Beginning Teachers becoming Professionals through Action Research

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ABSTRACT: This paper describes the conduct of, and acquired understandings from, a study designed to promote the professional growth of a group of beginning primary school teachers through participatory action research. The beginning teachers collaborated with university academic staff during the design and conduct of the study. A key component of the study was the formation of action research cells of participating teachers with each group focusing on particular aspects of teaching, for example, assessment, catering for gifted and talented students, and inclusivity in the classroom teaching program. The overall findings from the study, from the view of the university researchers, are presented and reflected upon in this paper. The implications of using action research for the professional growth of beginning teachers are also discussed.

Introduction

The first year of teaching is an important phase in any teacher's professional growth because the school and classroom experiences of beginning teachers may either catalyse or inhibit a lasting commitment to effective teaching. Successful early experiences may contribute to a positive sense of self-efficacy and thereby instil confidence to undertake stress-inducing tasks such as the planning and implementation of teaching programs and grappling with issues such as assessment and reporting, and classroom management. The lack of support given to teachers in many curriculum areas may mean that experiencing success in the induction year is problematical. Therefore, it is important that teacher educators examine ways of providing support for beginning teachers in order to foster their professional growth so that they can acquire the expertise and confidence to be effective teachers of all curriculum areas, in the long term.

The professional growth of beginning teachers

Researchers have described the professional growth of any beginning teacher in terms of states of enculturation into the school and the classroom. For example, Katz (1972) described four stages of pre-school teacher development: survival, consolidation, renewal and maturity, suggesting that the first two stages characterised the initial two or three years of teaching. Katz indicated that the survival stage was distinguished by the teacher's self interest and self concern, for instance, getting through the day and planning for a short period of time. In the consolidation stage, concerns progressed beyond self towards concerns for students.

Fuller (1969) described three major phases in teacher growth: pre-teaching, or a non concerns phase; an early teaching phase characterised by concerns for self; and a late teaching phase, characterised by concerns for students. Fuller and Bown (1975) revised this model to three stages of concerns encompassing an inservice teacher's development. The stages were characterised by initial concerns for survival, followed by concerns about the teaching situation (for example, content, methods, and materials), and progressing to concerns about the students (for example, students' learning and emotional needs). Other models for teacher professional growth have been reported in the literature, for example, Vonk (1983) and Burden (1980).

More recently, Karge, Sandlin, and Young (1993), in a study of beginning elementary school teachers, provided some insights into the stages of concern that beginning teachers might proceed through from the commencement of teaching. They identified three stages of concerns: (a) *self* - a concern about themselves and their own survival, (b) *task* - a concern about tasks and actual teaching duties, and (c) *impact* - a concern about their ability to be successful with the teaching-learning process and students. Karge et al. noted a change in the focus of beginning teachers' concerns from concerns about self to concerns about tasks in the first year of teaching.

One common feature of these studies was the identification of the initial survival stage of beginning teaching with its focus on practical problems and finding solutions to those problems. Veenman (1984), in a review and analysis of research studies from the United States, Europe, Australia, and Canada, identified a number of these problem areas. They included problems related to classroom management and discipline, how to motivate students, dealing with individual differences, dealing with problems of individual students, assessing students' work, relations with parents, organisation of class work, insufficient materials and supplies, and a heavy teaching load resulting in insufficient preparation time. When asked to provide suggestions about the most important topics for inclusion in support programs to help them overcome difficulties, beginning teachers nominated, for example, how to deal with learning and behaviour problems;

classroom management and discipline; and how to plan curriculum programs (Board of Teacher Education, Queensland, 1981). These suggestions were in accord with the findings of Veenman (1984), Katz (1972), Karge et al. (1993) and Brock and Grady (1996).

A second common feature of teachers' professional growth identified in the literature was progression towards the establishment of a more reflective, proactive view of teaching and the teacher's role (for example, Fuller & Bown, 1975; Karge et al., 1993). As part of their professional growth, Bartell (1990) maintained that beginning teachers should develop a framework for making decisions about what is, or what is not, useful or effective in their own practice. Although knowledge gained through experience is important, the development of recipe-type or even craft knowledge is insufficient. The teacher has to draw on a body of systematic knowledge requiring personal professional development initiatives in order to acquire a more comprehensive and reflective understanding of practice (Houle, 1980). Because knowledge-based skills are exercised in non-control situations, it is essential for the professional to have the freedom to make his or her own judgements with regard to appropriate practice.

Becoming professional assumes that certain behaviours, beliefs and actions will ensue as beginning teachers further their experiences. Carr and Kemmis (1983) describe some of these behaviours, actions and beliefs in the following way:

> ...that the methods and procedures employed by members of the profession are based on theoretical knowledge and research; that the members of the profession have an over-riding commitment to the well-being of their clients; and that individually and collectively, the members of the profession reserve the right to make autonomous and independent judgements, free from external non-professional controls and constraints, about the nature of particular practices or courses of action to be adopted in any particular situation. (pp 189 - 190)

Reflectivity, inquiry and a disposition to examine their practices and beliefs to enhance their knowledge, and to be prepared to question practice, are also desirable attributes of an effective teacher. These practices may be problematic in the face of the social structures of many schools into which beginning teachers are assimilated (Fuller & Bown, 1975). Therefore, beginning teacher support programs must identify the practical, instructional and non-instructional needs of beginning teachers (Runyan, 1991) and empower them to take control of their professional growth through active reflection-in-action and reflection-on-action (Schön, 1987). Do typical support programs for beginning teachers meet these suggested criteria? In order to provide a response to this question, the characteristics of typical support programs for beginning teachers are examined in the following section.

Support programs for first year teachers

A number of different support programs for beginning teachers have been described in the literature. For example, induction programs based on a *teacher-tutor* model, where both the beginning teacher and tutor have reduced teaching loads, have been recommended for some time (The James Report, 1972). In this model, the tutor would arrange inservice and provide professional help for beginning teachers. The costs for such a program were exorbitant, and beginning teachers expressed strong concerns about their professional status during the period they were on a reduced teaching load.

Mentor programs, similar to the teacher-tutor model have been initiated elsewhere, for instance, the *Indiana Mentor Internship Program*, *California Mentor Teacher Program*, *Mentor Teacher Internship Program*, and the *Kansas Internship Program*. In the mentor model,

beginning teachers were assigned to expert teachers who provided support and advice (professional, emotional, or both), and organised professional development. Inherent in the mentor model is the notion that experienced teachers, who are chosen as mentors, possess many professional and personal qualities, including the ability to provide information, ideas, assistance and support, adopt a stance of co-thinker, and maintain a balance between sharing personal knowledge of good teaching and fostering the beginning teacher's construction of his or her own views about teaching (Feiman-Nemser, 1992). Eight categories of mentoring roles were discussed by Wildman, Magliaro, Niles, and Niles (1992) ranging from the role of mediator to the role of offering direct support in order to encourage reflection.

A related mentor model, a *buddy system* was trialed in Idaho (Klug, 1988), where mentors provided assistance on request. This was compared with another model, the *Induction Team*, where a team, comprising an administrator, a staff member from a higher education institution, and a mentor worked with a beginning teacher. The findings suggested that the participants preferred the latter, more structured approach.

Other induction programs have included university input, where university staff provided expertise, support and advice, and ran inservice courses (e.g., Cheney, Krajewski, & Combs, 1992; Dianda & Quartz, 1995; Reiman, McNair, McGee, & Hines, 1988). Some of these partnership programs associated with universities incorporated reflective practice or action research at both preservice and inservice levels (McLaughlin & Hanifin, 1994).

The common features of support programs for beginning teachers in the United States, United Kingdom, Australia and New Zealand, include one or more of the following - provision of printed materials about employment conditions and school regulations; orientation visits to schools before taking up duty; release time from classes; group meetings among beginning teachers for emotional support; consultations with experienced teachers; and team teaching (Veenman, 1984).

It should be noted that, in the 1980s in Australia, and even the early 1990s, fewer than half of the beginning teachers had participated in induction programs (Davis, 1988; Denham, 1992), and many of the recommended forms of assistance were not being offered (Board of Teacher Registration, 1991). Beginning teachers reported that advice from other classroom teachers and the principal, and consulting textbooks, were the most tangible forms of assistance they had experienced.

It can be argued that all support programs cater for the practical, instructional and non-instructional needs of beginning teachers. However, it appears that very few programs have a focus on empowering beginning teachers to take control of their own professional growth. We agree with the comments of Bartell (1990) about the need for beginning teachers to seek knowledge and make decisions for their own settings, the empowerment needs of beginning teachers (Runyan, 1991), and the suggestion of Sullivan and Leder (1991) that assisting beginning teachers to reflect on their practice would influence the direction of their teaching. We contend that the conduct of action research by beginning teachers represents a way of fostering their professional growth by empowering them to seek deep understandings of practice, assert control over their own situation, develop decision making processes designed to enhance the effectiveness of their own teaching, and encourage critical reflection on practice. We also believe that the action research should be conducted in a social context that is wider than the school itself, there should be collaborative sharing of ideas for action research and findings from the action research, and action research will lead to an understanding of the need for beginning teachers to examine their own knowledge, skills and values by conducting research on themselves.

Aims of the study

The study reported in this paper was an investigation of a collaborative partnership among a group of first year teachers and university academics designed to establish and examine supportive structures for their induction into primary school teaching. Specifically, the aim of the study was to develop, trial and evaluate participatory action research as a way of supporting the transition of beginning teachers from university study into the profession, and enhancing their professional growth during the first year of teaching. We suggest that the engagement of beginning teachers in action research can result in experiences that will gradually empower them by enabling them to analyse critically the effectiveness of their own teaching, and encourage reflection on practice.

Methodology and design of the study

Overall Methodology

The methodology adopted in this study was participatory action research (PAR). PAR has been defined by Whyte, Greenwood, and Lazes (1991, p. 20) as "some of the people in the organisation or community under study participate actively with the professional researcher throughout the research process from the initial design to the final presentation of results and discussion of their action implications." Further, Argyris and Schön (1991, p. 86) suggest that PAR "aims at creating an environment in which participants give and get valid information, make free and informed choices (including the choice to participate), and generate internal commitment to the results of their inquiry."

It is clear, from the research findings on the professional growth of beginning teachers, that initially they are conscious of survival and focus on themselves. They have to come to grips with basic problems in the classroom and the school such as planning learning experiences, searching for resources, classroom management, and coping with a heavy teaching load. How can we help beginning teachers overcome a sense of isolation, perhaps a lack of control over various events and situations, and any feelings of professional inadequacy? How can we foster their professional growth and empower them, so that they assert control over their own thinking and actions, and become critically reflective and proactive teachers? PAR does present a way forward in initiating and sustaining the professional growth of beginning teachers.

Participatory action research is a *social* activity in that "it deliberately explores the relationship between the realms of the individual and the social" (Kemmis & Wilkinson, 1998, p.23). It recognises that the individual and the social are inextricably linked together (Habermas, 1992), and that the processes of individualisation and socialisation continue to shape individuals and social relationships in all the settings in which we find ourselves.

PAR is *participatory* in that "it engages people in examining their knowledge (understandings, skills and values) and interpretive categories (the ways they interpret themselves and their action in the social and material world)" (Kemmis & Wilkinson, 1998, p. 23). It is also participatory in the sense that people can only do action research "on" themselves, individually or collectively. It is not research done "on" others. Further, PAR is also *collaborative* in that "action researchers aim to work together in reconstructing their social interactions by reconstructing the acts that constitute them. It is a research done "with others" (Kemmis & Wilkinson, 1998, p. 23).

Beginning teachers may eventually become empowered to assert control over their thinking and actions because PAR is *emancipatory* in that "It is a process in which people explore the ways their practices are shaped and constrained by wider social (cultural,

economic and political) structures, and consider whether they can intervene to release themselves from these constraints" (Kemmis & Wilkinson, 1998, p. 24). PAR is also *critical* because "It is a process in which people deliberately set out to contest and to reconstitute irrational, unproductive (or inefficient), unjust, and/or unsatisfying (alienating) ways of interpreting and describing their world (language/discourses), ways of working (work), and ways of relating to others (power)." Finally PAR is *recursive (reflexive, dialectical)* in that:

> It aims to help people to investigate reality in order to change it (Fals Borda, 1979), and to change reality in order to investigate it, in particular by changing their practices through a spiral of cycles of critical and self-critical action and reflection, as a deliberate social process designed to help them learn more about (and theorise) their practices, their knowledge of their practices, the social structures which constrain their practices, and the social media in which their practices are expressed and realised. It is a process of learning by doing - and learning with others by changing the ways they interact in a shared social world. (Kemmis & Wilkinson, 1998, p. 24).

Based on the attributes of PAR, defined and elaborated upon by Kemmis and Wilkinson (1998) described above, it is not unreasonable to assume that beginning teachers may benefit from engagement in participatory action research.

Participants

The participants in this study were beginning teachers and four university academic staff. Twenty-one potential participants who had been involved in previous programs with the academics were approached. The potential participants had participated in either one or two projects with the university staff: the Women Trainee Teachers in Mathematics study (Atweh, Kyle, & Burnett, 1996; Atweh & Burnett, 1997), and/or worked as mentors in a Peer Assisted Study Sessions (PASS) program established for students enrolled in a core science content subject (Watters & Ginns, 1997), during their preservice course.

Thirteen female, beginning teachers expressed interest in the study, however, before commencing teaching, four decided not to participate because of their concerns related to overall work commitments at the start of the teaching year. Of the nine remaining in the study, eight teachers commenced teaching at the beginning of the school year and one teacher commenced teaching at the mid-point of the same school year. All were recent graduates from a four-year Bachelor of Education (Primary) course at a large university in Brisbane, Queensland. They joined the study in the belief that it might benefit their teaching in general. The four academic staff (one female; three males) are experienced teacher educators who have an interest in investigating the transition of preservice teachers from university life into full time teaching in the classroom.

The participant teachers were invited to commit themselves to collaborative work with each other and with staff from the university in action research projects within their schools. Five of the beginning teachers were located in Queensland schools, and three worked interstate - two in the Northern Territory and one in New South Wales. Of the five located in Queensland, three were appointed to distant country schools, and two were appointed to outer suburban schools in Brisbane. Hence, most of the beginning teachers were separated from each other and the university staff by two to three thousand kilometres.

The network of participation, collaboration and interaction established by negotiation among the participants is represented in Figure 1, and explained in the following discussion.
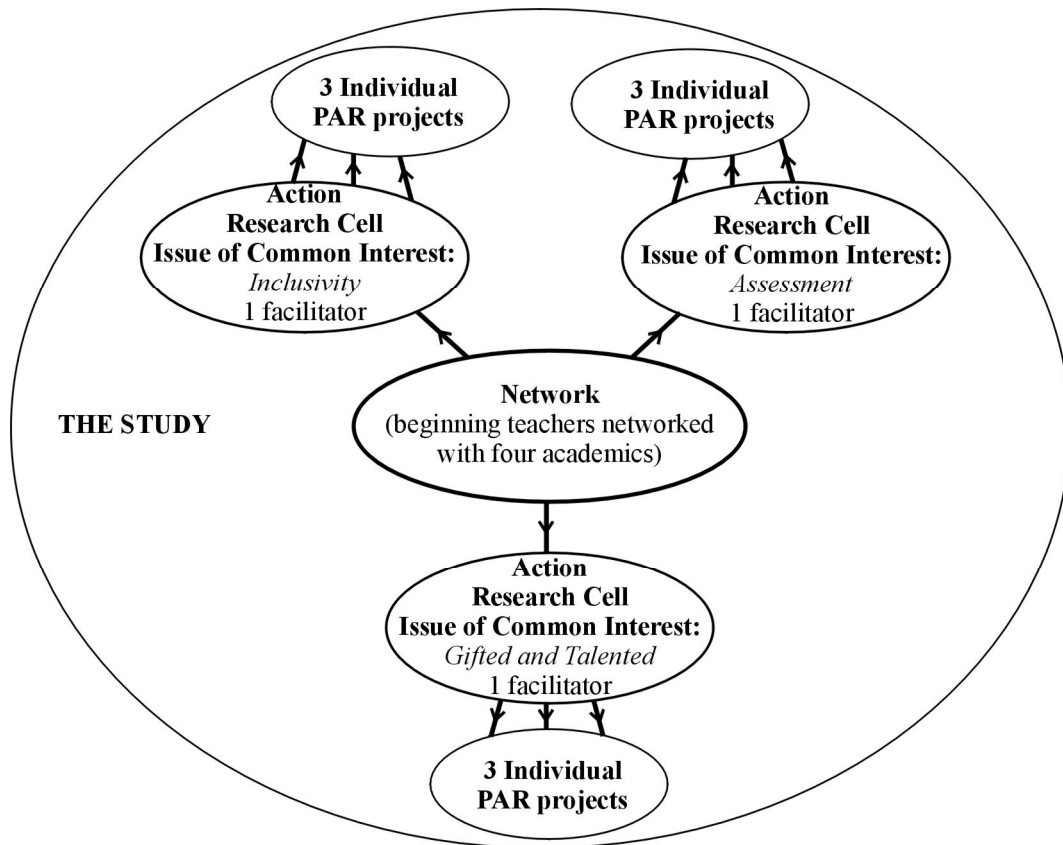
Figure 1 The Study Framework

All participants formed a *network* of people and action research projects. Within the network, three *action research cells* were formed based on issues of common interest to the participants. One member of the university research team was associated with each action research cell as a facilitator of ideas and discussion. Within each action research cell, each beginning teacher conducted one or more action research project(s) of relevance to the particular issue, for example, inclusivity. With the guidance of the facilitator, each teacher shared her findings with the others in the same action research cell to provide a more comprehensive understanding of the respective issue of common interest. The collective understandings that emerged from each action research cell were then used to inform the network of all participants. From time to time the expertise of more experienced people was called upon to assist in the discussions within the network and action research cells.

Procedures and data sources

A key aspect of this study was the formation of a network among the beginning teachers, staff from the University and, on ad hoc occasions, some more experienced teachers. Being an action research study, the exact procedures used emerged from the various discussions at network and action research cell meetings and were based primarily on the needs of the teachers. Network meetings were conducted face-to-face, by telephone conferencing, or a combination of both.

The first network meeting, held before the commencement of the school year, allowed participants to identify their personal aims and negotiate the general operation of the study, and, for the beginning teachers, acquire some experience in using email as a way of communicating

with all participants. The attributes of participatory action research were discussed and elaborated upon, and issues of common interest began to emerge by the end of the meeting.

The second network meeting, held at the end of the first month of teaching, provided teachers with an opportunity to discuss and share their early experiences in their new schools, as well as consider and reflect on their initial plans for action research in their own classrooms. Issues of common interest continued to emerge and tentative groupings of beginning teachers into action research cells began to form. The university staff acted as facilitators for connecting teachers with similar needs and interests. The attributes of action research were reiterated, as well as at subsequent network and action research cell meetings.

During the third network meeting, held after the completion of the first term of teaching, three groups sharing a common interest, or action research cells, became firmly established. One focused on gifted and talented programs for students (three teachers), another on inclusivity (three teachers), and the third one on assessment in lower primary school (three teachers).

Regular meetings of the action research cells were conducted at different times in the year face-to-face, and by telephone conferencing. Other forms of communication, such as email and surface mail were used to maintain links between, and within, action research cells, the respective facilitators, and the network. The preferred modes of communication varied from one cell to another depending on the teachers' needs and locations. The action research cell meetings provided opportunities for the participants to share their experiences, report on their actions, exchange ideas, and interact with the facilitator, thus contributing to knowledge and understanding of the shared issue. The network and action research cell meetings were audiotaped and transcribed. Summaries of the network and action research cell meetings were prepared by the respective facilitators.

An important feature of the planned study was that all participants would be provided with email facilities thus providing efficient channels of communication, one to one, and one to many. However, it eventuated that not all teachers had personal access to email, because of the distance of the schools from internet providers. Some schools had in-house computer facilities only. Where email links were established, all correspondence was archived as data for the study.

All participants were requested to maintain a journal of individual reflections throughout the study. The beginning teachers provided on-going evaluation comments on various aspects of their own action research project, other aspects of the study, and reflections on their teaching during the year, as part of their individual journal reflections. In addition, the individual action research cells worked towards producing final reports of their own action research projects and a collective overview of the shared issue.

Data analysis

Two levels of analysis were conducted on the study data. The first level of analysis focused on the individual understandings acquired by the participating teachers as they conducted their own action research project in the classroom and contributed to the issue of common interest within their respective action research cells. The teachers, in consultation with the facilitators conducted the analysis of the data from the individual journal reflections. Based on the individual analyses, each action research cell produced a final report describing the projects and presenting a collective overview of the issue of common interest (Atweh, Harris, Garrett, Pitman, & Sitton, 1997; Fitzgerald, Moman, Suhrbier, & Ginns, 1997; Watters, Andrew, Henderson, & George, 1997).

The university researchers conducted the second level of analysis, used in the preparation of this paper. The analysis took into account the data from the network meetings, the action research cell meetings, the beginning teachers' reflections, data from the first level of analysis,

and the reflections of the university team on their experiences as they participated in the project. Qualitative techniques, based on the methods of grounded research (Strauss & Corbin, 1990), were used to examine the data for similarities and differences in the beginning teachers' experiences and to isolate experiences that could be construed as fostering their professional growth during the first year of teaching. The techniques also enabled the university researchers to acquire insights into what the teachers were thinking about the study and their respective action research projects, the aspects of their practice being developed as a result of involvement in the study, and to identify the common needs of these teachers. The experiences from this study allowed the university researchers to evaluate the use of participatory action research to enhance the professional growth of beginning teachers by engaging them in individual action research projects as part of a larger collaborative, participatory network of fellow beginning teachers and university academics.

Analysis and reflections

The use of action research with beginning teachers

The definitions and attributes of participatory action research described by Whyte et al. (1991) and Kemmis and Wilkinson (1998) provide a framework for reflecting upon the completed study and upon the feasibility of using action research as a way of immersing beginning teachers into the profession and enhancing their professional growth.

The action research was *participatory* in that the beginning teachers did participate in its design, conduct and analysis. This study was planned to allow the teachers the greatest input in determining the issues to be pursued as well as the methodology of its conduct thus allowing them to gradually claim ownership of the study. The planning for gradual ownership by the teachers was reflected in the conferencing as a whole group in networks, the formation of action research cells, and the provision of opportunities for extensive communication between all members of the network, the action research cells, and individuals.

However, the participation by the teachers had its limitations and the participation of the different players was not necessarily equal. For example, the university researchers, as holders of a research grant to conduct the research, and as more experienced action researchers, had outlined the general structure of the study at the early stages of its implementation. Although the plans were not adhered to rigorously, they determined to a large extent the structure of the study.

Prior to the study, the teachers were not experienced in participating in research projects in which they chose the issues to research and the management of such research. Although the principles of participatory action research were discussed at length with the teachers during the first few network meetings, at times, the teachers felt some unease. They did not know clearly what they wanted to investigate at the classroom level, and what were the expectations of them as a result of being a part of the study. However, the journal reflections of each facilitator revealed that the situation did gradually change at the later stages of the study where teachers were taking more initiative in their own action research projects. For example, Martha reported several action research cycles during the year in which she investigated the use of a variety of assessment methods to probe students' understandings of science concepts. Her journal entries revealed an enhanced ability to analyse critically her findings and propose further action research from those findings.

The relationships between the beginning teachers and university staff may have been an important issue that influenced full participation and immersion in the study. The

beginning teachers' experiences with the university staff had changed from a student-teacher relationship to a co-researcher relationship within a very short period of time. Arguably, the initial expectation of some of the teachers in joining the study was that they would receive continual support from some of their former lecturers during the first year of teaching. Some may have expected us to act as experts and mentors. In contrast, the attributes of action research imply strongly that reflection on practice is the process to use for improving practice, rather than expert advice. This aspect was openly discussed in the first two network meetings. Further, in our deliberations with the action research cells, we were careful to refrain from providing advice about teaching practice. When we did provide advice, it was done in the context of the different players attempting to negotiate a problem, and our advice was given along with advice from the other participants.

While the teachers' views of university staff as being mainly higher authorities and sources of learning about teaching practice may have changed over time, the same could not be said in reference to their knowledge of action research principles and the conduct of the study. For example, our journal reflections reveal that we discussed the principles of participatory action research at every opportunity, and organisational records reveal that often the teachers left the calls for meetings and documentation of the study to the university staff. Gail's reflections at the end of the year confirm our observations, "Even though I was not reliable with sending information and in communicating with the project (study) coordinators, I felt that through thinking about it and occasionally involving myself in debates about my practices, I did improve."

These difficulties in obtaining true participation, we argue, were not unique to this study. It is a potential problem of all funded action research planned with the assistance of external facilitators. Also, these observations do not imply that genuine action research work among partners with different experience is not possible. In discussing the problems of participation in research with the profession, Grundy (1998) examined the issue of "parity of esteem" where the different expertise of the various participants was brought to bear in the design and conduct of the project. Grundy suggested that participants should be aware of these limitations to equal participation, and they should negotiate the roles and expectations very early in the project, and the negotiations should be honest, open and continual. A clear distinction should be made as to the variants and constraints of the study and to the roles of the different partners and their expectations of each other. Based on our records of meetings and our reflections, we consider that our interactions with the beginning teachers throughout the study met these criteria.

The different players were involved in the enhancement of the practice of teaching, and worked together to develop individual and collective understanding and improvement of the practice, thus ensuring that the action research was *collaborative*. The question that the study designers had to face was who were the different players in the process of transition of teachers? Naturally, the problems associated with the transition and their solutions were dependent on people in addition to the beginning teachers themselves. The crucial roles of the school administration, other staff and other members of the school community can not be overemphasised. Should they have been participants in the study as well? It is conceivable that the action research cells could have been formed around the individual schools with the participation of the school administrators, and other more experienced teachers. We are confident that such an organisation would have been useful as well. However, in this study, we decided to work with the teachers from the same preservice cohort of the university and leave the nurturing of contact with other players in the respective school and local community to the teachers themselves.

The organisation adopted in this study fostered collaboration. The beginning teachers developed, in the first network meeting, a sense of rapport with each other, being from the same cohort of a preservice teacher education program. Many knew each other previously, and in cases where they did not, they established easily a sense of common interest because of their similar backgrounds. All participants asked each other about their placements for the year and about their plans. In addition, when the need arose for the teachers to provide advice to each other, for example, at the second network meeting, the common knowledge of resources and context covered in their preservice course was helpful. With the teachers at remote locations in attendance via teleconferencing, suggestions and ideas were volunteered for each other's consideration. Undoubtedly the study developed a sense of community between the teachers, confirmed by the comments of Martha, "At this early stage, one of the most helpful things for me to do was to speak with other beginning teachers about our fears and concerns. It was also a great opportunity to exchange units of work we had written during practical experience, or at university."

The formation of support groups in this study, in the form of a network of participants, and action research cells, outside the individual schools also fostered collaboration. The beginning teacher could be open about the problems experienced without fear of reprisal within the school or creating problems for the school. Given the opportunities to talk to other beginning teachers located at other schools and discovering what was available, or possible, in other contexts, meant that they could be more analytical and critical about what was happening in their own schools. Beginning teachers often have little experience with other contexts, however, working with colleagues from other schools gave these teachers the opportunity to reflect on critical factors within their own environment in order to explain it to others.

By agreeing to participate in the study, the beginning teachers indicated that they had a *social* dimension to their expectations of the study. There was an interest in the relationship between the individual and the *social*, and looking beyond the self to relationships with other professionals. Commenting in her final journal entry, Leanne felt that this attribute of the study was important to her:

> In my experiences in professional development, the teacher never has the opportunity to talk about what successful programs are running in their classrooms and what is unsuccessful. The positive aspect that this project (study) offers is that it allows the teacher to share with other professionals some of their faults and difficulties without being persecuted or seen as incompetent. Writing about your experiences through action research and allowing the teacher to work through their own difficulties allows the teacher to reflect upon their teaching practices more critically. In my situation, this is not something that is encouraged when working in the teaching profession.

Data from the network meetings showed that the teachers were interested in the generation of knowledge and understandings related to assisting teachers in the process of transition into the profession, and initiating and sustaining the professional growth of beginning teachers. They also indicated a desire to help the university improve preservice teacher education preparation for the first year of teaching through their participation. Needless to say, they also looked for, and were encouraged to do so, what benefit they, individually, could gain from the exercise.

This study allowed the teachers to acquire a deeper awareness of the social context of their teaching. In one action research cell, the participating teachers decided to write a situational analysis of their respective context to share with each other. Their writings showed a deep insight and knowledge of the social background of their students, the ethos of the

school, and limitations to their practice. For example, in her situational analysis, Leanne, whose appointment was in an Aboriginal School, noted the Aboriginal worldview included some mathematical concepts which were vastly different from, and more complex than, non-Aboriginal concepts of time, measurement and space. Gail, on the other hand identified her tendency to teach in the same way as she has been taught in her primary years as a major hindrance to her teaching. Naturally, identifying these deep-rooted constraints to effective teaching and learning was much easier than coping with them. However, both teachers demonstrated some progress in their efforts to deal with these difficulties in the life of the study. At the end of the year, Leanne noted that she felt more accepted by the Aboriginal community population, which arguably, is a first step towards understanding her students' traditional worldview. Gail noted that she had gained more confidence in capitalising on students' every day life experiences in order to make her teaching more meaningful. The teachers raised both issues in their action research cell meetings.

Participatory action research attempts to empower teachers to take control of improving their own practice. The practice in which the beginning teachers were involved could be seen as a part of a system that, at times, acted and was structured contrary to their interests. The individual reports of the action research cells suggested that some aspects of the PAR attributes, *critical* and *emancipatory*, were experienced by a few teachers in the study, however, we felt that, in general, these two attributes were not experienced at all in the three action research cells. Many of the teachers' concerns continued to be more technical rather than emancipatory, for example, Leanne believed that teachers in this study "…needed to have more access to university resources, materials and people." While the teachers were critical of some of the conditions at their schools, they were not always able to articulate these criticisms in terms of structural and personal conflicts of power.

Was the action research *reflexive*, or *recursive*, for the beginning teachers? Teachers enter the profession with various theoretical knowledge bases acquired during their preservice education courses and with limited experience in the practice of professional teaching. The learning curve in the first few years of teaching is naturally very steep. We argue that developing the practice of reflection on their practice can assist teachers to integrate their theoretical knowledge with their practice. We suggest that the teachers' writings about their practice and action research projects in this study, and used as evidence in the paper, have demonstrated their professional growth towards the achievement of this integration.

Challenges and constraints

By the nature and scope of the study some of our understandings evolved out of the challenges and constraints we encountered, which resulted in several compromises. The first challenge encountered related to the geographical distance separating most of the participants, and the resultant effects on communication. In one action research cell the members of the group were located across two states, hence the only means of rapid and direct contact was electronic, particularly when one of them received mail only once a week. Although it did not take the participants long to get used to teleconferences, the nature of such meetings prohibited important aspects of communication because they tended to be more structured and formal. For example, the usual protocols of politeness in talking on the telephone may have prevented more open debates of issues that might have arisen in face to face meetings. The efficiency of meetings may have been increased, but teleconferencing placed artificial constraints on the interactions among participants. Further, teleconferencing was an expensive way to meet causing, on some occasions, the termination of productive conferences to avoid exceeding time limits set because of the small amount of funding support received for the study.

Being at a distance from most of the teachers created constraints on how much we, as facilitators, could really understand their contexts without having visited them. This same difficulty was shared by teachers from the various schools as well, and was an inherent limitation affecting the functioning of the action research cells and the interactions with the facilitators. However, it was because of the isolation several of the beginning teachers experienced, that this study was very useful. From our journal data and transcripts of meetings, it was evident that the discussions at the network and action research cell meetings provided an atmosphere of mutual care and support for the teachers. Jody attested to this mutual support for teachers at a distance, in her journal, "Telephone conversations were beneficial. They enabled me to reflect on my teaching and I was given a few ideas to trial. It was good to be able to talk about my difficulties with my peers, to realise that many of my problems were not unique to my own experiences." The two teachers placed in isolated schools in the Northern Territory, reported, in network and action research cell meetings, that it took time for them to be accepted by the local school and parent communities. Hence, the support of the network of teachers and academics for these teachers was particularly important. One of the teachers, Gail noted that "through the project I was able to reflect on my own methods of teaching and the project assisted in developing my confidence and raised my awareness of the curriculum and suitable inclusive teaching methods."

There were other challenges associated with communication in the action research cells and within the network. At the planning stages of the study we expected that every participant would be connected through email, however, this expectation was only partially fulfilled. Those teachers who had email facilities often had to share them with many other teachers in the schools, thus limiting their access. Other teachers and/or schools did not have the software or hardware to access the internet and email. We suggest that access was only part of the problem with email. An email awareness needs to develop before people use email confidently for regular communication and sharing of understandings, and problem solving. The culture of many schools, at which the teachers were working, had not incorporated email communication as a normal means of dialogue. Communication problems with some teachers were not confined to telephone, or email. For example, one teacher did not like receiving faxes from the other participants because of a lack of privacy at the school.

The competing demands on teachers' time also affected communications. For example, one action research cell, in which the members worked in Brisbane and environs, had difficulty arranging face to face meetings due to their busy work commitments. Leanne, a teacher in a remote area of the Northern Territory, provided her thoughts on the role of communication, which were representative of the conflict experienced by many teachers between work commitments and maintaining contact with others.

> There needed to be more communication among the participants. However, it is difficult to maintain contact and correspondence with other teachers in the group (action research cell) while starting a new job in a different environment. And trying to cope with that, is the most important issue with which to work. (Journal reflection)

First year teachers are always under pressure to meet commitments and satisfy the demands of their classes and schools. In certain ways each beginning teacher's decision to be part of an action research study and engagement in a classroom action research project was a commitment to carry the burden of additional responsibilities and activities. The additional responsibilities may have distracted the teachers' attention away from more immediate and urgent tasks. We noted that there were times when the study did not seem to be proceeding in the manner we had envisaged, particularly when the teachers were tardy in not sending information, or fulfilling the agreed action from the meetings. We often reflected on the possibility that they

saw this study and their classroom project as not-so-useful activities that they were participating in for our purposes only.

As discussed previously, the literature on beginning teachers indicates that the first year is a survival year (Karge et al., 1993; Katz, 1972; Fuller & Bown, 1975; Vonk, 1983; Burden, 1980). Were we being unfair to add to their responsibilities concerns about the gifted and talented, assessment, and inclusive curriculum? Was the involvement in this study justified? Were the individual and collective efforts, and the commitment of resources justified? It is worthwhile to note that all nine teachers who remained in the study after the end of the first term of school, continued for the remainder of the year. They all had the opportunity to leave the study, especially after seeing some of their colleagues doing so early on. They chose not do so. The journal reflections generated by the teachers showed that they all found such an activity useful and that they had learnt from it, thus enriching their knowledge about their classroom practice, their school life and about the use of action research. Two sample journal reflections are provided as follows:

> Engaging in the action research project ensured I focused on assessment practices. This subsequently affected, and I feel improved, my teaching practices. I found I began looking for more substantial indicators of children's understanding rather than simply asking children to "parrot" information. I would do this by asking children to give me more examples and make up their own stories about the topic. The action research project has enabled me to realise that assessment is an area of paramount importance and requires considerable planning. Although I still have much to learn in regards to assessment procedures I have begun to develop a range of skills and strategies which are appropriate to the lower grades of the school. Undoubtedly, I will continue to refine my assessment procedures throughout my entire teaching career using participatory action research. (Martha)

> This project has enabled me to be more critical in my teaching practices, such as, do the students understand this concept?, how do I make this concept relevant and easy for them to understand? If (an approach) does not work, I have learnt not to be negative, but to learn from my mistakes and try it again, but in a different way. I believe this is developing good teaching practices. (Leanne)

We also faced the challenge of accommodating the participants' understandings of the nature of the study and of action research. On several occasions the participants would ask the university researchers about what was the next stage in the process. Even though it appeared some of the teachers had taken responsibility for reflecting on their own practice, none of them had taken charge of the process. Guidance was expected from the university staff. In one sense the teachers had not assumed ownership completely of the process of participation and collaboration as a means of improving practice. The study, even though it might have been seen as useful and enjoyable, may have been peripheral to the main concerns of those teachers. Similarly, where our concerns may have been on the emancipatory attributes of action research and a critical understanding of practice, it seemed to us at times that the needs of the teachers were the more technical and practical needs for their day to day survival. Arguably, these needs are more urgent at the survival stage of a beginning teacher.

Conclusions

As university researchers we had a range of interests, commitment to, and understanding of action research. In our planning meetings we debated our practices and plans for our action research cells. Ultimately we worked independently as facilitators within our action research cells. Our actions within these cells were determined as much by our values and beliefs as by the needs and activities of the participating teachers. However, based on the evidence from the

findings discussed in the previous sections, we are more committed to the concept of participatory action research as a way immersing beginning teachers into the profession and fostering their professional growth at the end of the study than we were at the beginning. We believe the research findings indicate that the beginning teachers underwent professional development and change through involvement in the study. It is evident that the beginning teachers benefited greatly from the participatory, collaborative, social and reflexive aspects of PAR.

Other options for the induction of teachers into the profession are often based on transmission of expertise and top down power relationships. Further, the traditional induction methods tend to reproduce the profession, rather than use critical reflection that can lead to change, progress and reflection on practice. We contend that beginning teachers working collaboratively with each other in small action research cells, and in a larger network, and with university staff, has been a more empowering and enriching experience for them and more effective in addressing the concerns of the teachers themselves. We acknowledge that, at times, such activities should start small and address everyday life, the practical and even technical concerns of teachers. When teachers have developed confidence in their profession and have developed some collaborative and reflective skills, it is possible to advance their action research into more emancipatory concerns.

We suggest that the place to commence the development of teachers' understandings of action research is in preservice teacher education programs. Requiring students to engage in action research, in particular, in the final year of preservice programs, could play an important role in developing their awareness and understanding of, and immersion in, the culture of action research. These understandings acquired in the preservice program would provide an ideal platform for beginning teachers to conduct their own participatory action research projects in their own classrooms, thus furthering their professional growth. Therefore, a place must be found in preservice courses where students and university staff, working together, can have the time to develop coherent, collaboratively planned, acting and reflecting cycles through action research.

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