponsor is a Deputy Commissioner
- The transition of a network of not-for-profit gaming organisations into a viable system. Sponsor is the Chairman of the Board

THE CURRENT POST GRADUATE RESEARCH/COURSE WORK SITUATION IN AUSTRALIA

The Australian tertiary sector has become increasingly dependent on non-governmental funding. As Federal funds have declined as a proportion of total funding, there has been an increasing reliance on full-fee overseas students. Many academics believe that the need to maintain these student numbers shifts the focus of staff away from research to teaching activities. There are other indications of the increasing dominance of fee-paying programmes, particularly at a post-graduate level. Table 1 shows the trend towards higher degrees by coursework. In five years, the number of research completions has nearly doubled, while course work completions have nearly trebled.

Table 1: Higher Degree Course Completions

	Research	Coursework
1991	2558	5461
1996	4724	14711
Increase	180%	270%

Source: ABS: Education and Training, in Australia (Press release 2 Feb 1999)

This shift toward degrees by course work and its importance for Business Faculties is shown in Table 2.

Table 2: Enrolments by Broad Field of Study (1997)

	Research	Coursework	% in Research
Humanities	9974	8117	55
Business	2721	18336	14
Education	3569	8195	31
Health	4198	5849	41
Science	8500	3709	70

Source: ABS: Education and Training, in Australia (Press release 2 Feb 1999)

While there are many reasons for the differences, it is clear that higher degree business students are disproportionately under-represented in higher degree research. The model used for most postgraduate coursework degrees in business can best be described as terminal knowledge transmission; terminal in that the degree is an end in itself and knowledge transmission in that the interaction between teaching staff and students is primarily concerned with teaching rather than research.

In contrast, the model used in the Master of Organizational Systems (MOS), which all students have completed, was for the coursework subjects to be a preparation for a final AR project. The subjects had a strong emphasis on process and methodology. Most importantly, they were deeply rooted in systems thinking and theory. Flood (2001) argued strongly for the relationship between systems thinking and AR. He argued that System Dynamics, Soft Systems Methodology, Critical Systems Thinking, Total Systems Intervention and Complexity Theory were necessary pre-requisites for conducting AR. These areas formed the basis for the subjects in the Master of Organizational Systems. The coursework in the degree was designed as a preparation for the AR project and so had a research orientation throughout.

It is important to emphasize that the systems disciplines developed as a response to perceived deficiencies in the ability of more traditional methodologies to make a difference in the world. (von Bertalanffy, 1968; Laszlo, 1972a, 1972b; Stewart, 1989; Holland, 1995). As such, systems teaching begins with a thorough critique of the philosophical basis of scientific investigation. The involvement of the students in this programme is based on an understanding of traditional methodologies and a decision to work outside them. One member of the group holds a PhD in a traditional science discipline and frequently serves as the catalyst for methodological debate.

It would be fair to state that the MOS programme was not designed with the purpose of producing a group of PhD AR students. The group was very much an emergent property of the MOS programme. When the students reflected on the reasons for participating in the PhD programme the following were suggested:

The MOS and the AR programme provided a sense of continuity of learning. The PhD programme seemed a logical progression.

AR sends people back through the cycles, allowing you to engage in your own learning.

The university provides emancipation and empowerment when you are working in your own organisation.

There was a sense of emptiness and loss of the ongoing learning after the MOS AR was completed.

AR becomes a way of doing things.

SOME ISSUES

There clearly exists a pool of potential PhD research candidates in the current coursework graduates currently enrolled as well as those who have graduated. Therefore four questions arise for Business Faculties:

- Does an opportunity exist to move the proportions of research students closer to those in other disciplines?
- What are the changes that need to be made to existing research degree programmes to make them attractive to the business community?
- What changes need to be made to current post-graduate coursework programmes to provide students with a preparation for, and transition into, a research programme?

- Is it now necessary to change the traditionally based approach to research?
If research methodologies are authorised by traditional researchers then that methodology may need revision to produce a different orientation amongst supervisors.

THE ROLE OF AR IN BUSINESS

If Business Faculties wish to enhance their PhD programmes and resulting publication records, attracting course work graduates into PhD research programmes becomes a critical strategic issue. It will be necessary for universities to rethink their strategies for PhD programmes in the light of the needs for growth and the shift to a more market focussed approach.

There are currently two means for developing research within the university, both of which rely for the most part on the traditional hypothesis-testing model of research. The first is where industry provides money for a specific research project and academics, possibly PhD candidates, work on that research project. With the declines government funding, this has become a very important activity for universities. The second model is where academics pursue their own academic interests, funded from within the university or by the Australian Research Council (ARC). Recent changes to ARC funding guidelines have placed an emphasis on research collaboration with industry. In both of these cases, it is usual for the candidate to be full-time, usually straight out of an honours programme. Clearly, universities will have to develop sophisticated means of interaction with industry if such collaborative research projects are to be a significant form of funding.

An alternative model of research is where the PhD candidate would work within their own organization enrolled as a part-time student. Such a model proposes that the PhD student's project would be an integral part of their professional life and that PhD programmes could be integrated into the ongoing concerns of a business. Evans (1995) discussed the role of Australian graduate research and the needs of a changing population of part-time, mature, and off-campus students. It is precisely the part-time mature-aged students who are most likely to attract to such workplace oriented programmes. The part-time, work based model has the advantage of combining fieldwork for the PhD with the on-going work in the host organization.

AR is suggested as a practical methodology for meeting the needs of both business and academia. Levin and Greenwood (2001) define pragmatic AR:

- AR is context-bound and addresses real-life problems.
- Participants and researchers co-generate knowledge
- Diversity of experience is an opportunity for enrichment of the research project
- Meaning constructed in the inquiry process leads to social action and reflection on social action
- Validity is established and measured by the extent to which problems are solved and participant gain control over their own situation.

Hall (2001) emphasised that AR originated as a challenge to positivist research methodologies and cited Schon (1983) who observed:

Universities are not devoted to the production and distribution of fundamental knowledge in general. They are institutions committed, for the most part, to a particular epistemology, a view of knowledge that fosters selective inattention of practical competence and professional artistry.

Park (1997) explained the purpose of participatory AR as the engagement in three different kinds of activity: inquiring into the nature of the problem in order to solve it by understanding its causes and meetings, meeting together in community units, and mobilizing for action on moral and political grounds. Traditionally, university research has been involved in the first of these activities, e.g. inquiry, and has had little concern with the action and the emancipatory aspects of AR. It is this bias towards action that makes

AR a potential link between the research concerns of the university and the action and results oriented approach of business.

The focus of AR on issues of emancipation may not translate directly to the language of the business environment. However, many businesses are concerned with issues of commitment and engagement of their staff. This however, raises some ethical issues around the involvement of "subjects" in AR. Workplace participants in these AR projects may not have the option of opting out. In one case, the CEO is conducting the AR project and in another the CEO is the sponsor of the project. The dilemma is that powerful sponsorship may have the effect of making declining to take part in the project "career limiting". This is simply to say that there is an issue surrounding consent to participate. As the projects are closely tied to organizational aims, it could be argued that the AR projects constitute nothing more than normal work enhanced by an informed and articulated theory base. As Levin and Greenwood (2001) suggested, the validity of AR is established in the action outcomes. In the pragmatic business world, outcomes and results are the justification for action. It is at this junction that business faculties have the opportunity to re-define the research activities in a manner that will produce closer and more relevant relationships with the business community. The other side of this ethical issue is that of equity to those who are not able or allowed to take part in a project. Such people may feel aggrieved if the project is highly successful and participants receive benefits from participation.

THE ROLE OF AR IN BUSINESS FACULTIES

In addition to the suggesting that AR more attractive to the business community, there is also an argument that increasing the emphasis on AR will have strategic and operational benefits for business faculties. In most universities, many of the full fee-paying students enrol in the business faculties. As the market for full fee-paying overseas students matures and competition intensifies, prospective students will be able to make decisions between relatively high quality universities based on price. If price pressure increases in this market, it will become increasingly difficult and unattractive to compete in this market. In contrast, AR projects conducted by PhD students in their workplace and tied closely to job performance outcomes may be a strategy that will prepare business faculties for the possible decline in the full fee paying and primarily undergraduate market.

Many Australian universities inherited sizeable business faculties during the Dawkins amalgamations of the early 1980s. This was a result of the emphasis on business education in the vocationally oriented CAEs and brought large cohorts of part-time, mature aged undergraduate students into the university system. Since the amalgamations these undergraduate cohorts have been migrated into full fee paying executive certificates, and graduate diplomas. The natural developmental progression has been into part-time masters programmes for these students. While Leder (1995) sounded a cautionary note when he suggested that institutional mergers, market forces and expansion of enrolment would impact negatively on the quality of graduate-level research, these mergers had the effect of boosting numbers in business faculties and these numbers are now appearing at Masters level. The universities have been very successful in this conversion. This conversion is now reflected in the large number of part-time postgraduate coursework students. However, business faculties have largely been unsuccessful in converting these course work numbers in the corresponding numbers into research programmes despite efforts in the offering of the primarily course based D.Bus.programmes.

However, it is possible to argue that the continuation of coursework at the doctoral level is simply more of the same. While institutions allow varying degrees of group work at PG level, this coursework is essentially an individual activity in that the outcome is individual learning. At its best, AR is a group activity where learning is at best "organizational learning" where part-time PhD students can work within both university and work contexts. It has the added advantage of making the research outcomes business focussed and organizationally relevant. Basing the AR within a group of the students' work colleagues, who would not be enrolled at the university, provides a useful bridge between the university and members of the business community who may benefit from the university researcher/supervisor's expertise without themselves actually being enrolled in a PhD programme.

ROLE OF CO-RESEARCHERS AND SUPERVISOR

PhD supervision is expensive and resource intensive. The success of PhD programmes is measured by completion time and completion rates. There is a significant body of research that identifies the role of the supervisor as critical in the successful completion of PhD programmes. There is also considerable evidence that completion rates are a continuing problem for universities. The process being used in this project is designed to use the group learning process to keep completion times to a minimum and produce completion rates superior to the current ones.

The management literature contains little discussion of completion times. Ibrahim (1980) attributed unduly long completion times to the imposition of excessive standards often for ulterior motives and inadequate supervision. Hunt Ogden, (1993) suggested that up to 50% of students fail to complete their dissertation despite having completed their course work. Factors contributing to completion rates are more widely discussed. Schroder and King (forthcoming 2002) cite Garcia, Mallott and Brethower (1988) who reported an experiment with graduate students that involved a series of incentives for performance but importantly also involved regular meetings with their supervisor. These students made better progress on their dissertations. In general, the evidence seems to support the view that attention to process does, in fact, improve completion rates and times (Blanton, 1983; Pearson, 1996; Acker, Hill and Black, 1994). Schroder and King suggested that the "technical rationality" model provides the structured processes required for successful completion. The current project has a formal process of group and individual meetings. Agendas are set, minutes of group meetings are kept and circulated and there are regular reflection cycles around the learning of the group. In effect, the group replicates the learning processes used in their organizational learning in their own learning.

A universal theme in the literature is the contribution of the quality of the supervision and the relationship between supervisor and student. Holdaway (1996) drew data from Australia, Canada and the United Kingdom and made recommendations for institutional support, programme administration, student organization, data gathering, funding, research, and supervision. Haksever; and Manisali; (2001) reviewed the UK literature and concluded that high non-completion rates were a result of deficiencies in the supervision received and highlighted the importance of student expectations. Their UK study on engineering students showed that more than half of the respondents were unhappy with the supervision they received. Wright and Lodwick (1989) found similar results in a study of research students. Pole (1997) demonstrated the importance of student expectations in the assessment of the student/supervisor relationship. Kam, (1997) examined the impact of dependency on the research supervision process and suggested a range of characteristics to be considered including power dynamic (see also Hammick, and Acker (1998), Harrow and Loewenthal (1992)).

Buckley and Hooley (1988) also identified the quality of supervision as the single most important problem for PhD students. Hockey (1995) identified the pastoral dimension of supervision as having the potential to create detrimental conditions in which supervisors become too emotionally involved with their students. Dong (1996) concluded that the advisor's cross-cultural awareness affected research outcomes. Rudd (1987) identified research culture as a source of conflict between student and supervisor. Over (1990) examined the impact of supervisor gender on publication rates while Hammick and Acker (1998) suggested gender might affect the knowledge flow and power dynamics in undergraduate research.

The structure of the support and supervision of the Monash group is designed to ameliorate the impact of a sole supervisor-student relationship. While each student meets regularly with both the supervisors and co-supervisors are encouraged to attend group meetings, a significant proportion of the support, advice and direction that each student receives, comes from the other students in the PhD cohort. The high level of cohesion in this group is based on a common academic background in Systems theory, the experience of having worked together during the course of the MOS programme and the experience of the learning group itself pioneering AR within the group. Nonetheless, it is important for students to be testing their work in the wider academic community. To date, five students have presented double blind refereed papers at the ANZSYS conference in Perth in 2001 and four will present double blind reviewed papers for the QIK conference in Malaysia in 2002.

In addition to the support provided by the learning group, each student is working within their own organisation where the AR project has been designed into their job specifications. This means that their project is an integral part of their professional work life, and that they have a sponsor and work colleagues inside the organisation who are interested in, and working on, the project. This provides a significant reference base for the research projects outside that which the university already provides. This dual support system of university and workplace effectively doubles the infrastructure of expectations and support systems for the students.

While the process of supervision generally focuses on the technical aspects of the research, the management of the supervision process and the interaction between student and supervisor requires significant attention. In the Monash programme, the students work at two recursive levels.

- The first level is one where students work together in the university context and have the role of co-researchers with the other members of the group with the goal of developing a coherent AR methodology for working in business. A long-term goal (of the supervisor) is that this group, upon graduation, will then supervise similar groups moving into PhD programmes. This university-based group is primarily concerned about AR methodology and uses the principles of AR and reflection as the basis for its work.
- The second level is where the students work in their organisation. Here the emphasis is on collaboration with their work group rather than the co-research of the university group. The principles of AR are the same at both levels.

Some comments on the importance of the group:

The group gives purpose and reason. I respect comment and criticism (something I do not handle as readily in the real world) because I respect the individuals concerned. The diversity of the group, in age, gender, specific interests, qualifications, methodology contributes a common philosophy which gives respect, respect means feedback (either negative or positive) is considered seriously - reiterated into individual projects.

The cohort is a community of practice and interest in the belief that the way you do things well with people in organisations is by AR. The group provides a shared space where I can come and hold conversations with like minded people, undertaking different projects but using a like methodology. So there are common principles and processes and diversity in content.

Peer support through caring (both personal and academic) and sharing. Opportunity to share, critique and reflect on experiences with any aspect of the research process, preparing of papers etc. with a group of like minded but different individuals.

The group provides "critical friends" and is where you are not doubted but where people are critically reflective.

It is important to emphasize that the university-based group of co-researchers effectively spreads a significant aspect of the supervision work amongst the students themselves. It is important also to re-emphasize that the students are mature age, highly experienced in their organizational context and have already completed one AR project at Masters level. Consequently, this group has a depth of experience that may not be matched in a cohort of post-Honours PhD students and it is this depth of experience that plays a significant role in the mutual support provided by the group.

THE CASE FOR AR

Krugman, and Andrews (1991) argued that adopting a Newtonian outlook, common in the hard sciences and emphasising simplicity, uniformity, predicability, and control, caused an excessive simplification of the conditions and transactions present in teaching, learning, and research. The Monash group seeks to use the theoretical knowledge gained at Masters level and to balance the needs for rigorous and methodical data analysis with the needs to produce action outcomes in organizations. Working within the tensions created by this will produce richer results both in terms of research and organizational outcomes. Pearson's (1996) discussion of Australian PhD supervision practices suggested students be introduced to the professional practice of research and scholarship, with an aim of their becoming independent practitioners.

The goal of developing the practitioner-scholar is primary in this project. The belief is that practice without theory is ultimately doomed to repetitious failure and that theory unproven by practice remains sterile and meaningless. D'Onofrio (1993) suggested that the traditional expert/novice model was not appropriate for established professionals. The learning group is based on the concept of co-researcher all of whom are "first among equals"

Hays-Thomas, (2001) examined the relationship between cohorts of research students and commented on an ethical question concerning the recruitment of students into a field that can employ only a limited number of doctoral practitioners. This would not be a problem with the AR model, as the students would normally need to be employed to be able to undertake the projects.

Little has been reported on supervision of PhDs by AR in business. Taylor and Dawson (1997) reported on emancipatory AR and the collaborative research role in a situation of conflict between student and supervisor. Reason and Marshall (2001) discuss their work supervising students by emphasising the psychodynamic aspects of supervision. The long lead-time into the PhD at Monash has meant that the students have had sufficient experience to make an informed decision about the relationship with the supervisor.

It is important also to note that there was a large number of students who had similar experiences at Masters level who did not continue on to PhD. for a large number of reasons, one of which could well have been the prospect of a long relationship with supervisor and learning group. In any event, it is clear that all graduates of the MOS were in a position to make an informed decision on the choice of supervisor thereby lessening the likelihood of problems during the candidature

CONCLUSION

The Monash project is only in its second year. Its aims are summed up by Senge and Scharmer (2001:240):

- Research: a disciplined approach to discovery and understanding, with the commitment to share what is learned
- Capacity building: enhancing people's awareness and capabilities, individually and collectively, to produce results they really care about
- Practice: people working together to achieve practical outcomes

While the project is small, it has the potential to develop into a model, which offers a new strategic direction for the business facilities. Its ultimate success will rest, not on completion times and rates, but on the extent to which we are able to learn from the experience of those involved in the project.

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