This paper reviews four currently recognized modes of inquiry available to reading researchers, including both qualitative and quantitative approaches. The paper discusses empiricism, interpretive research, critical science/theory, and action research, briefly describing the purposes, goals, and assumptions underlying each mode of inquiry. The paper concludes that reading research must broaden its methodology and work towards shifting paradigms of traditional research. It argues that the most significant aspect of the research activity is to ask the right questions—questions which are pertinent, researchable, and with outcomes directed at a process of change within appropriate social contexts—and notes that a suitable paradigm can be chosen from these questions. (One figure is included and 12 references are attached.) (SR)
READING RESEARCH IN GREAT BRITAIN:
Are the research questions being asked either appropriate or helpful?


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Introduction

Is it appropriate that the field of reading research should limit its procedures for inquiry almost exclusively to a single mode? Reviews of prestigious journal articles and the tracking of funding policies in the UK suggest that this is so. What is required is a broadening of inquiry modes in order to address the issues which face the educational community at a time of rapid change and inquiry outcomes which speak more directly to teachers within the contexts of their own concerns (Wardlow 1989). More importantly, the distance between researchers and teachers in educational inquiry needs to be eradicated if understandings and our knowledge base are to be increased. The purpose of this paper, therefore, is to present four currently recognised modes of enquiry available to researchers, including both qualitative and quantitative approaches.

Alternative modes of inquiry

Popular conception would classify research approaches as either quantitative or qualitative. However, there are currently at least four modes of inquiry in research identified in the literature which are applicable to the problems of reading research:

- Empirical
- Interpretative
- Critical Science/Theory
- Action Research

The empirical mode is at times called quantitative while the other paradigms are often classified as qualitative. The most dominant mode of inquiry in funded and published reading research in the UK is research conducted in the empirical mode, while the
employed to a much lesser degree (Raban & Geikie 1989, Raban 1990). Empiricism is based on the theory that basic natural laws exist which govern all phenomena. Factors within these phenomena can be separated and quantified for statistical analyses and the researcher remains value-free in the research activity.

Generally, interpretivism, critical science/theory and action research are each based on assumptions that factors within social phenomena are inseparable and indeed, defined by the interactions of the phenomena and the individuals involved, including the researcher, rather than by natural law. Rather than quantification, each of these latter three modes of inquiry is routed in phenomenology. Analyses are based on ethnographic procedures in which the researcher seeks to become part of the social system or culture under study to determine the meanings behind social interactions.

**Empiricism**

Empiricism draws its theories from the 'hard' sciences in which it is believed that basic laws exist. It searches for the basic truths of these laws by building theory through generalisations which are the result of experimental or mathematical controls. These theories provide for at least five implicit assumptions which underlie empirical research within the social sciences (Pophewitz 1980):

1. Sets of principles or rules can be deductively arrived at to describe and explain social phenomena.

2. Values and goals of the researcher are independent of the statements of science. Value-free objectivity is maintained.

3. Social science exists as a system of variables which can be studied independently of each other.
4. Knowledge is formalised using variables which are operationally distinct from each other and defined accordingly.

5. Hypotheses are tested through quantification of observations and by statistical models.

The ultimate goal of this kind of research is to evolve some stable principle, generalisation or theory to serve as the basis for testing the value of a proposed theory or generalisation in an internally consistent manner. The outcomes of this kind of research are not designed to inform practitioners. The empiricist seeks to describe and explain 'what is' in terms of isolated and quantifiable factors which frequently appear arid and unhelpful when we make efforts to translate their findings into busy classroom life.

Interpretative Research

Interpretative research is an alternative method of coming to understand new knowledge in reading education. While empiricism seeks to generalise and build theories about phenomena through control, interpretivism seeks to understand the values, beliefs and meanings of phenomena. The purpose of interpretative science is to systematically search for an understanding of the ways people subjectively experience their world. Researchers in this paradigm observe actions or responses to experience conditioned by the culture and the related conceptual schema of those being studied. This mode of research attempts to clarify, authenticate and uncover meanings embedded in the forces of cultural processes.

Research questions arise for interpretative scientists when there is a need for an experimentally meaningful, historically original, or authentically human understanding.
of some aspect of the interactive cultural system. The assumptions which underlie interpretative science include:

1. Human beings are self-interpreting, also capable of interpreting the language and actions of others.

2. People bring a framework of personal meanings to their experience of the world.

3. Experience is an intersubjective occurrence, not private to each individual.

4. Meaning and the symbolic use of language cannot be separated from context of occurrence.

5. The whole human being is greater than the sum of the parts.

6. Actions and language are rule-governed and value-laden.

7. Human beings reason affectively as well as cognitively.

Interpretative science, therefore, seeks to make visible certain aspects of social reality through dialogue and to generate typifying examples of social phenomena and events. Also it seeks an understanding of how those being studied interpret and give meaning to their own experiences.

Arriving at questions within specific social contexts, rather than broad generalisations, is the intent of interpretative scientists. Validity is a function of the researcher and subject being able to construct and share common meanings. Just as statistics are the tool of the empiricist, phenomenology and ethnography are the tools of the interpretative scientist and the process of acquiring data is inductive.
Critical Science/Theory

Critical science research is based on a framework described as critical social theory. Critical theory can be traced back to the Frankfurt School in Germany and the more recent works of Habermas (1972, 1979).

Empiricists believe that as researchers they must assume a value-free objectivity in their inquiry. They seek knowledge of previously unknown truths, with little regard as to how that knowledge will be used. Interpretavists, on the other hand, search for understandings. They allow for the value-laden inevitability of social experience, but they do not see their role as one of influence for change. Their objective is to attempt descriptions and explanations of social phenomena, stopping short of effecting social change. Critical scientists, however, not only seek an understanding of a society and its institutions, but attempt to use these understandings to enable the individual to change inappropriate practices.

Positivism requires a view of reality which includes a system of distinct and analytically separable factors which can be studied independently. Critical science believes that social systems are intricate inseparable systems of individual and group views which constitute concepts of reality. Critical theory focuses on the process of people achieving self-knowledge so that they can make decisions about courses of action. This is accomplished by identifying the discrepancies between the ideal state and the existing state. Through the use of this knowledge, the critical scientist attempts to move the existing state towards the goal state. Assumptions which underlie critical science as a mode of inquiry include:

1. Social and natural science phenomena are not the same.
2. Value questions are based on reason.

3. There is a reciprocal relationship between the individual, the institutions in society and the culture which they have created.

4. Society can best be changed by systematically sought self-reflection.

5. People have the potential to become self-reflective and can affect the formative processes of themselves and society.

Critical science research is designed, therefore, to provide an awareness of values and beliefs as part of the process of inquiry. This awareness can empower people with knowledge which can lead to substantive change in the social systems being researched. It can provide a way of thinking critically about the world, including the interconnected networks which provide meanings to the concepts and values held. It is in this sense that critical science research has so much to offer educational research. To conduct research in an educational arena is to be involved in an educational endeavour.

**Action Research**

The basis for action research is social and demands involvement. As a method of exploring and solving problems, action research can be applied equally to large-scale inquiries and to a single case of a teacher in a classroom. The action of action research, whether on a small or large scale, implies change in people's lives and, therefore, in the system in which they live and work (McNiff 1988).

However, the term 'action research' in education has been assigned to any activity which involves teachers critically reflecting on and changing their practice. Any
investigation which goes on in the classroom has been referred to as action research (Olson 1990). The teacher-as-researcher movement is gathering pace and the term 'action research' is broadening to an extent which renders it almost useless as a defining mode of research with specific assumptions and a distinct paradigm.

What is distinctive about action research is its development of methodology beyond that of critical science. Outcomes of critical science research will be in the form of recommendations for change and the choice for change rests with the individuals. Action research, in contrast, is a paradigm for research where a problem is identified and change is required and this change becomes the focus of further reflective inquiry involving all concerned.

Action research is systematic. As Stenhouse has pointed out, it is 'a systematic inquiry made public' (Skilbeck 1983). It is not the random, ad hoc activity that characterises everyday life, although it can accommodate within its methods those random, surprise elements of unpredictability. The methodology of action research is elegant. It invokes a self-reflective spiral of planning, acting, observing and reflecting/replanning and as action research takes place over time, this cycle becomes part of a continuum with action following on from each stage of replanning. It has traditionally been shown as a spiral (Kemmis and McTaggart 1982).

A distinctive feature of action research is that those affected by the planned change(s) have the primary responsibility for deciding on those courses of action which seem most likely to lead to improvement, and for evaluating the results of the strategy tried out in practice. The research design, therefore will involve constructive and reconstructive modes (Kemmis and McTaggart 1982) each of which will require a combination of discourse among participants and practice within the appropriate social
Because of this, those findings from each cycle which propel the next will be reported, where relevant, at the end of each cycle.

This process is clarified by Kemmis and McTaggart (1982) and shown in Fig 1 below.

[INSERT FIG 1 HERE]

**Research as a force for change**

At this point it is helpful to reflect on some dictionary definitions. To educate is 'to improve or develop', to teach is 'to help to learn' learning is defined as a 'relatively permanent change in behaviour' and research as 'systematic investigation' (Hanks 1979). Thus we see that change is at the heart of educational concerns and research which does not address this issue will be limited in its application. Reading research, if it is to impact provision for literacy in the nations of the world, must broaden its methodology and work towards shifting paradigms of traditional research. Paradigms whose assumptions ignore the concept of change as a legitimate outcome add little or nothing to the shaping of our future concerns.

Paradigms are shifted by challenging what is conventionally accepted. Such challenges are revolutionary and uncomfortable. However, much pioneer work has been done already and this will need to be constantly reinforced by successive generations of reading researchers. Goodman (1976) recognised the conservative influence on the development of reading research which was evident in American universities and there are many examples of this conservatism across the world today.

As Goodman (op cit) has pointed out, while doctoral research offers scholars opportunities to explore frontiers, their need to be accepted into the research
community can force them to compromise their methodology and ask irrelevant questions which meet the criteria of the favoured research paradigm against which they are being judged. One important lesson which needs to be learned from any discussion of research is that the most significant aspect of the research activity is to ask the right questions, questions which are pertinent, researchable, and with outcomes directed at a process of change within appropriate social contexts. From these questions, a suitable paradigm can be chosen.

In an international reading research community where the paradigm dictates the questions we can ask, we are in danger of being trapped by a world view which cannot develop in cooperation with the profession of reflective practitioners we require. It is this view of partnership which must now lead the way ahead for reading research if we are to ensure for ourselves and for those who make legitimate political demands, that the impact of reading research is changing and has value for all concerned.
## Action Research Cycle

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<tr>
<th>Discourse (among participants)</th>
<th>Reconstructive</th>
<th>Constructive</th>
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<tr>
<td>4 Reflect</td>
<td>1 Plan</td>
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<tr>
<td>Retrospective on observation</td>
<td>Prospective to action</td>
<td>(constructed action)</td>
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<td>(reconnaissance and evaluation)</td>
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<tr>
<th>Practice (in the social context)</th>
<th>2 Act</th>
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<tr>
<td>3 Observe</td>
<td>Retrospective guidance from planning</td>
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<tr>
<td>Prospective for reflection</td>
<td>(deliberate and controlled strategic action)</td>
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<tr>
<td>(documentation)</td>
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