Educational Research - Two Paradigms: Two Epistemologies

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Such a move would, as always, be seriously contested by managers and professionals who realise that they have selfish vested interests to defend. Nevertheless, if successful in the schools, such a move towards egalitarian collaboration would probably be followed by the members and clients of other organisations, for the ultimate benefit of us all.

Professionals, such a medical practitioners, may certainly be necessary to treat the symptoms of a corrupt mankind. However, if the causes of the corruption are to be cured and mankind is to graduate to a higher level of humanity, then it is their adversaries, the collegians, who show us the way that needs to be followed.

References


EDUCATIONAL RESEARCH — TWO PARADIGMS: TWO EPSITEMOLOGIES

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Put simply, educational research is the systematic study of educational problems and practices. Its basic purposes would at least be seen to cover such things as evaluating new and existing policies, programmes, curricula and practices; strengthening the information base underlying educational planning, the formulation of educational policy and the design of educational programmes; increasing the problem solving capacity of education systems, institutions and teachers; increasing knowledge and understanding of educational problems and processes; and raising questions concerning assumptions and identifying weaknesses. Research into these problems and practices has commonly been designed and structured so as to lay claim to 'scientific' respectability (Brim:1974). This claim remains a constant theme throughout the literature concerning education and in the normal parlance and value judgements made by educators. However, it has also been a feature of educational research that many of its practitioners have confused academic excellence and scholarly endeavour with the requirement to become as 'scientific' as possible in their research designs. This is in spite of the now recognised triviality and irrelevance of much of the so called 'scientific' research undertaken by postgraduate students.

While there will always be the need in the humanities for increased rigour, more systematic, encompassing theory, and a growth of comparative analysis and literature, these modest aims often would seem to have become secondary in the rush to overcome an imagined inferiority. A common response to the perceived inferiority complex held by some educational researchers has often led to research work on issues of minutiae and the further regressive splitting of education research into smaller and smaller studies with more and more 'perfect' methodologies.
In much contemporary discussion on research methodology it is customary to distinguish between two dominant paradigms\(^2\). The **normative** paradigm, which favours quantitative statistical case studies (empirical and pseudo-empirical) and the **interpretative** paradigm, which prefers qualitative case reports, are commonly accepted as the two major epistemological paradigms in educational research\(^3\). The need for rethinking is evidenced by the diversity of labels used to denote these research methods. Sometimes they are called *empiricism* and *humanism*, sometimes *unification* and *separatism*, sometimes *naturalism* and *phenomenology*, *objectivism* and *mentalism*, *mechanism* and *anthropomorphism*, *hard* and *soft*, *naturalism* and *anti-naturalism* and *ethogeny*\(^4\). To appreciate the distinctive features of so-called ‘non-empirical’ research, it is necessary to be familiar with the normative interpretive paradigms and to understand what *research* is purported to be.

The scientific method has become the basis of the normative approach, which seeks to explain behaviour in society through the study of people. This paradigm contains two basic orienting ideas. The first is that social interaction is governed by sets of rules external to and constraining the person concerned. Behaviour is essentially rule-governed in the sense that an observed pattern of action is rendered intelligible by referring to rules, in the form of dispositions and expectations, to which actors are subject. The second orienting idea is the assumption of cognitive consensus held to affect the actors’ behaviour. Its origins are considered to be in the common culture of a society with its shared symbols, meanings and, particularly, language, into which the actors have been socialised and conditioned. Such constraints are held to be somehow ‘out there’, as a largely taken-for-granted reality which moulds and channels behaviour. The most common type of research appropriate to this paradigm is the hypothetico- or logico-deductive model, which commonly starts with a series of hypotheses to be tested, proceeds to establish variables (often by operationalising relevant factors), and ends with assembling the results, testing the hypotheses and writing up the findings.

The normative paradigm assumes that it is value-free and almost completely divorces theory from research techniques, ignoring and skating over the former and emphasising the latter through operationalising variables to be tested. The accusation of Gjessings (1975) that it suffers from ‘factophobia’ and ‘theoryphobia’ is hardly surprising\(^5\). Heavy reliance is thus placed on quantitative statistical techniques. Despite the fact that it is a parody of natural science methods, this paradigm still tends to dominate much of what passes for conclusion-oriented educational research. Two cogent criticisms are commonly levelled at the normative approach to the study of human behaviour. Firstly, it fails to take account of a person’s unique ability to interpret experiences and to represent those experiences to the person concerned. People can and do construct theories about themselves and their worlds; moreover, they act upon these theories. In failing to recognise this, the normative paradigm can be accused of ignoring profound differences between the natural and social sciences. Social science, unlike natural science, stands in a subject-subject relation to its field of study, not a subject-object relation. It deals with a pre-interpreted world in which the meanings developed by active subjects enter into the actual constitution or production of that world\(^6\). It can never cope with what Broudy called ‘an infinite range of individual differences under an infinite range of circumstances’. Secondly, the findings of this approach are often said to be banal and trivial, so that they have little consequence to those for whom they are intended. The more effort, it seems, that the researcher puts into scientific experimentation by restraining, quantifying and controlling variables, the more likely the researcher is to restructure a ‘pruned, synthetic version of the whole’ — ‘a constructed day of puppets in a restricted environment’ (Shipman:1972). In other words, how is it possible to form objective concepts and objectively verifiable theory of subject meaning-structure?

The interpretative paradigm directs itself at an examination, in an wholistic manner, of settings (historical, comparative, philosophical, sociological and so on) and the individual or individuals, or groups within those settings. In this way, the subject of the study (an idea, organisation, system or individual) is not reduced to an isolated variable, but is viewed instead as part of a whole. For example, Bernard Bailyn perceives, particularly for the educational historian, that the responsibility of the research worker is to get behind all formal economic, political and legal codes to see how people actually behaved in various social situations.

Research which takes its direction from the interpretative paradigm makes different theoretical assumptions about the social world from those related to the normative paradigm. They move the emphasis
away from thinking that there is an established social world 'out there', with set statics and roles which predetermine how people behave, to a more phenomenological and social interactionist perspective. This challenges taken-for-granted characteristics by holding that a great deal of social interaction and behaviour is determined by the participants' unique interpretation of situations and the meanings that they attach to both their own and others' acts. This is an essentially interpretative process, in which meaning evolves and changes over the course of interaction. Obviously this view of the social world has a number of implications for educational research. Because social reality and meanings of interpretation cannot be taken for granted (the assumption of the alternative, normative paradigm), research must become more explanatory. Prestructured questionnaires are of dubious value as they depend on the researcher's prior assumptions concerning the meaning of what is to be investigated and these assumptions may well not match the meanings actually held by the research subjects. Because one should not impose a mechanistic set of assumptions upon the universe of objects to be studied, their nature should determine the methodology and instruments to be adopted and not the prejudices and preconceptions of the researcher. The aim should be to elicit the meanings and experiences of those being studied, as these are more likely to reflect the way they generally conceive events and objects in everyday life, rather than expect them to respond to a multi-choice questionnaire that pre-categorises what the research worker imagines these meanings might be.

It follows that normative or pseudo-scientific techniques can be replaced by those more usually associated with anthropology, ethnography and those methodologies collectively known as ethnoscience. Semi-structured or focused interviewing, various combinations of participation and observation, case-study and dialectical questioning, are some of the techniques associated with the interpretive paradigm. They are qualitative rather than quantitative and facilitate in-depth research but inevitably have a number of drawbacks. Critics have wasted no time in pointing out what they regard as its weaknesses. It is time consuming, often producing unique results from which it is not possible to generalise and not possible to replicate, as they depend heavily on the skill and sensitivity of the research worker involved.

Whilst it is undeniable that our understanding of the actions of our fellow people necessarily requires knowledge of their intentions, this cannot be said to comprise the purpose of a social science. Rex observed that whilst the patterns of social relations in institutions may be the product of the actors' definition of the situation, there is also the possibility that those actors might be falsely conscious and that sociologists have an obligation to seek an objective perspective which is not necessarily that of any of the participating actors at all. He continued by suggesting that we need not be confined purely and simply to that social reality which is made available to us by participant actors themselves. Giddens (1976:29) has argued that no specific person can possess detailed knowledge of anything more than the particular sector of society in which he or she participates, so that there still remains the task of making into an explicit and comprehensive body of knowledge that which is only known in a partial way by lay actors themselves. Bernstein's criticism focuses upon the over-riding concern of interpretative researchers with the meaning of situations and the ways in which these meanings are negotiated by the actors involved. What is overlooked about such negotiated meanings, observed Bernstein, is that they presuppose a structure of meaning wider than the area of negotiation. Situation activities pre-suppose a situation; they pre-suppose relationships between situations; they pre-suppose a set of situations. His point is that the very process whereby one interprets and defines the situation is itself a product of the circumstances in which one is placed. One important factor which must be considered is the power of others to impose their definitions of situations upon participants.

In normative studies the researcher undertakes investigation with attitudes, values, skills and objectives derived from the positivistic model. The researcher is concerned with the outer social world and, as far as he or she is able, adopts a detached and so-called 'neutral' role. The researcher is thus freed to stand apart and apply whatever conceptual schema is chosen to the phenomena selected for investigation.

A researcher assuming an interpretative perspective, by contrast, favours an inner view of social reality and is therefore much more involved, an involvement which frequently demands participation in the ongoing action as a member of the group being studied. There is no question of being neutral. Most likely the researcher will be
changed by the events that are being studied. Indeed, this kind of change will provide the researcher with the fresh insights which are being sought and with firsthand knowledge of the way the group conceives the world and the meaning its members imbue to such conceptions. The traditionalist approaches social reality with preconceptions and hypotheses which are manifest in the choice of questionnaires, aptitude, attitude scales and structured interview schedules. The interpretative researcher, however, will start with the social world as it is, almost in the spirit of an eavesdropper; will tune in to it on its own terms with unstructured interviews, natural conversation and the like. The data thus gathered by the normative researcher may be described variously as objective, external, quantitative, explanatory, publicly verifiable and replicable. Interpretative data, by contrast, may be referred to as subjective, internal, qualitative, interpretative, unique and negotiable.

Cohen and Manion (1980) identify both perspectives as being necessary and inseparable for a fuller and meaningful understanding of behaviour and experience. And Giddens has suggested that it is more profitable to see all paradigms as mediated by the other. Of course, as Light (1982) reports, these divisions are changing and distinguished researchers are now calling for an evaluation of existing methodologies. It is indeed unfortunate that some researchers appear to be retreating further into their positivist caves. It is often the case that the birth of educational research in a particular area is heralded in its first years of development by this regression into its own theoretical and methodological cave. In this manner the integrated approach to educational problems, which is sorely needed, has been found wanting. It is to be hoped that an integrated approach to the study of educational problems will gain more support, depending on the extent to which an institution realises that one of its major tasks is the education of teachers and that another major task is the carrying out of research into problem areas which are educationally relevant. Certain studies or areas in education could almost stand as paradigms of this integrated approach. Curriculum study could be one such area. Meaningful discussion in curriculum areas can only be carried out if a number of areas or subdivisions have inputs in an integrated manner. In the past, many of the inputs into curriculum studies have come as the result of what could be called 'post hoc' attacks. It seemed fashionable for each academic to hide in the cave of a discipline, only to emerge when there was something that could be attacked, be it a framework of learning objectives or any other theoretical stance. The risk involved in this practice is that sometimes nothing is salvaged and advance becomes dependent upon the persistence of the original theory builder. It would seem more sensible to structure learning situations in the research arena so that combatants of the past might meet with perhaps only one thing in common — the wish to tackle meaningfully a field of common interest, an educational problem. The area of curriculum studies has, if it is to be regarded as a paradigm, also directed attention to some of the forces in educational studies which make any sort of meaningful integrated approach difficult. The birth of new sub-disciplines in education is often heralded by the proponents who are so keen to advance the status and claims of their own sub-disciplines that they feel that they can only do justice to their discipline if they divorce themselves from other informative areas which might, in fact, have important inputs for the new discipline or subject. The early years of the growth of the analytic trend in educational philosophy is a good example of misplaced aggression and many studies and courses in curriculum studies have suffered because the researchers or teachers have not availed themselves of information concerning historical influences on the curriculum. Sociological studies have sometimes even failed to set up a sufficient conceptual framework — such was their haste to get findings. One of the more obvious (and perhaps unavoidable) by-products of this is the lack of conceptual clarity and understanding amongst educationists of different sub-disciplinarian predilections.

Perhaps the need for an integrative approach is seen most starkly in programmes of teacher education. Most seemingly leave the task of integration to the student teacher. The integrative, interdisciplinary approach to the study of education demands academic competence and avoidance of superficiality. It demands, as R.S. Peters has suggested, that teachers in educational studies live concurrently in three worlds if they are to approach educational problems in a meaningful manner. Their first world, their 'centre of identity', would be the world of educational study within which they have specialised training and education, be it the psychology of education, the sociology of education or the pedagogics of a language. The second is the world of their 'pure' discipline, which correspondingly would be psychology, sociology or maybe the
French language. The third world is the only world which will develop within a group of scholars or students of education some form of collective identity — that is, the world of educational theory. This third world must be planned for by the careful integration of interdisciplinary conceptual schemes that have as their pivot some educational problem. It has been argued elsewhere that education is neither a pure nor an applied discipline, but rather a subject concerned with locating and defining educational problems and with establishing criteria with respect to making decisions. The criteria are met through the use of concepts and the application of insights, laws and principles derived from appropriate feeder disciplines. Recognition of the appropriate disciplines is dependent upon the identification and specification of the parameters of the problem. The course of problem-solving actions which follow is integrated and may be described as educational. Of course, the effectiveness of any integrated model of teacher education is dependent upon the extent to which researchers and teachers bring open minds to the solving of educational problems. Unless an interest is retained in the various feeder disciplines and there is a conscious effort to relate their training and experience to those from other modes of inquiry in order to promote effectively a coherent body of educational theory, we will be left with a series of discrete areas of study with a high probability of the result being invalid educational decision making.

Theodorson and Theodorson (1970) take a neutral position in defining research as a systematic and objective attempt to study a problem for the purpose of deriving general principles. The investigation is guided by previously collected information and aims to add to the body of information on the subject. Francis (1967) pretentiously claims that a distinguishing characteristic of ‘scientific research’ is its scholarship, and he goes on to suggest that most of the non-scholarly research is ‘applied research’.

Scientific method can be seen as a method of inquiry developed over time, moving from problem and observation to hypotheses and their empirical testing. Marshall (1981) has identified five or six steps in this method. These steps are the suggestion of a problem; the definition or intellectualisation of this problem; the advancement of a hypothesis to solve the original problem; the deduction of implications from the hypothesis; the empirical testing of these deductions against observations; and the reconsideration and evaluation of the hypothesis. Claims by educational researchers to be concerned with discovering knowledge through scientific methods is a view not shared by all; and Mills (1979) contends that the accumulation of knowledge may not necessarily be the primary function of science; he goes on to point out that in no science is the pursuit of objective knowledge a more futile one than in social science. The eminent scientist Sir Peter Medawar (1963) would agree. B. Smith (1979) argues that the dominant research paradigm (experimental, quantitative, positivistic and behavioural) has been too restrictive to cope with the ideas, problems and interests of what is called education and of people who call themselves educators. He further argues that participant observer research seems uniquely suited to the task of building genuine educational theory as distinct from ‘approved theory’ or what Haggard (1954) calls ‘hand-me-down’ theory. Central to distinguishing the suitability of any method for education would seem to lie in its efforts to understand events in a culture and system from the point of view of the practitioner in that system. It is a pity nevertheless, that this view of research in education (very much like the view of the Marxist) is one that demands passionate adherence and it is apparent that deviation from it attracts anger and derision from its strongest protagonists.

When the methodology attracts or demands unthinking adherence, then either the methodology or the methodologist (or both) demand further attention. Both Poole (1980) and Coser (1975) observe that the methodological structures often dictate the problem rather than the other way round and they allude to a situation in which the methodological tail wags the substantive dog. Coser, in fact, refers to ‘the fallacy of misplaced precision’ which consists of believing that one can compensate for theoretical weakness by way of methodological strength. Many of the illusions (and not a few of the problems) of those who aspire to ‘science’ have resulted from a fundamental misconception of its basic character. This common misconception identifies science with methodology and thus presumes that reliability, precision and certitude can be attained by the dutiful application of specified methods and techniques, irrespective of the nature of the subject matter under study.

As Kaplan (1964) observed, methodology is very far from being a sufficient condition for scientific achievement. Methodology is, in fact, nothing more than a reconstruction of particular modes of inquiry utilised by working scientists. It is neither self-evident nor
singular. Nor is it static, for, as Einstein observed, if you want to find out anything from theoretical physicists about the methods they employ, then don't listen to their words; fix your attention on their deeds. If science is no more than that which scientists do, than it become clear that there is no one correct methodology. There exists only a series of distinctive logics-in-use for a variety of different types of inquiry. Aristotle's astutely empirical reflection remains pertinent: 'Look for precision in each class of things, only in so far as the nature of the subject permits'.

The normative researcher, committed to the view that there are general and universal laws determining social behaviour, uses data to check out hunches about objective reality or absolute truth. In a sense, the researcher tries to straight-jacket social reality with preconceived models of humanity. Not so the interpretative researcher. This researcher searches out modes of explanation from data themselves, be they descriptive, analytical or conceptual. No doubt the interpretative researcher would share the view of Filshead (1970), who claimed that knowledge needed to understand human behaviour is embedded in the complete network of social interaction. To assume what is without attempting to tap it; to refuse to tap it on the grounds of scientific objectivity; or to define this knowledge with constricting operational definitions is to do grave injustice. The assertion of the statistician Tukey (1963) best highlights the distinctive feature of the interpretative paradigm and of so-called non-empirical research. It is, he states, 'far better to have an approximate answer to the right question, which is often vague, than the exact answer to the wrong question, which can always be made precise...'

Notes


5. See, for example, BROUDY, H., (1976), 'The Search for a science of education', Phi Delta Kappan, Vol. 58, pp.104-111.

6. See, for example, HUSSELR, S., (1965), Phenomenology and the Crisis of Philosophy, Harper Torchbooks. p.102.


8. R.S. Peters expressed this idea during conversations held in April, 1973 with one of the authors.

THE ROLE AND INFLUENCE OF TEACHERS IN RELATION TO STUDENT DECISION MAKING REGARDING JOBS AND CAREERS

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Introduction
Secondary schools in most parts of Australia now conduct work experience programmes which provide for student participation in normal conditions of work. Generally, work experience is now embedded within what is termed a 'Transition Education' programme, and usually includes elements of social studies, skills associated with job acquisition, and components designed to prepare the student for transition from school to work.

In the past decade, there has been a rapid increase in the number of such programmes. In Tasmania, this involvement has grown from a work experience scheme for 60 students in two high schools, funded by the Special Projects Committee of the Australian Schools Commission in 1974, to a situation where about 90% of secondary schools offered some sort of programme in 1982 (Education Department of Tasmania, 1981:1). Such a response has been caused by a number of motivations, partly educational and partly political, but particularly related to a growing concern for youth unemployment.

Recommendations regarding transition education have appeared in major reports such as the Karmel Report (1973) and the Poverty and Education in Australia Report (1976). In Tasmania, the State Department of Education (1980a, 1980b, 1980c, n.d.) has produced a number of publications to be used as support documents for an educational enterprise that has had an almost embarrassing growth rate.

As might be imagined, in the absence of evaluative evidence there is considerable anxiety about the educational outcome of transition education. In particular, teachers in the schools apparently have