SECTION 1
APPROACHES TO EDUCATIONAL RESEARCH

Educational research can take a wide variety of forms and serve many different purposes. Sometimes it is located within social science disciplines, especially psychology and sociology. Other work is of a more policy-oriented nature, and some is quite closely linked to educational practice. There is also diversity at the level of methods used. These include: laboratory and classroom experiments; large-scale surveys of the behaviour, attitudes, aptitudes, etc., of teachers, children, heads, governors and others; analysis of published and unpublished texts,-both qualitative and quantitative; and small-scale investigations of particular institutions or locales. A common way of conceptualizing this diversity in method and data is the distinction between quantitative and qualitative approaches, between research which relies primarily on numerical data and that which uses mainly verbal data. This is a distinction which will be used in this module; though as we shall see it is by no means unproblematic.

1.1 THE EARLY DEVELOPMENT OF EDUCATIONAL RESEARCH

In the sense in which we know it today, educational research began in the late nineteenth and early twentieth centuries. Before that much had been written about education, but this had been primarily concerned with how children *should* be educated. While such 'educational theory' was usually based on practical experience, it involved little systematic investigation of teaching and learning as they actually occur. What was new in the late nineteenth century was a concern with the empirical nature of educational processes, and an attempt to apply a rigorous approach to understanding them. While the new educational researchers were still motivated by the age-old concern with how education could be improved, they believed that such improvements must be based on empirical knowledge produced by scientific method.

Activity 1 (allow 2 hours)

You should now read 'History of educational research' by G. de Landsheere (Article 1 in Reader 1). This outlines the history of educational research from the late nineteenth century up until the 1960s and 1970s.

This article probably includes names and other references with which you are not familiar. Don't worry about these: they shouldn't prevent you from getting a sense of the development of educational research. You're not expected to remember the historical details the article provides.

Psychological approaches

As de Landsheere makes clear, the new educational research had its origins in late nineteenth century psychology, which was itself only just emerging as a distinct discipline at the time. This initial connection with psychology affected both the topics that were investigated and the methods which were used. Above all, it led to a commitment on the part of educational researchers not just to a scientific approach to their work but also to a particular interpretation of the methodological requirements of science; one which has come to be referred to broadly, and somewhat dismissively, as 'positivist'. This placed great emphasis on the need for quantitative measurement of the characteristics of learners and teachers, and of their behaviour. Experimental method was regarded as the ideal model of a scientific approach, even though by no means all early educational research was experimental in character. The aim of the new educational research was to lay a

theoretical basis for understanding the processes of teaching and learning, one which would revolutionize education by putting it on a scientific footing.

A particularly important aspect of this early history of educational research was the construction of mental tests of various kinds - of intelligence, academic achievement, personality, and attitude — which were applied to pupils. Alongside these were developed various rating scales and observational schedules for measuring aspects of teachers' behaviour (Dunkin and Biddle, 1974). Such tests and behavioural measurements were believed to offer teachers, educational administrators and others valuable information of an objective kind which would facilitate both effective educational planning and the monitoring of educational processes to assess their success.

The sociology of education

In these ways psychology and the methodological ideas associated with it, had an enormous influence on the early development of educational inquiry. However, the *sociology* of education also developed over much the same period. In the United States it was initially associated with the educational reform movement inspired by pragmatism and progressivism (see Floud and Halsey, 1958, p. 165). In Britain, from the 1930s onwards, its prime concern was with the extent to which children from different social classes enjoyed equality of opportunity within the educational system. Such equality was not only valued in itself, but also regarded as essential if the nation was to capitalize on its talent, and thereby to promote its development as a modern technological society. In the 1950s, when the sociology of education began to flourish, the main focus of research was the impact of the 1944 Education Act in England. Previously, most pupils had received all their education in elementary schools, with only a minority getting a secondary education, secondary places generally being fee paying. The 1944 Act led to the establishment in most parts of England and Wales of a tripartite or bipartite system of grammar, secondary modern and (in some places) technical schools. At the age of eleven children were allocated to these schools on the basis of examinations, intelligence tests and/or teachers' recommendations, the methods varying from local authority to local authority, and also over time. Grammar and technical schools catered for those who passed the 'eleven-plus' assessment; secondary modern schools were for those who did not. (Similar changes were instituted in Scotland in 1945 and in Northern Ireland in 1947.) The earlier system had clearly disadvantaged children from the working class, and much sociological research of the 1950s and later was designed to discover how far the new arrangements rectified this.[1]

This sociological research was not experimental in character: it involved the analysis of official statistics and of data from questionnaire surveys. However, it employed similar measurement techniques (for instance, of pupils' ability and social class) to those used in psychological research. It also used statistical analysis designed to simulate the manipulation of variables involved in experimental research, and thereby to identify causal relationships. Quantitative research relying on these techniques continues today though now the focus is more likely to be on differences in educational outcomes between pupils from different ethnic groups or on 'school effectiveness' (see, for instance, Drew and Gray, 1990 and 1991; Gray *et al.*, 1990). As an illustration, we will look briefly at the latter.

School effectiveness

The measurement of 'school effects' is an area of educational research which has come to have considerable significance in recent years. One of the original stimuli for this research was the report in the United States by Coleman (1966). This was

See Floud *et al.*, 1956, and Douglas, 1964. A recent study in the same tradition, which brings the story a little more up to date, is Halsey *et al.*, 1980. For similar studies relating to Scotland and Northern Ireland, see Gray *et al.*, 1983 and Cormack and Osborne, 1983, respectively.

based on a survey of a large sample of schools, documenting their material circumstances and the home backgrounds and levels of achievement of their pupils. Comparison was made mainly between schools 'which had a majority of white pupils and those with a majority of black pupils, reflecting concern about the fact that black people tended to be concentrated at the bottom of the occupational structure and suffered a disproportionate level of unemployment. Analysis of these data suggested that the differences between schools in which black and those in which white students predominated were surprisingly small, and that school characteristics seemed to have little effect on the levels of pupils' achievement. This led Coleman to the conclusion that variation in individual ability and family background are much more important than school characteristics in explaining variation in pupils' achievements. Re-analysing the same data, Jencks *et al.*, (1972, p. 159) came to much the same conclusion in this respect, commenting that: 'qualitative differences between high schools seem to explain about two per cent of the variation in students' educational attainment'. This also fitted with the dominant view on the part of researchers in Britain during the 1960s and early 1970s, where the emphasis was on the effects on children's educational achievement of social class differences in home environment and parental attitude to education.

These apparently pessimistic conclusions about the impact of schooling began to be questioned in the 1970s, however. It was pointed out that Coleman had only measured a very limited number of features of schools, and that these had mainly concerned differences in material resources. The effects of factors which seemed likely to be more important, such as teacher-pupil relations or the organizational structures and climates of schools, had not been taken into account. Research investigating these began to suggest that 'schools can make a difference'. An early example in Britain was the work of Rutter *et al.* (1979), which claimed to discover significant 'school effects' arising from such factors as the extent to which schools had a balanced intake of pupils in terms of ability, set clear academic goals and had high expectations of pupils, focused on rewarding good behaviour and took rapid action to deal with disruption, etc. (For a useful discussion of this and other studies, see Reynolds, 1985.) More recent work, employing more refined statistical techniques, has also claimed to discover significant differences among schools in their effects on pupils' achievements (see, for instance, Smith and Tomlinson, 1989; Gray *et al.*, 1990; Paterson, 1991; Willms, 1992).

Educational evaluation

Another area where a quantitative approach became very influential was in the field of educational evaluation. In Britain in the 1960s many large-scale projects for curriculum development were sponsored by the Schools Council and by private funding agencies, such as the Nuffield Foundation. Sometimes, these projects were subject to evaluation as part of the process of implementation. Initially, this often took the form of a translation of the objectives of the project into quantitative terms, and investigation relying on measurement of pupils' achievements and attitudes to determine whether those objectives had been met. This quantitative approach to evaluation has continued to be influential; though, as we shall see, qualitative forms of evaluation have become more prominent in recent years.

Activity 2 (allow 2 hours)

You should now read 'Equal opportunities in the curriculum in single sex schools' by M. Bird and A. Varlaam (Article 1 in the Offprints Reader). As you read it, write a brief summary of the main findings they present and the sort of evidence they offer in support of it.

In the course of their discussion the authors make reference to the 'statistical significance' of their findings. What they mean by this is that they have tested the differences in attitude they found to check whether these were likely to have been produced by chance, rather than by the effect of the students' experience of 'non-traditional' subjects. Later in the Study Guide we will explain in more detail what is involved in testing results for their statistical significance.

In our brief and rather selective account of the history of educational research we have concentrated on what, until fairly recently, was the most influential element of it: quantitative approaches modelled to one degree or another on what was taken to be the method of natural science. We turn next to qualitative research, which has come to have considerable influence in the past few years.

1.2 THE RISE OF QUALITATIVE APPROACHES

Criticisms of quantitative research

By no means all early educational research was quantitative in character. For instance, in the late nineteenth century a number of studies of child development were carried out, usually involving psychologists studying their own children, where the primary method was careful observation and verbal reporting of stages of development (see Wright, 1960). However, this early qualitative work was subsequently eclipsed by the use of quantitative methods, and it has had very little impact on more recent qualitative approaches. These arose largely as a reaction against what were seen as the failings of the dominant quantitative tradition. In particular, it was argued that, although the numerical evidence produced by quantitative research looks similar in kind to that used in the natural sciences, and therefore appears authoritative, there are some fundamental doubts about its validity: about whether it represents accurately what it claims to represent. In part, what is involved here are problems of measurement.

Measurement problems

Quantitative researchers themselves are not unaware of these problems, but they view them rather differently from their qualitative critics. We can get a sense of this by looking at an influential commentary on some experimental research by the famous Swiss psychologist Jean Piaget. Over a lifetime of work, which spanned much of the twentieth century, Piaget developed an influential account of child development that portrayed the child as evolving through various stages, primarily as a result of practical involvement with the physical and social world, each stage providing for progressively more complex capabilities. His work has been criticized by some for being insufficiently rigorous from an experimental point of view. In part this stems from a difference between Piaget and his critics about the requirements of scientific research. But it also reflects an increasing awareness by psychologists of the extent to which their experimental findings are open to alternative interpretations, and their attempts to design more sophisticated experiments to allow for these.

Activity 3 (allow 2 hours)

You should now read 'Failing to reason or failing to understand?' by M. Donaldson (Article 9 in Reader 2). As you do so, make a note of the various sorts of explanation mentioned for the difficulties the children had in answering the experimenters' questions correctly.

Piaget's interpretation of his research was, of course, that most of the children were unable to perform the logical task involved in answering his questions, this being because their cognitive development had not reached the necessary stage. Donaldson questions this. She mentions the possibility that the children were simply unwilling to play the experimenter's game, but she concentrates particularly on the suggestion that the children misunderstood what the experimenter was asking. This points to the fact, obvious enough but important in its implications, that experiments are social situations in which interpersonal interactions take place. The implication of this is that Piaget's work, and attempts to replicate it, not only involve

measurement of children's capacities for logical thinking but also of the extent to which they have understood what was required, their willingness to comply with these requirements, and the experimenters' success in communicating what is wanted and motivating the children to answer appropriately.

The response of Donaldson and her co-researchers to these problems was to devise ingenious new experiments which sought to test the competing interpretations to which Piaget's original work was subject. Others have taken a more radical line, however, treating this type of problem with experimental research as one which cannot be overcome by an improvement in technique. Instead, it has been taken to indicate that there is something fundamentally wrong with experimental research, or at least that it suffers from severe limitations.[2]

Parallel arguments emerged in relation to other forms of quantitative research. Thus, we find Mehan developing similar criticisms of psychological and educational tests to those which Donaldson made of Piaget's work. He points out how test questions may be interpreted in ways that are quite different from those intended by the researcher:

> A question from [a] language development test instructs the child to choose the 'animal that can fly' from a bird, an elephant, and a dog. The correct answer (obviously) is the bird. Many first grade children, though, chose the elephant along with the bird as a response to that question. When I later asked them why they chose that answer they replied: That's Dumbo'. Dumbo (of course) is Walt Disney's flying elephant, well known to children who watch television and read children's books as an animal that flies.
> (Mehan, 1973, p. 249)

Here Mehan is pointing out that interpretation of the results of tests depends on the assumption that there is a correspondence between the interpretative frame employed by the test constructor and that adopted by those who take the test. Any disparity between these frameworks may mean that the test is not measuring what it is intended to measure.[3]

Test constructors recognize this problem and engage in a great deal of pilot research to eliminate potential ambiguities and misunderstandings. In other words, they see the problem as a technical one which can be minimized by improved test construction. However, Mehan believes that the problem is endemic to tests, and that it can only be dealt with by a change in approach. He summarizes his argument as follows:

> This examination of testing interactions shows test assumptions are not met in practice [...] Test materials do not always have the same meaning for tester and child. The child's performance is not just the result of his ability and the stimulus presented but is also influenced by contextually provided information [...] In short, test taking and test scoring are interpretive interactional processes which should be approached and studied as such.
> (Mehan, 1973, pp. 255-6)

In other words, Mehan believes that what is required is qualitative research into the interpretive and interactional processes involved in learning, not reliance on quantitative measurements whose validity is in doubt.

Much the same criticism of quantitative research was developed in other areas too, for example in relation to the official statistics and questionnaires on which much social and educational research relies (Kitsuse and Cicourel, 1963; Phillips, 1976). Thus, it has been pointed out that survey data do not simply represent facts about the world, but are the product of complex patterns of social interaction between interviewers and interviewees.

For a review of these criticisms, see Rosnow, 1981.

For a similar analysis of standard assessment tasks in the English national curriculum, see Cooper, 1992 and 1994.

Criticism of the logic of quantitative research

However, it was not just the failings of psychological, social and educational *measurement* which were criticized. Questions were also raised about the assumption, built into the logic of quantitative research, that causes can be identified by physical and/or statistical manipulation of variables. Critics suggested that this fails to take account of the very nature of human social life, assuming it to consist of mechanical cause-and-effect relationships; whereas, in fact, it involves complex processes of interpretation and negotiation that do not have determinate outcomes. From this point of view, it is not clear that we can understand why people do what they do in terms of the simple sorts of causal relationships on which quantitative research focuses. Social life, it is suggested, is much more contextually variable and complex (for these arguments, see, Blumer, 1969; Matza, 1969).

These criticisms of quantitative research are not simply about method, about the relative effectiveness of different research strategies. They also involve more deep-seated disagreements about the nature of human behaviour and how it can be understood. Very often this has been formulated as a conflict between the positivist assumptions of quantitative research and the very different assumptions, sometimes referred to as 'naturalistic', 'interpretive' or 'phenomenological', of the newer qualitative approaches. This alternative philosophy of research stresses the way that people's perspectives on the world shape their actions, and the diversity of such perspectives. It has led to an emphasis on the importance of researchers understanding those perspectives, this often being seen to require an exploratory approach in which the researcher suspends his or her own assumptions in order to learn to see the world from others' points of view. Equally important, anti-positivist views treat action as not being determined by prior perspectives but rather as constructed over time in ways which are sensitive to their contexts. This results in an emphasis on the detailed investigation of actual social processes as these occur in natural situations, instead of (or as a complement to) the use of other types of data.

Reviewing the quantitative-qualitative debate

Activity 4 (allow 10 minutes)

List the main criticisms that qualitative researchers made of quantitative research.

What response do you think quantitative researchers would give to these criticisms? Think about this and write down the counter-arguments they might use before reading on.

Quantitative researchers have responded to the criticisms of qualitative researchers in a variety of ways. Often, they have accepted that these criticisms have some force, but have argued that they do not undermine quantitative research. It is pointed out, for example, that criticisms of quantitative measurement often focus on examples which are unsound even in terms of the canons of quantitative research. Similarly, it has been argued that the problem of interpreting the meaning of people's behaviour is not as severe as the critics suggest, that in most cases the researcher and the people being studied share a common framework of meaning, as a result of living in the same society. Indeed, it might be argued that if the meaning of behaviour were as unstable and unpredictable as interpretive critics propose, then qualitative research itself would not be feasible: no researcher could ever be sure that he or she had understood the meanings involved in human social life.

Much the same sort of response can be made in relation to the issue of causality. Quantitative research often deals with quite complex causal relationships, it is not restricted to crude mechanical laws. And, furthermore, if one denies all causality, what basis remains for qualitative explanations of human behaviour?

Besides defending their work against criticism in this way, quantitative researchers are also able to point out that qualitative inquiry is itself by no means free of problems. It often deploys verbal quantifications, for example by means of such words as 'often', 'usually', 'frequently', 'generally', 'typically', etc., and yet the use of these is not usually based on any rigorous counting procedure; indeed, there may not even be any explicit indication of what were and were not taken to be instances of the phenomena concerned. This means that the generalizations produced are subject to the sorts of errors that have been documented in informal observation, such as being unduly influenced by novel or extreme occurrences (Sadler, 1981).

Similarly, qualitative researchers often make causal claims, but their procedures of inquiry rarely involve the sort of control of variables which experimenters or survey researchers use; and it is not clear what other means are effective in ruling out alternative explanations.

There is much truth in both the criticisms and the counter-criticisms. However, the contrast assumed by this debate between two paradigms, between two opposed methods and philosophies of social and educational research, is rather misleading. Much educational inquiry uses both quantitative and qualitative methods, and there are good reasons for believing that these can complement one another in important ways (see Bryman, 1988 and 1992). Furthermore, at the philosophical level, while positivism has certainly been very influential in the twentieth century, not least in promoting the view that natural science is the model for all knowledge and inquiry, there has been considerable disagreement amongst those influenced by this philosophy about the nature of scientific method and about how it should be applied to the study of the social world. Nor is there just one alternative to positivism, so that the influence of many different forms of anti-positivism is to be found within qualitative research. Equally important, divergence in philosophical orientation is not all that divides qualitative researchers; there are also differences stemming from disciplinary and theoretical commitments, and from different ideas about the proper relationship between research and practice.

Characteristics of qualitative research

Activity 5 (allow 2 hours)

You should now read 'Qualitative research traditions' by P. Atkinson *et al.*, (Article 2 in Reader 1). As with the de Landsheere reading, there may be terms used with which you are not familiar, and there are a lot of references. Here again, though, what is important is the overall picture which the article provides, not the details of the particular approaches.

As Atkinson *et al.* make clear, qualitative research can take many forms. At a practical level, this is loosely indicated by the use of a variety of overlapping terms, such as 'ethnography', 'case study', 'participant observation', 'life history work', 'unstructured interviewing', etc. In general, though, qualitative work has the following characteristics:

- A strong emphasis on *exploring* the nature of particular educational phenomena, rather than setting out to test pre-defined hypotheses.
- A tendency to work with 'unstructured data': that is, with data that have not been coded at the point of collection in terms of a closed set of analytical categories or a formally constructed scale. When engaging in observation, qualitative researchers audio- or video-record what happens or write detailed open-ended fieldnotes, rather than coding behaviour in terms of a set of categories, or rating them on a scale, as would a quantitative researcher employing 'systematic observation'. Similarly, when interviewing, open-ended questions will often be asked rather than questions requiring choice from pre-specified answers of the kind typical, for example, of postal questionnaires. In fact, qualitative interviews are often designed to be close in character to informal conversations.

- Typically, a small number of cases will be investigated in detail, rather than any attempt being made to cover a large number, by contrast with much quantitative research, such as systematic observational studies and social surveys.
- The analysis of the data involves explicit interpretation of the meanings and functions of human actions, and mainly takes the form of verbal descriptions and explanations. Quantification and statistical analysis play a subordinate role, at most.

The two areas of educational research where criticism of quantitative research and the development of qualitative approaches initially emerged most strongly were the sociology of education and curriculum evaluation research.

Qualitative work in the sociology of education

The trend towards qualitative research in the sociology of education began in Britain in the 1960s, with studies of a secondary modern school and a grammar school by Hargreaves (1967) and Lacey (1970).[4] They employed an ethnographic or participant observation approach, though they also collected some quantitative data, for example on the friendship patterns among pupils. Both researchers began by working as teachers in the schools, albeit with reduced teaching loads. They observed lessons, interviewed teachers and pupils, and drew on school records. And they studied the schools for relatively long periods, spending many months collecting data.

A focus of both Hargreaves' and Lacey's research was the effects of streaming which, they claimed, polarized pupils' attitudes towards schools and thereby affected their levels of educational achievement. They argued that streaming increased the motivation and attainments of pupils in top streams and depressed those of pupils in bottom streams. These authors also claimed that a similar effect occurred *within* streams, with the differences in motivation and achievement between those ranked high or low by the teacher being amplified. Although the work of Hargreaves and Lacey contrasted with earlier research in the sociology of education in being focused on intra-school processes, and being substantially qualitative in character, it shared the concern of previous researchers in this field with social-class inequalities. Both authors looked at the extent to which differentiation and polarization processes within the schools reinforced social-class differences in pupils' achievements. And this theme has been continued in more recent work by Ball (1981) and Abraham (1989).

In the late 1960s and early 1970s other qualitative researchers within sociology broke more sharply with the earlier tradition of quantitative educational sociology. These 'new sociologists of education' (Young, 1971; Gorbutt, 1972) argued that this research did not ask deep enough questions about the phenomena it investigated, that it took too much for granted. For instance, it assumed that the education which schools dispensed was of positive value and therefore it did not give enough attention to the nature of school knowledge and pupils' learning, concentrating exclusively on the distribution of educational opportunities. These 'new sociologists' sought to place the question of who defines what constitutes education on the research agenda. They suggested that the nature of teaching and learning processes in schools reflects the cultural, and (ultimately) the political and economic, dominance of some groups in society over others. This change of theoretical orientation in the sociology of education had methodological implications: it was widely believed that only qualitative research could provide an understanding of the cultural and political processes involved in schooling.

Both the example of Hargreaves and Lacey and the writings of the 'new sociologists' encouraged the growth of ethnographic and other forms of qualitative research in the 1970s and 1980s. At the same time there was a shift in interest away from social-

A girls' grammar school was also studied at the same time by Lambart, but the results were not published until later: see Lambart, 1976 and 1982.

class inequalities to those relating to gender and 'race'. This was stimulated, in large part, by the growing influence of feminism and of multiculturalism/anti-racism. Many of the same arguments about the role of schools in generating inequalities were developed here, and much emphasis was placed on qualitative investigation of school processes. One consequence of this has been an increased amount of research of a qualitative kind on women's and girls' experiences of the educational system (see, for example, Stanworth,1981; Griffin, 1985; Arnot and Weiner, 1985; Weiner and Arnot, 1987). Similarly, there has been a growing body of research looking at the experience of ethnic-minority children in schools (see, for instance, Eggleston *et al,* 1986; Mac an Ghaill, 1988; Foster, 1990; Gillbom, 1990).[5]

Activity 6 (allow 3 hours)

You should now read 'Gender and the sciences: pupils' gender-based conceptions of school subjects' by L. Measor (Article 2 in the Offprints Reader).

As you do so, map out the central points of Measor's argument, and take note of the nature of the evidence which she provides in support of it. What are the main differences in this respect between her account and that of Bird and Varlaam (Article 1 in the Offprints Reader)? What do you see as the advantages and disadvantages of each approach?

Qualitative approaches to curriculum evaluation

A similar shift from quantitative to qualitative work took place in the field of curriculum evaluation. As we noted earlier, the original strategy adopted in that field was one in which the goals of an innovation were specified in terms of measurable features of the situation. Very often gains in knowledge and/or changes in attitude on the part of pupils were then assessed by comparing the results of tests before and after the innovation. This approach was criticized on a variety of grounds. The most fundamental criticism paralleled arguments against quantitative research in the sociology of education: that it makes false assumptions about the nature of human beings and their social interaction; and that, as a result, it cannot capture the real effects of innovations. There were other criticisms, too. For instance, it was argued that being concerned solely with outcomes, this type of quantitative evaluation failed to document the processes which had led to those outcomes and, consequently, was unable to understand how they had been produced. It was also suggested that the narrow focus of quantitative research meant that unanticipated, but perhaps very significant, outcomes were unlikely to be discovered.[6]

A variety of alternative approaches to evaluation emerged, all relying on qualitative method (see Hamilton *et al.,* 1977). Also important was the development of what came to be referred to as the teacher-as-researcher or educational action research movement, which led to growing emphasis on practitioners researching their own professional practice (Stenhouse, 1974; Nixon, 1981; Elliott, 1991) As its name implies, this began as a movement among teachers investigating their own classrooms. However, the concept of the reflective practitioner (Schon, 1983 and 1987) was soon extended more widely, partly under the influence of growing demands for accountability within the education system. Educational action research now often involves members of management teams investigating their own institutions (see Wallace, 1987; Lomax, 1995).

As a result of these trends, the amount of qualitative research in education has grown considerably since the 1970s, spreading to many other areas, for example to the study of educational administration and management and to the investigation of language issues in education. Indeed, it has also started to have an impact within psychology (see *The Psychologist,* 1995; Richardson, 1995).

Foster *et al.,* 1995, provide a critical assessment of research on school processes and educational inequality.

For an illuminating history of the field of curriculum evaluation, see Hamilton, 1976.

Changing conceptions of qualitative research

It is worth reiterating that the distinction between quantitative and qualitative approaches is not as simple as it might seem. We have noted that there are diverse forms of both kinds of research. And we also saw that the philosophical contrast between positivism and anti-positivism, which is often held to underpin the distinction between quantitative and qualitative approaches, is far too crude to represent the different conceptions of the nature of the human social world and how it can be understood which have guided educational research. Thus, while they reject exclusive reliance on quantitative method, many qualitative researchers have retained a commitment to at least some of the features of what might be referred to as a 'scientific approach' to educational research, and have often combined the use of qualitative and quantitative techniques in their work. Many have also remained committed to the task of testing empirical claims and trying to maintain objectivity of analysis.

In recent years, however, there has been an increasing number of qualitative researchers who reject all use of quantitative method and/or who question the influence of the model of natural science on educational research. As a result, they have started to challenge many features of conventional *qualitative* research. Thus, it has been denied by some that educational research can test claims against evidence, on the grounds that no evidence can be independent of the presuppositions of the researcher. In part, this argument reflects changes in the philosophy of science in the past few decades, in particular the discrediting of the idea that there is a body of data (for example, data produced by direct observation of physical behaviour) whose validity is given to us independently of all theoretical presuppositions. The consensus among philosophers of science today is that all observational data rely on theoretical presuppositions. And not only may these presuppositions be wrong but which ones are taken to be true varies across cultures and over historical periods. Thus, work in the history of science has shown how, in the past, scientists have interpreted the same data very differently from modern scientists. For example, at one time there was widespread reliance on astrology to explain all manner of events. Yet few researchers today take this seriously, despite the fact that there are well-established correlations which might be treated as open to astrological explanation, for example that between children's dates of birth and their levels of educational success. Astrological explanations are now generally regarded as so implausible on theoretical grounds as to be not worth considering.

Increasingly, it has come to be argued that the changes in theoretical presuppositions found in the history of science cannot be accounted for simply in terms of our better knowledge of the natural world today. Rather, they reflect shifts in frameworks of understanding whose relationship to empirical evidence is much less close than was previously assumed. Furthermore, this is a two-way relationship: theoretical ideas influence the selection and interpretation of evidence as well as being tested against empirical data.[7]

It has sometimes been concluded from these ideas that we must simply accept that there are different perspectives on the world, based on different theoretical presuppositions; so that the assumption traditionally built into the scientific approach, that research can provide us with conclusive evidence to judge between competing accounts, is false. This leads to a rejection of the whole idea that the goal of educational inquiry can be the production of accurate representations of educational institutions and processes. Instead, it is argued that the accounts produced by researchers are constructions that reflect their personal characteristics and socio-historical circumstances. And it is sometimes inferred from this that these accounts should be judged by aesthetic or political, as much as by cognitive, criteria.[8]

[7] For a now classic example of this work in the history and philosophy of science, see Kuhn, 1970.

[8] For an account of the development of these arguments, see Hammersley, 1995, Chapter 1.

A closely related development has been questioning of the distinction between factual and fictional accounts. The reliance of these two forms of writing on similar rhetorical forms has been highlighted; and it has been suggested that the educational value of research reports often depends heavily on these rhetorical devices. From this point of view, fictional accounts may be of more value than purportedly 'objective' accounts (Barone, 1990). We can get a sense of this trend of thought from a list of questions which Walker raises at the beginning of an article entitled 'On the uses of fiction in educational research':

> Is objectivity a desirable aspiration?
>
> Is it feasible? Is an objective account possible?
>
> Can the quest for objectivity distract us from the pursuit of truth?
>
> Can some truths only be realized by subjective methods?
>
> Can subjectivity be treated objectively?
>
> Is fiction a legitimate device for an evaluator/researcher to use? (Is fiction the only route to some kinds of truth?)
>
> What are the dangers of assuming that description must be scientific (or a technology) rather than artistic (or a craft)?
>
> (Walker, 1978, pp. 147)

The challenge to the concept of objectivity

At the heart of these radical criticisms of conventional forms of educational research is a disagreement about the nature of what such research can produce. Most educational inquiry aims at objective knowledge, at knowledge whose validity is independent of the researcher. As we have seen, some qualitative researchers now question whether such knowledge is achievable, even in principle.

This has been encouraged in recent years by the influence of French poststructuralist and postmodernist philosophies, notably the work of Derrida, Foucault, and Lyotard.[9] Despite considerable differences among the views of these writers, a central theme is rejection of the possibility of a scientific understanding of the world, on the grounds that this assumes a fixity of meaning which does not exist. Science claims to produce a single true account of reality, but the poststructuralists and postmodernists suggest that there are only diverse and changing interpretations, and that any meaning given to the world results from the exercise of power: meaning is imposed on the world, and on other people. Indeed, the work of Foucault was specifically concerned with exposing the power of science in modern societies, especially of medical, psychological and social sciences.

These ideas, combined with the growing influence of feminism and anti-racism, have encouraged a fundamental critique of conventional forms of educational research, leading to an emphasis on research as story-telling, in which there are always other stories to be told, and a concern with giving voice to those regarded as marginalized by white, male culture; of which conventional, including much qualitative, educational research is seen as representative. While these developments do not represent a single coherent movement, and have had only limited influence as yet, the underlying issues which they raise - notably about the possibility and desirability of pursuing truth and objectivity - are currently being given attention very widely, and with good reason.

[9] For an account, see Best and Kellner, 1991. For examples of the application of these ideas within educational research, see Lather, 1991; Ball, 1990a; and Usher and Edwards, 1994.

Activity 7 (allow 6 hours)

You should now read the following articles from Reader 1: 'Objectivity in educational research' by E. Eisner (Article 4) and 'Subjectivity and objectivity: an objective inquiry' by D. C. Phillips (Article 5). As you do so, write down the key points of their arguments. How convincing do you find them?

Eisner criticizes what he takes to be the traditional conception of objectivity underlying much educational research. What he calls 'ontological objectivity' refers to its aim: producing an account which captures the phenomena investigated as they truly are, independently of the researcher. Educational researchers often believe this to be achievable by means of what Eisner calls 'procedural objectivity' - the following of a method that eliminates, or at least minimizes, the scope for personal judgement and therefore for subjective bias. Eisner criticizes both these aspects of the concept of objectivity. He argues that in order to show whether ontological validity has been achieved we need to have direct access to the area of reality being represented, so that we can compare the representation produced by research with reality, and thereby check that they correspond. This is clearly impossible and, if it were possible, it would make research unnecessary. He adds other reasons in support of this argument: for example, that perception and understanding are always framework-dependent, so that the framework of presuppositions on which we rely allows us to perceive and understand some things, but not others. Moreover, this framework plays a role in actually constituting what it is we see and understand. From this point of view knowledge and experience are achievements, products of the transaction between our frameworks of perception and understanding, on the one hand, and features of a 'world-out-there' that we cannot know directly, on the other. Eisner claims that unwillingness to relinquish the notion of objectivity stems from the feeling that this would leave us without bearings in the world. He argues that this is not so, and that we can and must learn to live with this sort of relativism. He suggests that it does not prevent us from using the concept of truth, so long as we understand that what we regard as true depends upon shared frameworks of perception and understanding. While we cannot have knowledge whose validity is certain, we can still judge whether beliefs are more or less sound. Furthermore, we must remember that the literal conception of truth as correspondence only applies to those forms of inquiry directed towards achieving literal (rather than, say, artistic) truth, and that these are not the only valuable ones.

Phillips' paper adopts what, on the face of it at least, is a contrary position. He explicitly criticizes Eisner, claiming that the relativism which the latter advocates leaves us in a position where we cannot make reasonable judgements between competing empirical claims. He spends most of his article demonstrating that relativism does not necessarily follow from the absence of some foundation of data whose validity is absolutely certain. He is at some pains to show not just that the concept of truth is legitimate and desirable, but that so also is the concept of objectivity.

To some extent, what we have here are two writers who, though they address the same issues, do not seem to join in argument; a fact that might be taken to support Eisner's claim that 'when people do not share frameworks, there is no common ground; they cannot understand each other' (p. 14). We can get a sense of what is involved in the disagreement if we recognize that the two authors are criticizing opposite polar positions that each regards the other as exemplifying. To call the target of Eisner's critique 'objectivity' is potentially misleading because, as he points out, that term is used to cover a variety of considerations. We would do better to see him as criticizing what he refers to elsewhere in the article as 'naive realism'. This is the idea that all knowledge, to be justifiably referred to as such, must constitute a full representation of the objects known and a representation whose validity is absolutely certain. Furthermore, this view seems to require that knowledge can only be gained by following a procedure which excludes subjective influences and

thereby gives direct access to reality. It is important to notice, however, that Phillips also rejects this position.

By contrast, Phillips takes as his target relativism. This relativism, however, is not synonymous with the relativism that Eisner admits to and, for this reason, we shall call it 'extreme relativism'. Extreme relativism is the view that all 'knowledge' is a construction based on a particular framework of presuppositions, that these presuppositions can never be fully assessed because all assessments themselves rely on presuppositions, and that all empirical claims must therefore be treated as equally valid in their own terms. From this point of view we cannot talk of validity in terms of correspondence to a reality that stands outside of any framework of assumptions, nor is there a procedure which provides access to any such reality.

We are not faced, then, with a conflict between two positions each represented by our authors, but rather with two authors attacking opposite polar positions that neither of them seems to occupy. Thus, Eisner suggests that quantitative educational research is founded on naive realism. Yet the philosophical ideas associated with quantitative research have been quite diverse and have included rejection of naive realism in favour of approaches which seek to avoid all reference to any reality beyond our experience. Indeed, what Eisner refers to as procedural objectivity has been regarded by some quantitative researchers as the only form of objectivity there is, agreeing in this respect with him that this is 'all we can ever have' and that we must 'recognize it for what it is'. (This is a point that Phillips makes on page 66.)

Similarly, Phillips treats Eisner as effectively claiming that any view is as good as any other, that this is what the abandonment of objectivity means. Yet Eisner clearly does not see his position in these terms. Towards the end of his article he quotes the philosopher of science Stephen Toulmin to the effect that even in the absence of knowledge that is certain we can still make reasonable assessments of competing claims. It must be said, though, that Eisner does not spell out how this is to be done and, in particular, how judgements of validity are to be justified: nor does he address the issue which Phillips raises about whether it is possible to offer rational justification for the selection of frameworks.[10]

These two articles indicate the sorts of philosophical issues which are at the heart of much discussion about validity among qualitative educational researchers today. Our analysis of them shows that the differences of view to be found are often more complex and subtle than they might at first appear.

1.3 CONCLUSION

In this section we have looked at the history of educational research and at some of the debates about how it can and should be pursued. We examined the dominance of quantitative approaches and the reaction against them, in the context of debates about positivism and anti-positivism. And we noted how criticism of quantitative method was accompanied by a great increase in the amount of qualitative research, initially in the sociology of education and in evaluation studies, but later across all fields of educational investigation. At the same time, we saw how the continuing commitment of much qualitative research to key elements of the scientific method has recently come under challenge; in part through the influence of poststructuralist and postmodernist ideas.

We have used the distinction between quantitative and qualitative approaches to educational research as a way of organizing our discussion up to this point in the course, and we shall go on using it. However, as we mentioned earlier, there are dangers with this distinction. It may lead us to believe that there are just two alternatives in doing research, so that one must choose either to do a quantitative or a qualitative study. Yet there are different kinds of quantitative research, and there is

[10] More extensive presentations of these authors' positions can be found in Eisner, 1991, and Phillips, 1992.

much disagreement among qualitative researchers not just about how to do research but also about its goal. We also noted that qualitative researchers often use quantitative as well as qualitative data. And the converse is also true: quantitative researchers often draw on qualitative data, for example by including 'free response' items in questionnaires. Furthermore, in recent years there has been a growing trend among social researchers towards the combining of qualitative and quantitative methods, in an attempt to capitalize on the benefits of both (Bryman, 1988; Brannen, 1992).

The distinction between quantitative and qualitative approaches to educational research is a useful device, then; but it does not present a very accurate picture of either the principles or the practice of educational research today. We need to exercise great care in its use.

Activity 8 (allow 40 minutes)

For FTMA 01 you are asked to produce an outline of the topic you plan to make the focus of your research proposal and pilot work. Here, we want you to give some preliminary consideration to what sort of methodological approach you intend to adopt, and why; against the background of the diverse methodological stances we have outlined in this section. Is your orientation close to one or other of those we have discussed? Does it share elements of more than one? Is it quite different to all of them? If you have been able to come to tentative conclusions about these questions, select an approach which contrasts with the one which you plan to use, and think about how adopting this would affect investigation of your topic. Is there anything you could usefully learn from this approach in your work?

In the next section we turn to an issue that confronts both quantitative and qualitative researchers: the question of what the relationship is and should be between their work and educational practice; and of the extent to which that relationship is 'political'.