TEACHERS AS RESEARCHERS: RESEARCHERS AS TEACHERS? TOWARDS SUCCESSFUL EDUCATIONAL RESEARCH

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Abstract: The teacher research movement has sought to "... weave a research element into the expertise of teachers" (Nisbet, 2005: 43). Much has been done to achieve this aim. There is a considerable body of research which seeks to demonstrate to practicing and student teachers the value of participating in classroom research (for example, Bailey, 2001). The skills required of a teacher researcher have been enumerated (for example, Kincheloe, 2002), and there is a range of literature available to give practical guidance to teacher researchers (for example, Yates, 2004; Miller, 2005). This paper asks why there is not more evidence of teacher research impacting on practice. To consider this question, a number of relevant areas are examined, for example: social and political contexts; school cultures; and teachers' perceptions of their roles and personal efficacy. Factors within these areas may affect teachers' motivation to be involved in research. Practical actions to support teachers in becoming self-questioning, reflective and informed teacher researchers are identified. Inevitably, this development in the teachers' role impacts on the role of university based researchers and on the relationship between schools and universities.

Abstrak: Gerakan penyelidikan guru telah cuba mencantumkan unsur penyelidikan dalam kepakaran guru-guru (Nisbet, 2005: 43). Banyak perkara telah dilaksanakan untuk mencapai tujuan tersebut. Terdapat banyak hasil penyelidikan dan kajian yang menunjukkan kepentingan penyelidikan di bilik darjah untuk meningkatkan lagi kepakaran seorang guru dan bakal guru. Penyelidikan tersebut telah menjelaskan kemahiran-kemahiran yang seharusnya diperoleh seorang guru yang ingin melibatkan diri dalam penyelidikan di dalam bilik darjah. Artikel ini cuba mengetengahkan sebab-sebab mengapa tidak ada bukti yang konkrit tentang sumbangan hasil-hasil kajian tersebut kepada kegiatan guru. Untuk menimbangkan permasalahan ini, artikel ini telah meneliti aspek-aspek yang tertentu seperti kebudayaan sekolah, persepsi guru tentang peranan dan keefisienan kendiri mereka dan faktor-faktor yang mempengaruhi motivasi guru untuk melibatkan diri dalam penyelidikan. Artikel ini membuat beberapa cadangan untuk membantu guru memainkan peranan sebagai seorang penyelidik yang kritis dan reflektif. Penglibatan guru sebagai seorang penyelidik akan memberi kesan yang positif untuk mengeratkan lagi hubungan antara sekolah dan universiti.

INTRODUCTION

Second language classroom teachers have reported that academic studies they read have little connection to events in their own classrooms and rarely address the problems which arise there (van Lier in Pica, 1997). Commentators have suggested, more things needs to be done to make it easier for practicing and student teachers to relate theory to classroom practice (for example, MacDonald, Badger & White, 2001). To increase the impact of research on practice by making it more relevant to their professional lives, some language educators have become involved in action-oriented research in their own classrooms (Tsui, 1996; Bailey, 2001). Ethnographic studies have addressed questions about the cultural context of classrooms, schools and communities (Pica, 1997). School and university based educators have worked together on lesson studies (Lo et al., 2005; Sullivan & Smith, 2006), in partnerships to support institutions responding to externally imposed changes (Seller & Hannay, 2000) and in critical dialogue between school and university based educators (Fu & Shelton, 2002). Nevertheless, it has been argued that teachers involvement in educational research is limited and fraught with difficulties (Smedley, 2001). This article considers why teachers may be reluctant researchers and discusses ways in which this reluctance may be overcome.

The definition of teacher research adopted here is the "systematic and intentional inquiry carried out by teachers" (Cochran-Smith & Lytle, 1990: 3). It is a movement more concerned to ask questions and highlight problems, promoting inquiry which may generate more questions than it answers. The conceptual framework in which this paper's discussion is located is described as ways of knowing in communities (Cochran-Smith & Lytle, 1999: 18). It characterises teacher research as a means of driving classroom and school change. Using the knowledge of teaching and learning generated through their local research, teachers improve their practice and, in the long term, change the cultures of teaching by changing the power structures in and between schools and universities. The relevance of this framework to this writer's perspective needs no elaboration.

THE TEACHER RESEARCH MOVEMENT: MIXED PERCEPTIONS

The achievements of the teacher research movement have been well documented. Much of the available literature relates to work in the USA, Canada, UK, Australia, New Zealand, Japan, Hong Kong and Singapore. The forthcoming TESOL Language Teacher Research series includes a volume in the Middle East.

Published research includes, for example, case studies describing individual teacher's research procedures, suggesting they can advance educational practice (Hatch, White & Capitelli, 2005). Qualitative research has demonstrated that participating in teacher research can contribute to the knowledge base and collaborative enterprise of the teachers involved, has a positive effect on student learning, strengthens teacher researchers' self-efficacy beliefs, and has potential as a model for teaching critical thinking and targeted action (Ross, Rolheiser & Hogaboam-Gray, 1999; Henson, 2001). Descriptions of research practices in universities suggest the teacher research movement has begun to change relationships between school and university based educators, for example, teacher research is now considered in some teacher education programmes (Cochran-Smith & Lytle, 1999); and more democratic relationships and ways of working may have been achieved in collaborative work between researchers and schoolteachers (Sachs, 1999; Grundy, Robison & Tomazos, 2001). Accounts of teacher research are now more widely available through publications in journals, bulletins, local collections and edited books (Cochran-Smith & Lytle, 1999; Hancock, 2001).

Despite the findings in support of the value of the work of teacher researchers, there is considerable criticism of the movement. Cochran-Smith and Lytle (1999) identify three of the critical questions asked: What kind of knowledge – if any – is generated when teachers conduct research into their own schools and classroom? How legitimate are the research methods used? As the teacher research movement becomes integrated into existing systems, how can it meet the original purposes of restructuring roles and workplaces? The writers' answers do not detract from the relevance and pertinence of the questions which are still being debated.

For example, some commentators have suggested that the movement's purposes will not be achieved because schools are not by nature collaborative institutions and that teachers will not have the time, energy, confidence or support to move from discussing instructional improvement to implementing it (Huberman, 2001: 142–143). Other research has raised question about "the potential for teacher research to be more than a tool for improving the practice of individual teachers (which in itself, of course, is important work)" (Berger, Boles & Troen, 2005: 103).

In sharp contrast to this view of a more limited role for school based researchers is the following image of them replacing university based researchers:

The movement is on the march. It does not care about our own 'partnership' researchers in universities and other research centres. They believe that, soon, we will be left with only our monopoly on certification to protect our privileged status and our inert knowledge and, especially, our decontextualised methodologies. (Huberman, 2002: 268)

There are, then, mixed perceptions of the movements relationship to university based research, and of its effects on the roles and relationships between university and school based educators.

The movements of long term impact has been questioned too: Will it come "in the end to nothing of consequence or power" (Cochran-Smith & Lytle, 1999: 17). Its sustainability is certainly threatened if there is truth in the apparently widely held view (see, for example, Day, 1997; Hancock, 2001) that school based educators' involvement in research is not widespread. The reasons for this view are not hard to find. For example, the results of teacher research may not be valued by policy makers.

SOCIAL AND POLITICAL CONTEXTS

What constitutes good research is dictated, to some extent, by the social and political contexts of the day. These are continually changing. Currently, increased centralization of control over policy and practice, resulting in large scale reforms, has made instrumental research more popular with some governments.

Discussing the situation in the UK, Walford (2003: 2) states, "Teachers are seen as the primary 'customers' for research and the expectation is largely the rather crude one that research should help teachers by showing 'what works' in the classroom". It could be argued that in the long term this line of research will not be productive. There is evidence to suggest that what works in one classroom will not work in the same way or be sustained in another (Datnow, 2002). Nevertheless, local, small scale, teacher initiated research is unlikely to produce the broad-based empirical evidence required to attract funding in times of increased centralization of control over educational policy and practice. Teachers' autonomy, then, is circumscribed. Indeed, an environment which sees teachers as the customers of researchers may have little faith in teachers' ability to identify or solve their own problems.

Where research must be seen as evidence-based in order to be financed, inevitably the field of enquiry will be narrowed. Fink (2003: 107) has called on researchers "to address the non-rational as sources of insight into educational change". Teacher researchers would be ideally placed to do just that, but there

would be little support for such fancifulness in many social and political contexts today. This is regrettable. Rousseau, Dewey and Popper failed to produce evidence-based research though their thinking exerts a powerful influence on teaching and learning today (Atkinson, 2000: 326).

In some societies, challenges to the established system are discouraged. Teacher research may be perceived as questioning the accepted order. Many teachers tend to censor themselves in such situations thus severely circumscribing teacher autonomy.

Social and political contexts, then, may not be supportive of developing teachers' research expertise.

SCHOOL CULTURES

Many schools, too, are not conducive settings for teacher initiated research. For example, responding to students' and parents' demands; dealing with the pace and complexity of classroom and administrative requirements; meeting the challenges of implementing externally imposed innovation, including extending subject knowledge to deal with the demands of new situations, are often so exhausting that the research element in a teacher's role is likely to be overlooked (Baumann, 1996). It is not seen as a critical feature of a teacher's performance.

The culture of a school is often dictated by the community it serves. In a number of situations, these social conditions mean school based educators are concerned with providing for and protecting their students' physical well being. Educational research could appear irrelevant. If it were undertaken, the teacher is confronted by such a plethora of needs it would be difficult to focus on a particular research area.

The majority of schools are hierarchical systems. School leaders play a vitally important role in creating a school culture which supports teacher collaboration and professionalism and encourages teacher research. Some head teachers fulfill this role to great effect. However, in an authority-dependent school culture principals may have found that their colleagues did not initially want to accept any control offered to them. Teachers, in trying to hand over to students some control over their own teaching and learning, may find the same problem.

Despite the best efforts of many educators, a large number of teachers work in school cultures which emphasise control over development; which value self-reliance and self-sufficiency over the sharing of problems and issues; where attempts to share difficulties may be seen as a sign of weakness (Day, 1999: 226).

Such cultures isolate teachers from meaningful professional dialogue. In many secondary schools, there is insufficient communication within and/or between departments to move away from individual research (Hargreaves, 1992). The image of secondary school teachers "tinker(ing) productively inside classrooms in order to obtain the instructional and relational effects they are after" (Huberman, 1992: 132) still resonates strongly today. There is every reason for it to do so where systems base rewards on students' examination performance.

Even where systems do value and are able to provide teacher research opportunities, teachers may not be able to take advantage of them. Teachers on short-term contracts as university lecturers on pre-service education courses in New Zealand found that "opportunities for research was a potential benefit . . . that failed to materialise" (Russell & Chapman, 2001: 242).

The exigencies of the school day, the rhythms of a school year, means that it is difficult for teachers to integrate the demands of research with the demands of teaching. Some teacher researchers have come to terms with this (Baumann, 1996), but for many other, the problems posed by the unpredictability inherent in the challenges of teaching children make the rigours of research and its documentation unattractive.

In many schools, then, teachers cannot find the time, energy or support to engage in research.

Attitudes as well as systems may contribute to teachers' reluctance to participate in research. Literature on the theory/practice divide suggests teachers are likely to place less value on theory than university-based educators and may question researchers' motives and expertise (see, for example, Day, 1997; Sachs, 1999; Ebbutt, Robson & Worrall, 2000; Grundy, Robison & Tomazos, 2001).

Teachers may feel research merely confirms something practice has already demonstrated (Berger, Boles & Troen, 2005). For example, the news that researchers have found the UK's literacy strategy does not adequately assist sixyear-old below grade level readers, whereas the Reading Recovery programme, introduced in 1990 and subsequently scrapped, has the potential to bring these children to their expected reading level in weeks (Baker, 2006) will not have come as a surprise to many teachers.

This example demonstrates the conflicting criteria by which educational success is evaluated, for the literacy strategy may have assisted grade level readers. As a discipline which produces applied knowledge, education research aims to solve problems rather than establish patterns. Findings tend to be context-based and time-sensitive (Labaree, 2000). This finding sometimes enable media reporting of

educational research to create a climate in which both the researchers and the governments who respond to their findings are easily ridiculed.

Given that the aim of research in education is to solve particular problems, the lack of recognition given to teachers' knowledge based on observations of particular problems in their own classrooms is, at best, short-sighted. Working in a culture which ignores their professional knowledge, teachers are unlikely to be encouraged to become teacher researchers.

TEACHERS' PERCEPTIONS OF THEIR ROLES AND PERSONAL EFFICACY

This lack of power to alter systems may have contributed to some teachers' reluctance to be involved in research. Yet all teachers are researchers. They ask questions about their own and their students' performance. They gather data from, for example, observations, documentation (records; reports from social workers, medical personnel, psychologists and previous teachers) and interviews (with parents, colleagues) which they analyze to write reports about pupils' well being and progress, to recommend future action. Teachers evaluate teaching materials, change initiatives and students assignments. They reflect on the day.

However, the link between teachers' daily practice and the academic research process is not often made. So, teachers may undervalue their currently practiced skills and be intimidated by the conceptual and technical skills they may need to learn or revise. For some, memories of the assignments required by undergraduate classroom research courses may be a deterrent (Allwright, 1997).

There are further challenges for teachers considering becoming teacher researchers. As Freeman (1998: 192) points out, there is a tension between the role of the teacher and the teacher researcher. There is a moral purpose to teaching and most teachers need to believe their actions contribute positively to their students' development. A teacher researcher's investigations, however, presuppose teachers' actions are based on assumptions which need to be questioned. Teacher researchers, then, need both to believe in and question their actions. The same person needs to act confidently based on premises which he or she may be undermining.

For teachers to have questioned their own actions so critically that they are prepared to invest the time to research them, first they must have looked closely at themselves and their practices. This may involve questioning of a teacher's whole classroom persona (Convery, 1992). This takes courage, confidence and support. Few teachers have all three at their disposal.

Methods of research may appear to be in conflict with the moral dimension of teaching, too. For example, whilst quantitative research may be less commonly used by teacher researchers, experimental and control groups do feature in some research projects. They may be thoughtfully and sensitively designed experiments (Baumann, 1996). Nevertheless, deliberately depriving one group of a potentially beneficial intervention will be perceived by some as a questionable undertaking. Total participant observation may lead to a lack of verifiable, representative data and also present ethical problems arising from the absence of consent from those being observed and even deception by the researcher (Denscombe, 2003). These kinds of problems can be overcome, but they may deter teachers from being involved in research.

However data is collected, the task inevitably adds to a teacher's load and may adversely affect teaching and learning in the classroom. Planning the research will take time from responsibilities like lesson planning and marking (Bailey, Curtis & Nunan, 2001: 143).

The traditional interpretation of a teacher's role, with which most teachers and the community they serve will be familiar, does not encompass the idea of being a good researcher. For many teachers, success in teaching is seen in successful relationships with their students. Teachers reflecting on their careers perceive their time to have been well spent because of these relationships (Sikes, 1985). Colleagues and the community may perceive a teacher's acceptance of the role of a teacher researcher as contributing to that teacher's professional advancement rather than professional development. Perhaps the teacher is looking for a position as a teacher educator?

There is a tendency, too, for older teachers to be resistant to change and to concentrate their efforts on accomplishments within their classrooms (Hargreaves, 2005). It is less likely, then, that they will be persuaded to take on the responsibilities of a teacher researcher.

Thus, lack of confidence and support, apparent conflicts between the traditional understandings and moral purposes of the roles a teacher and a teacher researcher, and resistance to change may discourage teachers from adding a research dimension to their responsibilities.

TOWARDS MORE EFFECTIVE EDUCATIONAL RESEARCH

The discussion so far has identified reasons which may deter teachers from becoming teacher researchers. Can these deterrents be overcome?

Changes in social and political contexts will occur in the same way as any change occurs: slowly, unpredictably and too often without reference to the voices of educators. Where these voices are heard, for example in the media, public lectures and published research, some have argued for greater autonomy for teachers "to innovate and experiment" (Mortimer, 2000: 11). Currently, there does seem to be a growing recognition among policy makers of the need to support teaching as a research based profession (Grundy, Robison & Tomazos, 2001; Russell & Chapman, 2001). Unfortunately, in some instances, this support has restricted teachers' autonomy (Day, 1997: 196; Atkinson, 2000: 318). However, knowing the social and political contexts within which they operate will enable educators to establish realistic goals and to work more effectively towards implementing and introducing change.

It is perhaps at the systems level that educators are in a better position to influence changes which may encourage teacher research.

School and university educators have the same purposes: Encouraging the growth and understanding of teaching and learning in the community in which they work. They have complementary knowledge and experience. However, differences in culture and structure have adversely affected developing partnerships between school and university-based educators. For example, differing patterns of work organization within schools and universities may make collaboration difficult on anything but short-term projects. Different expertise is valued: a university culture rewards scholarship and research; schools value practical advice which will solve immediate problems. Universities provide time and opportunities for individual research and learning; teachers learning tends to be fragmented in the form of one-off workshops, in which the information given may have been identified by an external authority.

To work together to achieve their joint purposes, educators need to establish new patterns of practice and partnership. The provision of an infrastructure which supports collaboration and mutual learning is essential. To achieve this, organizational changes in schools and universities are needed to create the conditions for pedagogical improvement in both institutions. Ideally, such changes will result in an organic relationship between the two organizations, one in which "the parts fulfill unique functions, to serve the body as a whole . . . stress the common good above all else . . . (and) the identification and development of common interests would receive the institutional support necessary to sustain the collaboration" (Schlechty & Whitford, 1988: 191–192).

Currently, to work towards this vision, many of the suggestions below are being explored.

Alteration of the structure and culture of universities and schools to promote partnerships

Universities have built into their organizational structure and educators' workloads the expectation that university based educators will work on long-term projects with schools. This fosters teachers' professional development, including research skills, sometimes through facilitating partnerships with other schools (Sachs, 1997; Ross, Rolheiser & Hogaboam-Gray, 1999), and gives schools access to expertise and resources. It provides university based educators with knowledge of educational practice and school based educators' concerns, research data and a means of informing their own teaching (Seller & Hannay, 2000; Grundy, Robison & Tomazos, 2001).

A natural development of this change would be the establishment of educational research partnerships between schools and universities, providing opportunities for educators from both institutions to collaborate in useful educational research and foster school improvement through teacher engagement with research (Ebbutt, Robson & Worrall, 2000).

Some universities have provided teachers with short-term contracts to revise, teach and evaluate pre-service courses, so giving teachers opportunities for reading, reflection and research. In this way, the content of teacher education courses has been improved through advice grounded in current classroom practices and policies and based on students' needs. Students have thus gained wider insights into education. Over time, as the teachers returned to schools, mentoring in schools has improved and the prospect of longer term partnerships between university and school-based educators has been enhanced (Heikkinen, McDevitt & Stone, 1992; Russell & Chapman, 2001).

Partnerships are also promoted when schools provide university-based educators with short-term contacts giving them responsibility for teaching a class and/or subject area. This maintains the educators' contact with the knowledge creation which takes place in schools and encourages empathy with school based educators. The researchers model teacher research in practice and contribute to classroom teaching and learning. They are given access to research data which will also contribute to their university teaching (Baumann, 1996).

Schools and universities have provided opportunities for their educators to coteach courses situated in either organization (Clark et al., 1996; Fu & Shelton, 2002). Learning partnerships are forged in this way, providing the opportunities for personal and professional development outlined above. The impact on educators' teaching practice and students' learning is potentially very powerful.

Governments have established centres for educational research which bring together school and university based educators to investigate teaching and learning (Labaree, 2000: 67–71). Teachers acquire research skills, and researchers gain insights into classrooms. Partnerships between school and university based educators developed here may be continued when they return to their respective institutions.

To enable long-term collaboration between the organizations and their educators, school and university work patterns need to be altered and synchronized. For many educators, even working together to support student teachers on school attachment presents a logistical problem. Communication, too, could be improved through the provision of electronic communication between schools and universities.

Development of the university's role in preparing their students to become teacher researchers

A number of universities have developed and delivered courses which redefine the perception of teaching to include the role of researcher: For example, by preparing students to work with colleagues in schools to create a culture in which collaboration is supported (Yeomans, 1992) and by providing students with an appropriate knowledge of research. For students to become teacher researchers, research needs to be seen as a means of professional development, "a way of knowing about teaching that extends across the professional life span" (Cochran-Smith & Lytle, 1999: 17) rather than as a last semester project. To motivate students to integrate research into their working lives as teachers, they must perceive research as sustainable (Allwright, 1997). University courses need to promote this perception.

To model and promote collaboration between universities and schools, educators from both institutions have worked together to provide student teachers with more meaningful school attachments. At least one example of this collaboration has involved school and university based educators and student teachers in examining the teaching process, questioning and challenging traditional classroom practices in an action research cycle of reflection and action (Zellermayer & Margolin, 2005). Links have been established with schools which have accepted increased responsibility for student teachers. Educators at these schools have free access to the university's social, sports and learning resources, including some courses (Ashcroft, 1992).

Relevant teacher research has been included in the required reading of many university courses, contributing to the credibility of these courses to students.

Provision of incentives to promote teacher research

Schools have provided teachers with an allowance to use for personal and professional development which, amongst other possibilities, will provide an opportunity for them to pay for substitute teachers and plan a more coherent personal learning programme. In addition, teachers are awarded professional leave.

Teacher research is supported and rewarded in a variety of forms. The timetable may provide departments with common free time to use for collaborative research. Workshop programmes to facilitate interaction between school and university based researchers have been established (Smedley, 2001). Completed research may be rewarded with time given to conduct more research or take a further qualification; or a financial reward may be provided. An appointment as a teacher researcher, acting as a mentor for other teachers and working on intra- or inter-department or cross-school/university change projects, could be offered.

Research may be published on schools' website. This not only motivates teacher researchers, but their colleagues too. It may lead to the recognition that teacher research is directly related to improving pupils' lives and so has a moral dimension. Some schools and universities recognise that teacher research may need to be published in several forms in several places to appeal to its intended, wide audience. Teachers are encouraged to publish in the local university's academic journal.

Schools, universities and other stakeholders have jointly organized conferences and educational caucuses which showcase teacher research and act as catalysts for more long term working partnerships between all stakeholders. They also support teachers' centres which will encourage these partnerships.

Re-considering the definition of research

Educators need to reconsider what is meant by research. Teacher research can be distinguished from academic research in terms of focus for the first is concerned with the improvement of specific practice whereas the other reflects a desire to achieve validity and generalization (Sachs, 1999: 48). One is likely to emphasise the importance of relevance, the other of rigour (Ebbutt, Robson & Worrall, 2000). The teacher and academic researcher, then, may ask different questions and use different research methods. The teacher is likely to be a participant in the research study, and it has been argued that the data gathering and analysis will therefore be biased (Huberman, A. in Sachs, 1999: 40).

Traditionally, the work of the university based researcher has been more highly valued. However, according to Labaree (2000: 71),

. . . there is nothing in the nature of educational knowledge to prevent researchers in education from creating their own standards of rigour and from policing their own ranks in light of these standards.

Currently, the teacher research movement still lacks a recognizable, coherent disciplinary community and the standards of validation are still being debated (Allwright, 1997). This debate needs to be moved forward.

Promoting individual partnerships between school and university based educators

Acting on the above suggestions should contribute to the process of making schools and universities more democratic organizations and, ideally, to developing an organic relationship between them. Creating an organic relationship between schools and universities involves more than restructuring organizations: it involves relationships between people. Some researchers and teachers are guilty of negatively stereotyping each other (Schlechty & Whitford, 1988: 197). Even without this, effective partnerships are not easy to develop (Day, 1999; Ebbutt, Robson & Worrall, 2000; Smedley, 2001). They need to take account of educators' work patterns, to adapt to the daily and weekly variations in circumstances and priorities in universities and, especially, schools. They require the redrawing of the traditional hierarchical balance of power in the relationships between university and school based educators.

Productive partnerships are open and transparent and built with sensitivity and patience. They are based on trust and characterized by depth, continuity and direction which enable the partners to challenge and analyze their work. The partnership has long-term objectives and a theoretical basis rather than a concentration on quick solutions to immediate problems. Sharing the same vision but recognizing each other's perspectives, the partners are different enough to stimulate change in each other, creating "a productive tension" (Goodlad & Sirotnik, 1988). One partner's source of expertise is not privileged over the other's, and the partnership works towards the satisfaction of the identified interests of both parties. There is joint accountability for the research. (Biott, 1992; Grundy, Robison & Tomazos, 2001).

In rejecting the traditional framework, both partners will need to find new roles with which they feel comfortable. No longer directive, controlling outside experts, university based educators may find themselves juggling roles as practitioners, theorists, interventionists, facilitators, experts and learners. Within

this new framework, these same roles will be played by school based educators, too. To fulfill these roles within a coherent, life long learning process, educators will need to support each other intellectually, affectively and practically as they reflect on their own practice, challenge assumptions, confront problems, and work towards achieving their visions (Day, 1999; Hammerness, 2001).

Exactly how this is to be achieved will need to be established by the partners themselves as they grow into these altered professional identities. Enormous demands will be made on educators. Many will find themselves in unchartered territory with no rules to support their initiatives. Educators will need to understand the local culture of the site in which they are working; they will need to negotiate, to learn together through dialogue, perhaps playing multiple roles; to respond where they may have led; to develop the skills of reflection, questioning and collaboration; to recognize that constructing knowledge is a dynamic process involving, for example, reflection, criticism and collaboration; to understand knowledge and learning as a spiral, reflexive process of inquiry that has no final answer (Zellermayer & Margolin, 2005).

The framework in which such personal and professional learning takes place will vary, as the many suggestions above regarding organizational change demonstrate: from a partnership between two people to the one between organizations. In this transition stage, finding ways to work together within these frameworks may not be easy. Practical and imaginative ideas are needed. Tentatively, patterns are being established. Where schools and universities have formed research partnerships, it has been suggested that ". . . a rapid but rigorous participatory research methodology" (Ebbutt, Robson & Worrall, 2000: 332) be utilised by teacher researchers to respond to the demands of a practice context. Alternatively, there could be a division of labour between university and school based educators that plays to the strengths of each of the researchers. Such an approach, however, may reinforce the idea that as a form of knowledge, practice is less valuable than pure or applied theory (Ebbutt, Robson & Worrall, 2000). It may also militate against the development of individual partnerships.

WHAT CAN BE DONE TO INCREASE TEACHERS' INVOLVEMENT IN RESEARCH IN THIS REGION?

To implement many of the ideas discussed here requires a paradigm shift in the range and understanding of the roles of school and university based educators. To support this shift, changes need to be made to the structure and culture of schools and universities and to the beliefs and attitudes of many policy makers and educators. Where should such a change process begin?

Ideally, with the recognition by all stakeholders that teacher involvement in qualitative educational research will benefit the pupils. This can be achieved, to some extent, through successful demonstration and publication in the local context. In some countries, this process is underway, for example in The Centre for Research in Pedagogy and Practice in Singapore and in the work of Lo et al. (2005), in Hong Kong. Other examples need to be initiated and supported, perhaps through appropriate pre- and in-service teacher education courses. Their results need to be widely published in a variety of forms appropriate to a wide audience of stakeholders. Recognized and respected educators need to publicly give their support to the research process and findings, and their impact on teaching and learning.

The initial enthusiasm generated by this early work and its dissemination must be encouraged by school and university leaders. Above all, time and support needs to be provided for the long term partnerships upon which teacher research depends to grow and develop. At this stage, it will be necessary to provide funds, for example for substitute teachers, for workshops and incentives. Timetables and workloads will need to be restructured to encourage collaboration and ensure high standards of teaching and learning are maintained in this period of implementation. Teacher researchers will need time to liaise with researchers based elsewhere, to write and to celebrate.

The financial, social and political pressures are likely to be high. In some quarters the expectations and motivation will be correspondingly low. However, Smedley (2001) thinks that "ironically, it is the process of identifying and solving such constraints within a collaborative environment that nurtures and cements partnership ventures" (Smedley, 2001: 203).

CONCLUSION

The discussion makes clear that in order to overcome the identified deterrents and support teacher research, deep and wide ranging changes are needed both in schools and universities and in the roles of educators. Creating cultures in which teacher initiated research is valued inevitably blurs the boundaries between the organizations. This is physically manifested through the establishment of university field centres in school district facilities (Seller & Hannay, 2000) and in the increased movement of personnel between the institutions. It is reflected, too, in the ways in which educators use each others' talents to improve teaching and learning in universities and schools. To "... weave a research element into the expertise of teachers" (Nisbet, 2005: 43) requires organizations and individuals to recognize and promote the interdependence of schools and universities and to create an organic relationship between them.

All educators are teachers and researchers. Bringing together and equally valuing their different knowledge will enrich educational research and increase its impact on the improvement of practice. Ultimately, it will lead to improved teaching and learning in universities and schools.

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