

### RESEARCH IN THE CLASSROOM

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Educational research has been marked by its inability to answer questions teachers ask, its elitism, its reliance on unnecessary jargon, models and abstract theories, an inability and/or unwillingness to explore natural classrooms, and by the production of blueprints which teachers are asked to adopt unquestioningly. The phrase 'Research in the Classroom' thus presents a paradox to many people involved in education. Determining just what the relationship between teachers and research might be is a complex and open-ended task. However, in this chapter, we will concentrate on the appropriateness of teachers-as-researchers and the potential of specific research methodologies teachers can adopt to improve their practice. Following a brief review of historical trends in educational research, we will explore a number of contemporary issues so that you can decide *your* future research role, and follow-up with a few examples from recent studies.

The 1980s witnessed a growing demand in policy documents for the professional roles of teachers to include that of teacher-as-researcher (allied to the shift towards school-centred education) and the need for classroom practitioners to be better informed about educational research. Teachers have generally resisted these pressures, highly conscious of the gap between most educational theory and practice. Researchers have tended to blame teacher apathy for this gap, teachers have responded that the questions posed in research have largely ignored teacher concerns and/or have not provided the findings in accessible language (Olson, 1980). Teachers feel that when they have been studied by outsiders, they have received little in return. Much research is an academic intervention into school life which is patronizing, controlling and of benefit to the career interests of the external researchers and/or the vested interests of the funding body. Ethnography offers an alternative to this scenario. Ethnography does not pretend to be "neutral", it offers the opportunity for broad participation and action, it shares control and it addresses immediate and practical concerns.

#### **Research and Knowledge**

To begin, we must acknowledge that there is continuing debate between teachers and external researchers - and amongst the external researchers themselves - about the efficacy of teacher research. While some educational philosophers, sociologists (Interactionists, Critical Theorists and Radicals), some senior bureaucrats and some tertiary educators strongly support and/or actively participate in teachers-based research projects, others in each of those respective fields argue against the concept. Educational psychologists, whether Behaviourists or

Cognitivists, generally see research as something conducted by “experts” in a controlled, clinical, “objective” environment. This division also represented, until recently, a split between those who collect *quantitative* (mainly large scale and numerical) data and *qualitative* (mainly personal and documentary) data. We will return to this point later in the article.

The issue goes back, in written form, to the debate about the nature of ‘knowledge’ conducted between Sophocles, Plato and Protagoras in Ancient Greece (Smith & Lovat, 1990; 56-7). We now recognize that, whether we consciously state it or not, all teachers operate on a philosophy of knowledge (epistemology) every time they plan, teach and review a lesson. All courses in teacher education have a platform of assumptions, values and theories which construct a philosophy of knowledge - though lecturers rarely state them - as are the syllabi you use to develop a curriculum and, finally, as are all government education policies. For the purposes of this chapter, we must start by recognizing that all research methodologies are based on a view of knowledge and, again, most educational researchers also do not publicly acknowledge this when collecting data or writing up their findings.

The debate centres on the differences between research paradigms (approaches). In educational research, we can distinguish different: a) methods of inquiry; b) research traditions; c) theoretical positions. One could suggest that these differences, like the assumed difference between quantitative and qualitative, are a consequence of methods and history rather than views on what knowledge is. There are many influential theories which support the use of paradigms to structure educational research. Accordingly, they also see distinct ways of knowing. Husen (1985) argues for two differences - ‘scientific’ and ‘humanistic’; Popkewitz (1984) and Habermas (1972) distinguish three: - empirical-analytical, symbolic and critical; whereas other theorists distinguish three *historical eras*: the pre-positivist, the positivist and the post-positivist. Positivism is a view that one can discover “facts”, that the observations of the researcher can provide certain and valid data (Smith & Lovat, 1990: 57). Studies in Philosophy of Science have shown us that it is very difficult to verify knowledge claims (Chalmers, 1976). Knight, Smith and Sachs (1990) report that “certainty” has been undermined in recent years as methodological convention, and the ‘facts’ they produce have been opened to criticism. Tripp (1990) further suggests that:

*The positivist approach is not only the most manipulative, but it is also the form least accessible to teachers in two ways. First, it largely prevents classroom teachers from doing their own research. They are seldom able to access the kind of samples the method demands, let alone find the time and interest to administer the highly technical and elaborated techniques (...). Second, and this is perhaps more important, the positivist approach like all specialisms, has developed its own language and world view to such an extent that one requires a long initiation into it before*

*one can understand the connections between the data and conclusions, let alone be able to critique the research. (p.69)*

Habermas (1970a) would argue that a positivist approach renders teachers “communicatively incompetent” because one consequence of this approach is that teachers are not able to generate, explore or communicate ideas about educational research as successfully as professional researchers. It is not surprising, then, to find that teachers see a great gap between positivist educational research and classroom practice.

### The Unity Thesis

There are alternatives. Instead of looking for and stressing the differences between methods, traditions and theories, it can be argued that we should recognize the similarities, what the competing approaches have in common. In educational research, different ways of researching need not be seen as competitive but rather as complementary. Kuhn (1970), for example, argues that choices between competing theories cannot be resolved by the normal criteria of science. He states that scientists:

*will inevitably talk through each other when debating the relative merits of the respective paradigms. In the partially circular arguments that regularly result, each paradigm will be shown to satisfy more or the less the criteria that it dictates for itself and to fall short of a few of those dictated by its opponents. (Kuhn, 1970: 109-110)*

*The Unity Thesis* (Evers & Walker, 1982; 1988) proposes that there is no logically consistent way to partition knowledge into distinctive forms. The same argument applies to approaches to research. In the Unity Thesis, competition between theories is a major factor in advancing knowledge where ‘competition’ is seen as rival attempts to solve common problems. The important point to make at this stage is that, if we accept that there might be a unity of knowledge and, therefore, a greater unity between different research strategies, then this would allow for a unified account of educational research. As we will see later in this chapter, such an account provides an accessible and effective tool for teachers to conduct research in their own workplace.

Table 1: RESEARCH METHODOLOGIES:  
QUALITATIVE / QUANTITATIVE

*Quantitative methodologies are mostly:*

- based on large scale, experience-based, fact-seeking theories
- which view knowledge as objective, absolute and neutral and, therefore, locate power and control of research within the 'expert' researcher who is isolated from the subjects

WHICH COMPETE WITH

*Qualitative methodologies which mostly:*

- oppose most of the above points
- view knowledge as contestable and incomplete and share power and control in defining the problem, and in collecting and analyzing data between the researcher and subject

### Ethnography in the Classroom

Despite a considerable literature on the problems and limitations of case studies, ethnography and cultural research within educational settings, these studies have gained acceptance and recognition over the last twenty years as legitimate alternative research methods (Crump, 1990a: 39-40). Ethnography allows one to capture a whole cultural group such as the population of a school and it permits a first-hand account of different cultures within the boundaries of the school site. The research strategies include: observation, participant observation, direct inquiry through interviews (formal and informal), discussions, group meetings, surveys, historical material, institutional documents, policy statements and team teaching. Ethnographic research is contextual, longitudinal and open-ended, involving both internal and external perspectives, and tends to more democratic means than has been typical of research in schools.

No single strategy can reveal all the significant aspects of an issue under investigation, however, over the last twenty years, sociologists of education have responded to the debate over appropriate methodology for educational research by suggesting a number of ways we can be comfortable about the reliability and validity of qualitative research findings: A. Hargreaves (1981) called for a greater

synthesis of approaches; Hammersley (1981) argued for greater teamwork; Delamont (1980) suggested more comparative work; D. Hargreaves (1982) made a compelling call for a more conscious application of theory; and Stebbins (1981: 241) claimed that the relevance of educational ethnography in sociological and curricular research was to "pressing *analytical* problems of wider significance". The task for the 1980s was, therefore, to attempt a theoretical integration of the many disparate, mainly descriptive, ethnographies and an improvement in theoretical insight (Woods, 1986). The value of ethnography as a research method is its ability to generate coherent and valid theory:

*The depiction of perspectives and activities in a setting allows one to begin to develop a theory in a way which provides much more evidence of the plausibility of different lines of analysis than is available to the 'armchair theorists', or even the survey researcher or the experimentalist. (D. Hargreaves, 1978: 24)*

The challenge for classroom teachers is to adopt a theory which reflects the practical problems it addresses. Teacher-based research offers schools an opportunity to extend the professional knowledge of its staff (teaching and general) through the encouragement of experimentation and individual judgment. This context has the potential to develop new teaching roles. Teacher-based research also offers tertiary institutions better insights into classroom interactions and realities, a process which should encourage common conceptions about teaching/learning and, therefore, eliminate many of the problems inherent in teacher education as it now functions. Chattin-McNicholls and Loeffler (1989) concluded, after extensive experience with teacher research networks, that the benefits of having teachers conduct their own meaningful research in classrooms far outweighed any concerns over possible problems caused by small sample sizes or "quasi-experimental" designs. The advantages, as Stenhouse (1975) stated in a seminal book on curriculum research and development, are immediate and concrete. The key characteristics of an extended professional teacher is a capacity for autonomous professional self-development achieved through systematic self study, the study of the work of other teachers and testing of ideas by classroom research procedures.

This view remains just as pertinent and appropriate in the 1990s as we enter a new age of school-centred accountability, merit promotion and associated professional development. Teachers are now expected to be well-informed about current issues, the significance of policy developments *and* the appropriateness of relevance of contemporary educational research. As Smyth (1987: 19) states, "the idea that teachers are (...) incapable of rigorous and disciplined thinking about their own work is a viewpoint that deserves to be countered in the strongest possible terms". The rapidly growing numbers of teachers undertaking postgraduate studies is a clear signal that personal research is now a key element in teachers' professional profiles.

## Problem Solving: A Pragmatist Approach to Classroom Research

A problem-solving approach to research is a very practical method to adopt at the school level. It is an approach which allows teachers (and their students) to analyze their situation, clarify their aims, values, views of knowledge and learning and attempt to relate these to each others' problems and experiences. It is an attempt to make coherent school-level solutions to the set of problems arising in that situation (Walker, 1987: 8-9). Pragmatism in education, traced back to John Dewey, sees knowledge as an instrument gained in a learning process and suggests that solutions can arise from the interaction between the researcher and the context in which s/he works.

The notion is that, through inquiring into the set of social practices of teacher and student groups, one can develop a picture of the problems they face and the solutions they attempt. It is an appropriate method wherever a group of people have a common problem whose solution can be sought in the individuals themselves or can be brought about by their being changed in a certain direction (Werdelin, 1979). In this approach, 'problems' are those as perceived by the teachers and students, not only by the external theorist or researcher. The 'solutions' are the practices or strategies acted on in response to specific problems. The task for the analysis is to probe the various problem-solution strategies aiming to detect what they have in common and whether there are compatible solutions.

Table 2: PROBLEM-SOLVING & RESEARCH

**When we have a significant degree of agreement over what the problem is, and over possible solutions, then we have identified a starting point which can be used to reach a productive resolution of the issue. There is no point in someone coming up with a great solution if it does not concur with the perspectives of those people affected by the problem; and this has been the classic error of educational research.**

Teachers have, historically, had the greatest problem-solving power in schools, though the reforms of the 1990s will see parents and students gaining more than second-class status. There are increasing shared contexts and problem situations both within the school and for the school as part of the wider community. When these shared problems contain overlapping solutions, then we have identified the common ground, or *touchstone* on which we might base a long-term strategy to improve the classroom and school environment for teachers and students.

The following section of this chapter will provide research accounts of teachers, students and academics using various features of the above approach to research real issues in functioning schools. They represent a small fraction of recent research that you may wish to consider but do neatly expose the strengths and weaknesses of teacher research across an interesting range of topics.

## Research Examples 1: The "Minesville" Single-sex Science Project

At the end of 1989, a school-based participatory research project began at a secondary school in a large country town west of Newcastle, New South Wales. The focus of the project was the participation of girls in science classes, an issue with a strong background of research and theory development (Dale, 1974; Deem, 1978; Davies, 1984; Yates, 1985; Crump, 1990e). The project was initiated by the head teacher of science at "Minesville" who acted on concerns raised by the staff about the attitude and performance of girls in their classrooms by developing a method for establishing single-sex classes in science. He also contacted Newcastle University requesting *assistance* in implementing and evaluating the scheme. It was clear, right from the first meeting, that the idea belonged to the science teachers; first, they had determined the research problem through discussion in their staffroom and, second, they only wanted assistance in conducting a research study on their attempt at a solution (Cocklin, Crump, Allen, Flanagan, Au, 1990).

Subsequent meetings developed the research strategies in joint meetings of the school and university team members. Emphasis was placed on the broad notions of teacher-based action research as developed by Woods (1986), with the university staff serving to collaborate in the collection and analysis of data. There was some initial resistance from some members of the science staff to the qualitative bias in the research strategies, deriving to a large extent from their conception of research as a pre/post-test procedure. However, they warmed to the idea of a long-term study, acknowledging that a wide range of data gathering strategies might provide a good understanding of the actual experiences of both teachers and students as well as allowing greater flexibility for implementing curricular reforms.

The project initiators decided that the data recording and analysis would be best conducted as a joint concern involving internal and external perspectives and combining references to teacher practice and relevant theories. The different strategies chosen were dependent upon the setting and the varying experience of the team members. There was considerable overlap between the strategies used by different members of the research team. The above list was developed early in the project to suggest a workable 'division' of responsibilities based on available resources (such as computer software), time with classes, varying interests and different samples. The aim was to provide *triangulation* of teacher, student, parent, observer perspectives on the experiences encountered during the year.

Table 3: SUGGESTED DATA  
GATHERING STRATEGIES

**“Minesville” Science Project**

<b>Science Faculty Staff</b>	<b>University Staff</b>
Class observation	Field Notes
Class discussion	Classroom observation
Critical Incidents diary	Taped Interviews
Personal journal	Evaluation / videotaping
Peer review	Statistical analyses of grades
Questionnaires	Sociometry
Still/video photography	Document and policy analysis

Triangulation (Mathison, 1988) was developed through the interactions between data collected from interviews with the teachers and her/his students against the observation/recording of experiences in that classroom; through the interaction between data gathered by the teachers, the university team members, and by students/parents; and finally, through applying the findings of similar data on comparable gender issues; that is, by comparing information from practice, theory and policy.

In order to seek a shared commitment to the project, through identifying common ground for perceived problems and solutions, a number of pupil and parent meetings were held before the project began. Team members spoke at these meetings about the background to the project, then opened the meetings for questions and discussion so that we would all be conscious of the various feelings about the project. Without going into the details, there were fears expressed about single-sex classes, particularly by some boys and some parents, and generally a great deal of excitement on the part of the girls. We encouraged everyone to contribute, disavowing our status as ‘teacher’ or ‘university lecturer’, encouraging all those involved to be researchers of their own experiences and facilitators of curricular change. Our concern, at this stage, was to meet the ethical requirements of any form of research: that participation be voluntary, informed, open, and any publications allow for anonymity.

In this project, we set out to fulfil a number of basic factors in teacher-based research. There was negotiated access, negotiated rationale and procedures, informed participation, and equal status. To this end, we produced - over a number of round-table meetings - an agreement on the rights and responsibilities of participants. This ‘contract’ nominated the head teacher as the team leader and

spelt out individual and team responsibilities. While no research project runs trouble-free, this project offers a sound guideline for teachers wishing to attempt a solution to a significant problem in their school, and wishing to develop a broad strategy for evaluation of their success.

**Research Example 2: Teacher-research at ‘Carpenter’ High School**

In stark contrast to the above study, a school-level investigation of curriculum reform offers a number of insights into the experience of a single teacher as a researcher. This information (empirical data) is important in assisting us to understand how researchers can be research instruments and, in many ways, research subjects. The research took place in a co-educational secondary government school in Western Sydney between 1986 and 1989. The school was noted for its attempts, and successes, in developing a more relevant curriculum for its students, particularly those in senior classes (Crump, 1990c).

Arguments in favour of teacher-researchers include: the influence of the research process changing the way teachers then think and act; teachers being enabled to deepen their understanding of what is happening in their own classrooms; and the development of cooperative strategies with colleagues and students (Riordan, 1982). Indeed, it is difficult to see how classrooms can be reformed without teachers studying themselves. However, there are limitations: teachers find it difficult to create an openness for accurate feedback from students; self-monitoring can threaten teachers’ self-esteem and professional confidence; institutions are not conducive for activity which increases awareness of self and others; and some teachers find it hard to discuss their problems with one another honestly.

The Carpenter study began when the author was working as head teacher for English. In situations such as this, when the research site coincides with one’s workplace, there are further advantages and disadvantages. My background as a teacher in the school meant that there was no need to invent some cover story for my presence in classrooms and provided some insider privileges that are generally not available to an outside researcher who does not, at first, share familiarity and trust. Restrictions were generally those evolving naturally from my place as a member of the staff. All in all, I felt the need to draw up a research contract, even though the principal did not require this. A contract allowed me to place into context my research relationships with people who were either close friends or former foes in the politics of school life.

After the first year, I had to take study leave to continue the research. As I also taught part-time at a university during this period, I became something of an outsider, though my usual encounter with staff and students was to be questioned about when I was returning to teach. After the second year, I extended my leave; this meant that I lost my position at the school. At this concluding stage, this unplanned outcome appeared to be an advantage as it reduced the restraint I felt over presentation of my data and findings if I was to return to a working

relationship in the research site. Overall, the shift from colleague to companion occurred without repercussions, probably because it happened slowly. I am confident of this claim as, after I completed the research, I was invited back to the school a number of times to report on the findings and to join in social activities.

One of the successes of this project was the development of a number of 'critical friends', several adults who became key informants, who contributed towards the data collection and analysis, and who offered feedback on drafts of research publications. Critical friends included members of the curriculum committee, the Community Liaison Officer, the Project For Girls Coordinator, the 'Staying On' Project coordinator, some teachers closely involved in student welfare and some assistant staff. Yet it turned out that the most important critical friend was the school principal, Mr Woodstock. I had a close working relationship with Mr Woodstock before the study began and he was strongly supportive of the study and of my personal objectives and motivations. Unintentionally, the relationship was only strengthened as the research proceeded with Mr Woodstock contributing to data collection and interpretation during the early stages of the research, as well as commenting on final drafts even after his retirement at the end of 1988. In some cases, therefore, I (as researcher) did not have final control over what was to be published. However, the *significant outcome* was that key personnel were involved in a reflective process, feeding the research data back into improving the school organization and individual practices.

Researching my own school, my students, their parents and my fellow teachers suited the aims of this study. It made it easier to negotiate access; it offered the scope for a manageable study; it made it possible to take an holistic view on the issues. It also assisted in the development of a creative and enterprising culture in the school as the school community came to articulate much more openly their aims, strategies and beliefs. While I needed to be critically aware of my own ideological commitments and my values, I was quite open about my view that, while penetrating serious weaknesses in school structures and classroom teaching, I was intent on identifying those solutions which the school had struggled through and reached. What this study showed was a narrowing in the gap between the attempts and the achievements of teachers. It provides a powerful alternative to the dominant forms of educational research which tend to portray teachers as doing positive harm (Tripp, 1990).

### **Education Policy Reform in New South Wales and England**

This final section will elaborate on a number of research findings, depicting instances of constructive policy implementation. These instances derive from a collaborative study of policy issues in N.S.W. (Crump, 1990d) and England (Ball & Bowe, 1990), focusing on the school-level impact of the British "Education Reform Act" (1988) and the N.S.W. "Education Reform Act" (1990). The shared context, methods and data present an example of my arguments about the issue of

generalizing from qualitative research methods in education. In this instance, teachers in an inner-city school in London articulated, almost verbatim, the same concerns and hopes of teachers in, as just one example, a country town sheltered by the Great Dividing Range in N.S.W. This congruence of data suggests an international commonality which demands to be explored as a way of providing coherent and valid data when attempting to solve pressing policy problems.

What I am suggesting is that, if a number of schools half a globe apart have experienced very similar micro-political conflicts in policy implementation, overcoming all the variables associated with systemic, cultural and social differences, then qualitative studies *can* speak to a wide audience. To this extent, at least, the findings are generalizable by establishing common ground - touchstone - between the context, data and findings of the University of Newcastle [LTP team] and the University of London [ERAp team] research projects. The ERAp and LTP collaboration demonstrates a cross-paradigmatic dialogue and a cross-cultural conversation which, we believe, sets an example for future work.

The ERAp and LTP teams both concentrate on cultural aspects delineated by the practical issue of teachers implementing imposed political reforms. Both suggest an analysis of the direction of conflict and power in the new and changing social relations of the school communities. Both projects began by targeting four comprehensive schools. We have identified striking similarities. These are elaborated in Figure 4.

Figure 4: RESEARCH TOUCHSTONE:

NSW and BRITAIN

- \* England and N.S.W. have both explored the feasibility of a 'cash voucher';
- \* Both sets of reforms have aimed to reduce the number of government schools;
- \* Schools in England and N.S.W. have become commercial in seeking new students through a printed or video prospectus;
- \* England and N.S.W. have returned to external assessment of "basic" skills;
- \* Both reforms entail a funnelling of curriculum back to centralized control;
- \* Schools have returned to "core" subjects / key learning areas;
- \* Improved school management is a central goal in N.S.W. and England;
- \* Market-oriented decision-making now dominates educational concerns;
- \* Schools in both systems are seeking alternative ways of approaching the curriculum;
- \* The reforms in both systems are obstructed by conservative, senior teachers and also contested and resisted by younger innovative staff;
- \* The education bureaucracies in N.S.W. and England, while different in size, exhibit similar reactions to increasing political control of education;
- \* Women teachers at all levels, and those seeking promotion, do not as yet appear to have significantly benefited from these reforms;
- \* Many senior and assistant teachers in both circumstances suffer burn out and are shadowed by a sense of personal failure along with periods of high expectations and rescued self-esteem;
- \* Schools in N.S.W. and England have not been given the resources to adequately and effectively complete the implementation of the reforms;
- \* The change models followed in England and N.S.W. are ambiguous and not consistent with the practical context;
- \* Finally, both situations have encouraged greater community involvement in the decisions teachers once made on their own.

The collaboration of the English ERap team and the N.S.W. LTP team has produced a remarkable list of overlapping issues. The joint data suggests that leading a school through imposed change is a genuine micro-political minefield, a very personal experience which, for all the rhetoric, will only enable a change for the better in schools if those conflicts and power struggles which do occur are ones worth winning. In England and N.S.W., during the 1990s, the nature of school organization and institutional roles are being changed. We need teachers to conduct research on these changes so that we can determine whether these changes are ones which will engender deep, lasting progressive reforms for the twenty-first century.

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As you will by now appreciate, sociology, in its various forms and from its different perspectives, uncovers the full array of those social issues which impinge on education. As we attempt to come to terms with the changing world of the 1990s and beyond, and with the place of education in this, the role of sociological insight and research competence for the teacher cannot be overstressed. Those of us who have contributed to the construction of this book hope that we have helped you in this.