Environmental Education Research as Profession, as Science, as Art and as Craft: implications for guidelines in qualitative research

STEPHEN GOUGH & ALAN REID  University of Bath, UK

SUMMARY  The view taken by any particular educational researcher of the desirability and potential usefulness of guidelines for qualitative research seems likely to depend upon the way in which the activity of ‘doing educational research’ is itself conceptualised. The implications of a number of possible positions on this question are examined. It is argued that the existence of such a range of positions is likely to continue, but that there may be, nevertheless, a limited role for generally applicable research guidelines if their purpose is appropriately defined.

Introduction

Clearly the project of identifying guidelines for researchers in environmental education presupposes the possibility of establishing a consensus of some sort about appropriate research standards. One possible explanation for the observable elusiveness of such a consensus is that different researchers hold, implicitly or explicitly, rather different views about what sort of activity ‘researching’ in education actually is. If this is so, it is unsurprising, given the well-established perception that different teachers (and other stakeholders in education) may have quite different views about what sort of activity ‘teaching’ actually is. Wise et al. (1984) identified four ideal-typical views, or perspectives, of this kind. Teaching, they proposed, may be seen as labour, as a craft, as a profession, or as an art.

Certainly, and as will be argued in more detail below, this method of classification does not transfer wholesale to a consideration of ways in which educational researchers might think about what they do. However, in this article we use it both as a starting point and as basis for keeping the question ‘what sort
of activity is research in education?’ open while exploring the cases for and against guidelines for qualitative research. We argue, in particular, that researchers’ views about whether there should be research guidelines and, if so, what form they should take, are likely to depend upon whether they see their work as a science-based profession, as a profession based to a greater or lesser extent in something other than science, or as something other than a profession. We conclude by examining the notion of educational research as a craft, and exploring the implications for the development of research guidelines inherent in such a conceptualisation.

Environmental Education Research as a Profession of Scientific Enquiry

In his development and re-presentation of Wise et al’s (1984) work on teaching, Bennett (1997) identifies the following characteristics of a profession:

- diagnostic skills;
- skills in the evaluation and implementation of possible courses of action
- agreed standards of understanding and competence justified by reference to theory;
- confidence that fidelity to agreed standards will produce desired results.

Of course, professional attempts at diagnosis, evaluation, implementation and standard-setting in environmental education research need not necessarily be grounded in a scientific worldview. Equally clearly, however, some researchers have seen them as being so grounded. This is explicit, for example, in the characterisation of quantitative research which was used as an introductory resource in the workshop reported by Smith-Sebasto (2000, Fig. 3), and implicit in the claim (Smith-Sebasto, 2000, p. 10) that quantitative and positivist research are the same thing, as also are postpositivist and qualitative research. There are environmental education researchers who believe in:

- the existence of ‘social facts with a single objective reality’;
- observable and objective social truth;
- the possibility of avoidance of bias through researcher detachment from the research setting;
- the efficacy of adherence to predetermined, inflexible research procedures;

and who further subscribe to the justificatory notion that they and ‘natural and physical’ science practitioners are the joint custodians of these perceptions (Smith-Sebasto, 2000, Fig. 3). The point here is not that all these suppositions have been rendered at best questionable by a very substantial body of literature (see, for an overview, Reid & Gough, 2000), but that those who adhere uncompromisingly to such a ‘professional-scientist’ view (as we term it here) of their work in environmental education research are not just likely to support the notion of research guidelines, but to regard them as indispensable as a means of excluding from the canon research which is insufficiently objective, detached, pre-planned or, in sum, scientifically professional. Given this, the question arises: why do professional-scientist researchers in environmental education want to engage with what is commonly referred to as qualitative research at all?
One possible answer lies in the sheer, inescapable stubbornness with which human subjects refuse to behave in the manner thought proper for the foci of positivist social research. The point is nicely illustrated in Smith-Sebasto’s (2000) article, in which the following claims or observations are separately made:

- humans are the ultimate focus of environmental education research (p. 9);
- the human character is complex and inconsistent (p. 16);
- quantitative research often assumes stasis regarding the research focus (p. 18).

Hence, one might argue that the suggested guideline question for qualitative researchers: ‘Have you adequately described the evolving relationship between the emerging research question(s) and the data?’ (Smith-Sebasto, 2000, p. 18) is every bit as appropriate for quantitative researchers too, though there would seem to be difficulties in squaring an affirmative answer to it with a preference for pre-determined and inflexibly applied research procedures (Smith-Sebasto, 2000, Fig. 3).

The problem posed for positivist research by complex and inconsistent human behaviour would be greatly reduced if behaviour as a whole could be separated into two discrete parts, with the inconsistent bits hived off to qualitative or ‘postpositivist’ (Smith-Sebasto, 2000, p. 18) research and the rest isolated for investigation using objective, ‘scientific’ methods. Something of the sort has, in fact, been proposed within the field of environmental education research by Chawla (1998, p. 384), who refers to an ‘emotional and interpretive side of human experience’ which she sees as the proper focus of qualitative research. In this conceptualisation the role of qualitative research guidelines would seem to be a gatekeeping one, designed to exclude all those qualitative researchers who might be disinclined to see their own endeavours as a supplement to those of the professional- scientists, but prefer to argue instead that their work represented an alternative, and in many ways superior, approach to the complexity of educational experience in its entirety. This group would seem likely to include not only most of those qualitative researchers who would reject a ‘postpositivist’ label for themselves, but also many of those who would accept one. Interestingly, it would clearly further include many who were not the least shy of using quantitative techniques to inform or advance qualitative research when this seemed appropriate (see, for example, Silverman, 1993, pp. 162–165).

There is a further possible reason for the engagement of professional-scientific, positivist/quantitative researchers in environmental education with qualitative research which also implies a need for the development of research guidelines. The positivist appeal to the natural sciences as a model for social-scientific research has embedded within it a conception of a community of scientists able to check, replicate and verify each others’ work. This implies some measure of agreement about what research is properly to be done, and how. Examples of research in environmental education to which to this notion of scientific community is intrinsic include Hungerford et al.’s (1980) development of goals for curriculum development in environmental education, and Roth’s (1970) identification of fundamental concepts for environmental management education.

However, the word ‘community’ has sometimes seemed rather stretched when applied to that group of individuals who consider themselves to be environmental education researchers. Writing in 1987, for example, Ian Robot-
Tom accused Harold Hungerford and his colleagues of seeking to foreclose debate about the definitions, aims and guiding principles of environmental education in a way which protected their own interests (Hungerford et al., 1983; Robottom, 1987). In 1993, Robottom and Hart, referring to positivist approaches, observed that environmental education research was:

in some areas at least ... firmly in the grip of an insular research paradigm that has little prospect of contributing to the achievement of the very purposes espoused in the founding of modern environmental education some two decades ago. (Robottom & Hart, 1993, p. 3)

Whatever the truth or otherwise of these particular claims, ideas about educational research in general, and environmental education research in particular, have continued to change and develop, partly as a result of contestation between researchers. Some aspects of these changes are discussed in more detail below. For now, however, it suffices to say that while the research perspective of those classified here as ‘professional-scientists’ is still widely respected, it is very questionable whether it is any longer dominant within the field, as it certainly was in, say, 1987. In this changed situation, postpositivism provides professional-scientific researchers with a pragmatic way of behaving inclusively towards colleagues who do not espouse positivism, but are nevertheless counted in increasing numbers, de facto, among the academy’s eminent and respected persons, because it too permits appeals to the authority of a form of objective knowledge which is constructed and validated through the joint endeavours of a community of scientists with shared standards (Seale, in press). Though agreed standards and research guidelines may therefore shift or widen a little (perhaps through managed processes such as workshops and special editions of academic journals), the perceived need for them remains as strong as ever. A cynic might further argue that since the designation ‘qualitative’ has itself now become, de facto, quite respectable when applied to research, the attempt to conflate it with ‘postpositivist’ is no more than a (possibly unconscious) attempt to re-denigrate the respectability to those within the qualitative research community who are not postpositivists and who appear to reject or even threaten the notion of a coherent research community or ‘field’.

Artistry in the Profession of Environmental Education Research

Returning to our adaptation of the framework devised by Wise et al. (1984) and developed by Bennett (1997), we have already described the way in which some researchers in environmental education appear to see their work as ‘professional-scientific’. While any researcher presently engaged in one of the chores of the job, transcription for example, might feel that the designation of research as labour has much to recommend it. Nevertheless, it seems reasonable to suggest that many qualitative researchers would have relatively few problems with being designated as professional. It will be recalled that a key characteristic of work seen as a profession was its appeal to theory as a basis for establishing competence. ‘Professional-scientific’, has been used here to describe researchers in environmental education who have appealed to a positivistic theory of science in this way.
Implications for Guidelines in Qualitative Research

Writing about the view of teaching as an *art*, Bennett (1997, pp. 46–47) observes that:

> It does not deny the importance of techniques nor of standards of practice, but because teaching rests on individual, personal understanding of what is needed for a particular setting, these techniques may be deployed in novel and unconventional ways. Rules and procedures give way to intuition, creativity, improvisation and expressiveness. The teacher as artist, then, has to rely on personal insight as well as theoretically grounded knowledge, and therefore requires considerable autonomy and discretion in order to function effectively.

It seems likely that researchers may perceive their work not only as a science-based profession, but also as an art-based profession, or as any number of possible combinations of the two. A philosophically curious environmental educator travelling along this continuum might, in the course of her or his journey, visit all or some of the following methodological positions:

- the ‘single objective reality’ and ‘inflexible procedures ... determined prior to beginning the study and ... adhered to strictly’ (Smith-Sebasto, 2000, Fig. 3) position of *positivists*;
- the ‘critical-realism and modified objectivity’ of *postpositivism* (Connell, 1997, p. 121). Here the skill of the individual researcher is seen as crucial in obtaining the closest possible approximation to objectivity, which is seen as a regulatory but ultimately unobtainable ideal;
- *grounded-theory* approaches (Glaser & Strauss, 1967) which aim to develop theory from the researcher’s engagement with data, rather than test preconceived theory against data collected for the purpose. (Bryman & Burgess (1994, p. 221) note that grounded theory approaches are often characteristic of only a ‘particular phase or aspect’ of a piece of research);
- *interpretivist* (Cantrell, 1993) or *constructivist* positions, which are concerned to re-present to their research audience the way in which particular social realities are constructed and imbued with meaning. It is from such a perspective, for example, that the anthropologist Okely (1994, p. 32) has described data interpretation as a ‘creative experience’;
- *transformative* perspectives, including those of ecofeminism and/or socially-critical theory and/or ecosocialism, which may measure success in terms of their ability to contribute to political transformations and/or spiritual transformations. These often take an extremely critical view of positivistic science (Giroux, 1985; Merchant, 1990; Plumwood, 1990; Fien, 1993; Huckle, 1993, 1996; Sterling, 1993; 1996);
- *postmodern* approaches (Giroux, 1990) for which the concept of progress informed by the cloistered deliberations of ‘scientists’ is a meta-narrative meriting deconstruction. The appropriate limits of such deconstruction, and the possibilities for subsequent reconstruction, are the subjects of a debate (e.g. Payne, 1997; Huckle, 1999; Sauvé, 1999) which is clearly not amenable to solution by positivist scientific means;
- *poststructuralist* thinking, according to which the entire project of science is substantially misconceived, in that all explanations should be understood as kinds of fiction (Gough, N., 1991, 1999; Greenall Gough, 1993; Gough, A., 1997).
We therefore propose to use the term ‘professional-artistic’ as an inclusive, blanket term which permits variations of degree within it. The positions listed above are distinguished from each other by (among other things) their relative levels of acceptance of the methodological claims of science, the relative levels of ‘artistry’ they consider appropriate, and the forms that artistry takes. The further they are towards the ‘professional-artistic’ end of the continuum, on the whole, the more likely they are to respond to proposals for methodological guidelines with flat rejection, rather than conditional acceptance or attempts at redefinition. However, these professional-artistic groups tend to have in common, both with each other—and also, by virtue of their view of themselves as ‘professional’, with professional-scientific researchers—a belief that the ways in which a piece of research is conducted should reflect and be consistent with its philosophical underpinnings. As a result, they may have explicit or tacit guidelines of their own which are employed in the evaluation of the work of other researchers.

These points may be illustrated by reference to an important, continuing, and particularly well-documented debate within environmental education research. Roberts and Hart’s (1993) work on environmental education research represented a challenge to all workers in the field, particularly those of a positivist orientation. As the subtitle of their book made clear, these authors saw their work in terms of ‘engaging the debate’. They were at some pains to avoid any suggestion that what they themselves were proposing was a single best approach, or set of guidelines, for environmental education research. At the same time, they made clear their own dissatisfaction with the notion of ‘best approaches’ in principle.

If we can agree that educational inquiry is multiparadigmatic there is no need to fuse, no reason or need to find compromise, but there is a need to value different perspectives, assuming that knowledge is a social construction of communities of inquirers operating from various paradigmatic perspectives (each shaped by their unique distinct metatheoretical and methodological assumptions). (Robottom & Hart, 1993, p. 16)

It is therefore odd, on the face of it at least, to find the research approach advocated by Roberts and Hart being roundly condemned by other researchers for:

- prejudging problems and ignoring the ideas of educational practitioners (Walker, 1997);
- being deliberately antagonistic towards other methodological positions and seeking to foreclose debate (Connell, 1997).

It will be remembered that this same charge, of wishing to foreclose methodological debate, had been made by Roberts, with reference to Hungerford and his colleagues, in 1987.

We suggest that this situation may be understood as an inevitable product of the insistence, which is quite explicit in Roberts and Hart’s (1993, especially ch. 4) work, that the ‘metatheoretical and methodological assumptions’ which underpin a particular research approach must find expression in every aspect of
the research activity itself. Hence what they term ‘participatory action research’ is claimed as the only appropriate form of environmental education research because it is uniquely consistent with an ecophilosophical worldview which, in turn, is uniquely appropriate to environmental education.

If environmental education inquiry is to be compatible with an emerging worldview which underpins all environmental education activity then a new view of research is required. (Robottom & Hart, 1993, p. 52, emphasis added)

As a result, and in spite of what we believe to be the most genuine of good intentions, a new boundary of environmental education research acceptability is drawn. New guidelines for research come tacitly into being. It is to these that Connell and Walker, in their different ways, and from their different positions on the continuum we have identified, object. Walker insists that the problem-definitions and constructions of environmental education practitioners, which Robottom and Hart want to transform in a fashion consistent with their ‘metatheoretical assumptions’, should be explored and respected. Connell believes, for example, that even though facts and values are more closely entwined that positivists would accept there is still a point trying to separate them. Robottom and Hart (1993, pp. 46–47), by contrast, make a case for the merit of ‘personal, value-based knowledge’.

Conclusion: multiple perspectives and limited ambitions

We consider that all the examples of environmental education research mentioned in this article are valuable contributions to the field. Indeed, for all the arguments (and occasional animosity) between researchers, it is very hard to imagine any single part of this corpus without the rest. One might argue that the approach of Harold Hungerford and his colleagues preceded that of most others, but recent work, including that of Smith-Sebasto (2000) clearly shows a degree of awareness of and responsiveness to contrary views.

It might seem, then, that our position is similar to the ‘multiparadigmatic’ formulation of Robottom and Hart, but we would wish to emphasise two points. First, it is not enough to accept the existence of multiple research perspectives, and attribute their differences to different foundational assumptions, if underlying such a view is the notion that one perspective—the one with the best assumptions—will ultimately be proved right. What might really put an end to ‘animosity, antagonism, or hegemony regarding methods of inquiry’ and ‘advance the efforts of EE researchers’ (Smith-Sebasto, 2000, p. 19), we argue, would be to respond to the present situation in which, let us be clear, nobody knows what actions by environmental education researchers might best serve either education or the environment in the short term (let alone the very long term), by accepting the existence of socially-constructed multiple truths. Though this necessarily involves a difficult confrontation with the Aristotelian roots of our Western thinking, the case for its possibility, its potential efficacy, and its intellectual rigour has been powerfully argued from different academic perspectives by, for example, Thompson (1990, 1997), and Haste (in press). This view is not a relativistic one for which there is no such thing as truth, and does not
suggest that facts about the environment, education, and the relationships between them do not exist. It argues, rather, that:

- it is not possible for any researcher to have a detached view of her or his own research activity. We may see ourselves as ‘objective scientists’, ‘transformative intellectuals’, ‘reconstructive postmodernists’ or anything else, but all of these are stories we use to make sense, to ourselves and others, of what we do;
- these stories make all the difference to how we interpret the facts we encounter;
- there is no prospect whatsoever, within any imaginable time frame, of reaching a final judgement on the relative merits of these stories.

This being so, it is nothing more than due humility to open our minds to the insights claimed by those whose stories we do not share.

Secondly, while this formulation might seem to exclude a useful role for any single set of research guidelines, this need not be so if the requirement that all research activity must be capable of justification in terms of the theory which (however deeply) underpins it, is dropped. It will be recalled that this requirement has, throughout this article, been regarded as fundamental to a professional view of the activity of educational research. We now explore the possibility of taking a view of educational researching as a craft.

With regard to teaching, Bennett (1997, p. 46) has written that a craft involves ‘acquiring a range of specialist techniques, and learning general rules about how and when they should be employed’. The idea of social research as primarily a craft skill has been developed by the medical sociologist Seale (in press), whose arguments resonate strongly with some of those explored in this article:

The widespread appeal of postmodern, political and constructivist conceptions of research is based on some fundamental dissatisfactions with the scientific worldview. Quality does matter in qualitative research, but the modernist headings of ‘validity’ and ‘reliability’ no longer seem adequate to encapsulate the range of issues that a concern for quality must raise. The constructivist critique of criteriology has led us to see that ‘quality’ is a somewhat elusive phenomenon that cannot be pre-specified by methodological rules, though their reconstitution as ‘guidelines’, to be followed with intelligence and knowledge of the particular research context, may assist us in moving towards good quality work. A major threat to quality is in fact the idea that research must be carried out under the burden of fulfilling some philosophical or methodological scheme. Practising social researchers can learn to do good work from a variety of examples ... without needing to resolve methodological disputes before beginning their work.

A notable characteristic of both Bennett’s and Seale’s formulations is the place they give to learning in the acquisition of a craft skill. This may mean that novice researchers should be taught particular skills or knowledge, such as CAQDAS skills or theory familiarity for example, as indeed they usually are. It may further imply a need for manuals or guidelines and also, given that: (1) there is a need to distinguish the evaluation of research processes from research products (Lincoln & Guba, 1985); (2) criteria appropriate to one task may undermine those
found useful in another; it may imply a need for a degree of craft specialisation among researchers. Equally, however, the context-specific nature of qualitative research makes it likely, in our view, that learning-by-doing will continue to play a central part in the development of qualitative researchers.

Most importantly, and as Seale (in press) makes clear, to argue for a view of educational research as a craft is not to argue that philosophical and methodological debates are unnecessary or irrelevant. On the contrary, they are essential to the enrichment and improvement of research practice. What is unhelpful, however, is if researchers feel the need to pretend (for surely it must be a pretence) to have sorted out once and for all the many questions of epistemology, ontology and methodology which bear on educational research before mailing the first questionnaire, or writing the first word on an otherwise blank sheet of paper under the heading ‘Interview Schedule’.

Seale’s (in press) work demonstrates that a wide range of craft skills in qualitative research do not have to be linked to particular paradigmatic or methodological positions. Similarly, Burns (1989), for example, lists a minimum set of general capacities necessary for the adequate critique of a qualitative study:

- ‘context flexibility’ (a willingness and ability to examine works from diverse perspectives);
- ‘skills in inductive reasoning’ (in following the logic of the researcher);
- ‘skills in theory analysis’ (in critiquing conceptualisation, theoretical modelling, and theory construction and development);
- the capacity to follow and critique the ‘transformation of ideas across levels of abstraction’.

This being so, and given this consequently more modest conceptualisation of the meaning of ‘doing research’, there seems to us no reason why guidelines should not be used in qualitative research to ensure the quality of work, without becoming weapons on a methodological battlefield. This is to say, not very excitingly perhaps, that it should be possible to say whether a member-check, a numerical analysis, or a piece of triangulation has been conducted well or badly, regardless of the view of society–environment–education interrelationships held by its perpetrators.

Notes on Contributors

STEPHEN GOUGH is a member of the Centre for Research in Education and the Environment at the University of Bath. Correspondence: Department of Education, University of Bath, Bath BA2 7AY, UK.

ALAN REID is a member of the Centre for Research in Education and the Environment at the University of Bath.

REFERENCES


