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Educational Theory and the Professional Learning of Teachers: an overview

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TWO VISIONS OF PROFESSIONAL DEVELOPMENT

One way of looking at the relationship between educational theory and the professional knowledge of teachers is to see the former as a set of ideas about some aspect of education which has been constructed within a specialised academic discipline by experts who have mastered its particular standards of inquiry. The knowledge and understanding conveyed by such a theory can then be applied by teachers in learning to teach effectively. Professional knowledge, on this view of educational theory, consists of a theoretical understanding of ideas about various aspects of education drawn from disciplines such as philosophy, psychology, sociology and history, plus 'knowing how' to apply them in particular practical situations.

On this *rationalist* view (see Oakshott, 1962) of the relationship, between educational theory and professional knowledge, the process of theory generation is quite separate from the process of its acquisition and utilisation for practical purposes. The acquisition of professional knowledge is therefore dependent on theory generation within quite specialised disciplines of inquiry into education.

The traditional organisation of both initial and in-service teacher education reflects this *rationalist* view of the relation between educational theory and professional knowledge. Student and in-service teachers acquire theoretical knowledge from the disciplines of education, often taught in separation from each other, and are then expected to apply it in practice.

Over the last decade and a half this pattern of teacher education has been greeted with increasing scepticism by both practitioners in schools and educational administrators who manage resources. They argue there is little connection between the academic theories taught in institutions of higher education and the practical knowledge teachers need to improve their practices in classrooms and schools. Through the operation of the new arrangements in LEAs for in-service education (GRIST), local authority officials and inspectors have had the power to deny teachers access to theory-led teacher education in preference for what is believed to be a more practical competency-based training. The pressure on institutions of higher education to make their teacher education more practical and relevant has

also been felt at the level of initial training. Many departments and schools of teacher education within the UK have over the years attempted to respond to these pressures from 'the world of practice', and according to John Wilson have "allowed the discplines of education to wither". Wilson asks:

> What kind of authority—bearing in mind the nature of education as an enterprise—ought at least some of those staffing such institutions to possess, which is not already possessed in greater quantity elsewhere?

His answer constitutes an eloquently argued plea for 'the disciplines of education' as a major source of the teacher educator's authority. He regrets that professors of education are increasingly recruited from the ranks of educational administrators or politicians, and that the rank and file of teacher educators largely consists of people whose qualifications stem from their practical experience of either teaching a school subject or working in 'fashionable' fields like multi-cultural education, gender relations, curriculum development etc. The problem, as he sees it, is one of demonstrating the relevance and practical value of the educational disciplines. He admits that academics have not made a good job of this in the past, and claims that the specialised topics which the disciplines handle should not be transmitted in abstraction from practical themes and issues which emerge from school experience. Moreover, such themes and issues should constitute areas for interdisciplinary study in which students are able to analyse them from a variety of theoretical perspectives.

What is not clear, in my view, is the extent to which Wilson believes that the development of valid professional knowledge is entirely structured and determined by the differentiated systems of thought embodied in the disciplines, as opposed to the latter simply contributing to such development. Is Wilson offering us a more sophisticated rationalist justification for the disciplines of education or a rather different sort of justification for them? At points it appears to be the former; when, for example, he argues that teachers can only overcome prejudice and bias in their thinking about educational themes and issues by embracing the standards of reasoning embodied in the different disciplines. Such standards of reasoning, according to Wilson, are not relative to particular cultural contexts.

If Wilson is simply proposing a more sophisticated and flexible form of rationalism in teacher education then his position would be consistent with a philosophical perspective on the aims of the academic disciplines, which Maxwell (1984) has called "the philosophy of knowledge". Maxwell claims that the basic idea of this philosophical outlook is:

> that inquiry can best help us realise what is of value in life by devoting itself, in the first instance, to achieving the intellectual aim of improving knowledge, in a way which is dissociated from life and its problems, so that knowledge thus obtained may subsequently be applied to helping us solve our problems of living.

Wilson is not, I think, suggesting that the teacher educator's primary role is to help students become experts at knowledge generation within each of the disciplines

of education. He implies that the apparent disconnection in the past between theory and practice lies in the tendency of academics to transmit theory solely in the form in which it was generated, i.e. in a way which is dissociated from the practical problems of living. In Wilson's account the primary concern of the teacher educator should be to help the student or teacher utilise specialised knowledge: helping him or her to apply it to real educational problems and issues. In order to become familiar with such problems and issues teacher educators need to get out into schools and mix with teachers. But there will always be a point, Wilson argues, when some element of dissociation, from the practical topic at hand, is necessary for depth of understanding. In order to utilise a theory students may have to spend a lot of time trying to understand its conceptual basis or the empirical evidence which supports it. I shall now attempt to demonstrate that this view of the teacher educator's role is rather ambiguous. As it stands it can be accommodated within the 'philosophy of knowledge' perspective. But it can also be elaborated in a form which accommodates it within a quite different philosophical outlook.

According to Maxwell there is an alternative philosophical outlook on the aims and purposes of the academic disciplines which he calls "the philosophy of wisdom". Its basic idea is that,

> inquiry, in order to be rational, in order to offer us rational help with realizing what is of value, must give absolute priority to our life and its problems, to the mystery of what is of value, actually and potentially, in existence, and to the problems of how what is of value is to be realized. Far from giving priority to problems of knowledge, inquiry must, quite to the contrary, give absolute priority to articulating our problems of living, proposing and criticizing possible solutions, possible and actual human actions. The central and basic intellectual task of rational inquiry, according to the philosophy of wisdom, is to help us imbue our personal and social lives with vividly imagined and criticized possible actions so that we may discover, and perform, where possible, those actions which enable us to realize what is of value in life ... for each one of us the most important and fundamental inquiry is the thinking that we personally engage in ... in seeking to discover what is desirable in the circumstances of our lives, and how it is to be realized.

Maxwell cites two basic rules of rational problem-solving within this fundamental form of *practical inquiry*. The first is: articulate, and try to improve the articulations of the problems to be solved; and the second is: imaginatively propose and critically assess possible solutions. This is precisely the philosopical perspective which has informed the growth of educational action-research as a form of educational inquiry (see Elliott, 1987). Educational inquiry is not a separate process from the practice of education. It is a form of reflexive practice. Teaching can be construed as a form of educational research rather than its object.

The aim of educational action research is not the generation of highly specialised and differentiated theories about education, but the generation of practical wisdom. Wisdom can be defined as a holistic appreciation of a complex

practical activity which enables a person to understand or articulate the problems (s)he confronts in realising the aims or values of the activity and to propose appropriate solutions. Conceived as an *educational theory,* wisdom constitutes a complex structure of ideas which cannot be broken down into its constitutive elements—as propositions—without loss of meaning. Such an holistic appreciation of educational practice cannot be atomised into psychological, sociological, philosophical theories and retain the status of an educational theory. It may be constituted in part by such theories, but these in isolation do not constitute *educational theories,* although they may be called *theories about education.* It is only the structure as a whole which captures a vision of an educational practice and merits the status of an educational theory. How such structures become publicly accessible is a question we shall address later.

THE CONTRIBUTION OF THE DISCIPLINES OF EDUCATION TO PRACTITIONER-BASED EDUCATIONAL INQUIRY

If we return to Wilson's 'problem of authority' we can begin to formulate a solution from a 'philosophy of wisdom' perspective. The authority of the teacher educator, from this perspective, must primarily derive from the practical wisdom (s)he has developed through fundamental inquiry into how educational values can be realised in his or her practice (both as a teacher of children and as a teacher of teachers). Such practical wisdom implies that the teacher educator has a working appreciation of the process of practical inquiry through which it is developed.

The holistic theory which structures practical wisdom cannot be transmitted to student teachers in initial or in-service contexts on the basis of assumptions about the dissemination of knowledge which are made by 'the philosophy of knowledge'. The latter assumes that the validity of a theory can be demonstrated quite independently of the thinking of the practitioner who is required to apply it. From a 'philosophy of wisdom' perspective the validity of an *educational theory* cannot be tested independently of a process of practical inquiry in which practitioners discover solutions to problems of realising educational values in their actions. Thus the transmission of an *educational theory* by a teacher educator implies that (s)he must be able to establish conditions of practical educational inquiry, as a context in which his or her 'students' can assess the validity and relevance of the theory in helping them to articulate practical problems and discover appropriate solutions. As a result of such inquiry the students and their teacher educator may reconstruct their prior understandings.

The teacher educator can therefore only transmit educational theory in an educative manner if (s)he also puts him or herself into the role of a learner—who can be educated in turn by his or her students. The authority of the teacher educator does not rest on some 'infallible' *educational theory* but on his or her ability to utilise that theory as a resource for enabling practitioners to construct their own professional knowledge through action research. How this might be done is something we shall again return to later.

It could be argued that all this is no answer to Wilson's problem. It simply

legitimates taking teacher education out of the sphere of higher education altogether and locating it entirely within the practitioner system. But the 'philosophy of wisdom' does not negate an important role for 'the disciplines of knowledge' in the development of teachers' professional knowledge. It simply implies the subordination of specialised forms of inquiry aimed at the production of analytic knowledge to a more holistic form of practical inquiry aimed at generating wisdom about how to realise educational values in action.

Maxwell cites two additional rules for this kind of holistic and practically oriented inquiry. The first is that "in tackling a complex problem it is often helpful to break the given problem up into a number of subordinate, specialised problems". This moment of analysis is then followed by a moment of synthesis when the solutions to the subordinate problems are "put together to solve our original, overall problem". The second rule he cites is that "in order to develop good ideas for a solution to our given problem it is often helpful to look at solutions to analogous, already solved problems". This would apply to both the overall practical problem and the subordinate problems of knowledge.

Seen in this light the knowledge produced by the specialised disciplines of education can be seen as intellectual resources for the moment of analysis within the action-research cycle of 'reflection upon action and action upon reflection'. It can be eclectically utilised to deepen the action-researcher's understanding of the particular sub-problems (s)he has analysed a complex practical problem into. But this is only likely to happen if (s)he can apply the second additional rule so that the knowledge generated by the disciplines constitute solutions to problems of knowledge which are analogous to the problems which have emerged from an analysis of his or her practice. The ability of the educational action-researcher to utilise the disciplines of education will therefore depend on the extent to which the specialists within those disciplines subordinate the production of knowledge to the overall aim of helping educational practitioners to improve their articulations of complex practical problems. Maxwell argues that academic work on subordinate problems of knowledge should all be designed "in one way or another, to help us achieve what is of value in life".

This view of the relationship between the disciplines of education and practical knowledge has the following implications. First, everyday understandings of educational processes, which are embedded in educational practices and articulations of practical problems and proposed solutions (what Schön has called "problem-frames"), do not originate, as Wilson appears to suggest, in specialised and differentiated disciplines of inquiry. Rather they originate in the holistic and undifferentiated thinking of educational practitioners as they attempt to realise their educational values in complex practical situations. They are primarily conditioned by the practical aim of realising values.

Secondly, the theoretical knowledge which disciplines of education produce can only be utilised by practitioners if they are framed and conditioned by an interest in realising *common* educational values. In this sense the disciplines of education are not value-free and therefore, at least in one sense of the term, not free of ideology.

Thirdly, although specialised inquiries within the disciplines do not determine and structure professional knowledge, they can contribute to its development. The

disciplines of education can be viewed as specialised branches of inquiry whose fundamental task is that of facilitating fundamental educational inquiry (action-research). The major task of the philosophy of education is to improve educators' everyday conceptions of the aims of education and the processes in which they can be realised. That of the history of education is to help us to examine and assess the ways complex practical problems of education have been articulated and 'resolved' in the past as a basis for selecting analogies which can improve our articulations of, and proposed solutions to, current educational problems. Psychology and social psychology have the task of improving educational practitioners' articulations of the personal and interpersonal dimensions of educational processes like teaching and learning. The task of sociology is to help the practitioners improve their grasp of the institutional and social contexts in which the practical problems of education arise.

There is an important sense, then, in which we can say that the disciplines of education are a major source of critical standards for analysing aspects of educational practices. But these standards cannot fulfil this function by simply being applied to educational practices which are assumed to exist independently of the thinking and professional knowledge of the persons engaged in them. Structures of knowledge are embedded, often tacitly, in practices and provide the 'problem-frames' (see Schön, 1983) in which practical problems are articulated by practitioners. The disciplines of education provide critical standards for assessing particular components of teachers' knowledge. But they can only carry out this function in a context where teachers themselves are engaged in fundamental educational inquiry in which they articulate practical problems and proposed solutions.

In this context the relationship between the specialist inquirer and scholar as teacher educator and the practitioner is one of partnership and dialogue. The practitioners not only use the knowledge generated by the disciplines to develop their conceptualisation of practical problems but their conceptual schemes can in themselves provide a basis for a critique of the assumptions embedded in the way problems of knowledge have been defined within the specialised and subordinate disciplines. In this sense the teacher educator must always transmit his or her specialised knowledge as intrinsically problematic. Internal standards and methods of validating knowledge within a discipline are always open to a critique from the standpoint of the standards or values which are internal to educational practices and which ultimately define what is to count as professional knowledge. In the final analysis the ultimate validation of specialised knowledge about education is that it enables educational practitioners to discover better solutions to the complex practical problems they confront in realising educational values in action.

We are now in a position to provide a more precise restatement of the source of the teacher educators' authority from a 'philosophy of wisdom' perspective. It lies in his or her knowledge and understanding of the standards and methodological concerns of practical educational inquiry, conceived as a process of action-research. This knowledge and understanding includes an appreciation of the role of the disciplines in educational inquiry, and the ability to facilitate the utilisation of the theoretical knowledge they embody within it.

ACADEMIC CULTURES AND PRACTICAL CULTURES

Tony Becher's research into the culture of academic disciplines and fields of inquiry suggests that specialists' understandings and interpretations of the forms of reasoning within the disciplines they are engaged in varies considerably both across, and sometimes within, individual disciplines. On the basis of his interview data he identifies two major dimensions in which variation occurs. The first is the general–particular dimension. Conceptions of theorising between and within disciplines can range from the production of deductive general theories through "hypotheses which embody some measure of generalisation but rest on an appeal to empirical evidence" (what Becher calls "middle-range theory"), to "descriptive taxonomies and prescriptive rules of thumb embedded firmly in data yielded by observation and in practical experience".

The second dimension of variation is between those who attempt to discover "profound simplicities" underlying complex phenomena and those who, assuming that phenomena are more complicated than they seem (as many historians appear to), see it as their task to describe the idiosyncratic and unique features of phenomena and the ways in which their characterstics vary.

Becher discerned a "shadowy spectrum" from disciplines which embody some notion of "inherent order, neatness, and regularity" to those which rest on "considerations of individual idiosyncracy and collective variation, and acknowledge the intricacies of interpreting and encapsulating them". Mathematics and physics tend to fall at the top of the spectrum, economics and chemistry in the middle range, and then biology and sociology before reaching the bottom with history and literary studies. He expresses little surprise with finding that "the disciplines with highly-developed and coherent general theories ... are by and large those whose subject-matter is simple and orderly".

Becher not only looked at the cultures of what are traditionally known as 'disciplines'. He also talked to people operating within interdisciplinary fields of inquiry like geography and within fields of inquiry focused on 'professional pursuits' like engineering, law and pharmacy (he didn't look at education but would place it in this category). He characterises the cultures of interdisciplinary fields rather differently from inquiry focused on professional/vocational pursuits. The former tend to reflect the cultures of their contributory disciplines, and they display both 'hard' (general theory/simple) and 'soft' (descriptive/complex) elements. However, within the culture of the latter he argues "it is not easy to identify any all-embracing theories ... what replaces them seems to be something as nebulous as Dewey's 'problematic' ... or Schön's (1983) 'problem frames'".

It is interesting at this point to note that Wilson claims education is an interdisciplinary field of inquiry, which for Becher would mistakenly imply that its theoretical constructs are largely determined by its constitutive disciplines. His own analysis places educational inquiry as a professional/vocational field of study in which the theories employed are non-specialised everyday conceptions embedded in

the relevant forms of practice. However, he also affirms that certain disciplines can make a contribution to refining and developing 'theories' of everyday experience.

> ... since education ... is a professionally-orientated field of enquiry, it cannot aspire to a set of hard general theories of its own, even to a choice of soft, all-embracing metaphysical perspectives [such as those employed by some schools of sociology or literary criticism]. It may draw to a limited extent upon the theorising of the disciplines which contribute to it, but much of what passes as education theory is liable to comprise low-level generalisation. In the very nature of its underlying knowledge structure, the common forms which theory takes in this field might be expected to comprise 'models' which describe but do not predict, taxonomies which arrange the data into convenient categories without the scope for extrapolation, and nostrums or procedural propositions whose justification is pragmatically grounded in claims of their practical effectiveness. And on inspection, this would appear to be the case.

Becher argues that there is scope for the disciplines of education to make a contribution to the development of middle-range theories for educational inquiry, i.e. hypothesis inferred from experience rather than deduced from axioms. But disciplines which have some bearing on education will inevitably embody dominantly 'soft' rather than 'hard' cultures.

In general the implications Becher draws from his study of academic cultures for educational inquiry supports the account of the relationship between educational theory, the disciplines, and professional knowledge which is implicit in the 'philosophy of wisdom' perspective on intellectual inquiry. If we bring this perspective to bear on Becher's analysis of academic cultures we can argue that disciplines at the 'hard' end of his spectrum tend to be those which are the most specialised and dissociated from the practical problems of everyday experience in the real world. And this perhaps explains the special vulnerability, which Becher remarks on, of the 'hard' disciplines to paradigm shifts.

Although he is able to organise his cultures along a spectrum, Becher notes that the tension between 'hard' and 'soft' cultures tends to be manifested in each discipline. Thus in physics there are those who abandon the high ground in favour of middle-range theories inferred from observational data, while in psychology there are those who have aspired to abandon low-level generalisations and even middle-range theories to develop general theories which provide comprehensive explanations for psychological phenomena.

It might be argued that paradigm shifts in the hard disciplines are activated by those who return to the 'soft' end of the continuum within the discipline to answer questions the general theories ignore. Perhaps a paradigm shift in a 'hard discipline' is a response of that discipline, however invisible, to problems of knowledge which emerge as people in everyday life encounter new sorts of practical problems in realising their values in action. In other words paradigm shifts, even within 'hard' disciplines, constitute attempts to overcome the dissociation of knowledge from life,

and reflect renewed efforts to subordinate forms of knowledge production to the realisation of human values in social practices.

Within the 'soft' disciplines there are always people who as part of a quest for order and precision go in search of general theories. After all the academic status of disciplines and other fields of inquiry in universities appears to be organised in a hierarchy from 'hard' to 'soft'. Becher notes the tendency within the 'soft' disciplines for people to embrace rival paradigms of inquiry based on metaphors which are metaphysical in character. These metaphors provide a general orientation to inquiry —for example, 'behaviourism' and 'structuralism' in psychology, and 'functionalism' and 'symbolic interactionism' in sociology—but they cannot be directly connected with evidence. What they appear to do is to symbolically express and legitimate different methodological stances within a discipline on issues surrounding the nature of the subject-matter (simple or complex) and the kinds of theorising appropriate (high-level or low-level).

I would argue that such conflicting paradigms within a discipline at the 'soft' end of the spectrum also reflect a relation between theory and the world of everyday practical experience. In order to analyse the latter in depth it is necessary to generate more specialised branches of inquiry which focus on particular elements within that experience and thereby abstract them from their context. The question for any discipline is: 'how far can it take the process of abstraction and simplification in search of order and precision before it ceases to have any relevance to people's practical interests and concerns?'

Paradigm conflicts within the disciplines of education are essentially issues about the nature and form of the standards of reasoning which ought to prevail in them. I personally cannot see, as Wilson appears to, how such issues can be internally resolved without reference to the practical cultures which prevail in society. Peters (1974) once argued that he could not understand why American psychologists so enthusiastically embraced 'behaviourism' as a theoretical orientation to understanding persons. He then lived in America for a period and "realised", he claimed, that 'behaviourism' constituted a basic assumption which underpinned people's interpersonal relations with each other. The whole point of his paper was that psychological theories are framed by assumptions embodied in particular practical cultures. This, for me, implies that the 'standards of reasoning' which prevail in a discipline necessarily reflect the cultures embedded in everyday social practices, even through their precise application in the context of a discipline can in turn modify the content of such cultures.

Altrichter & Posch, in a paper on 'grounded theorising' and 'action research', attempt to show how the processes of theory-generation within specialised disciplines might become more continuous with the reflective features of professional action, and therefore make their theoretical products more utilisable in elaborating practical problems and solutions. They argue that the theory-generating process itself is necessrily structured, not only by the researchers' prior theoretical endeavours within a discipline, but also by their everyday experience of living. Theory-generation, they claim, is founded upon "a 'theoretical nucleus' which will contribute to the more elaborate 'theory' in some way or another". If specialist

researchers, they suggest, saw their own inquiries as reflexive practices, and made explicit the practical concerns which tacitly guide them, they would enable others to utilise the products of their inquiries in mutual practical discourse about problems of living.

STANDARDS OF REASONING IN EDUCATIONAL INQUIRY

There are good reasons from a 'philosophy of wisdom' perspective for locating teacher education within institutions of higher education. One of the unfortunate consequences of the dominance of the 'philosophy of knowledge' perspective in these institutions is that the generation of knowledge within the disciplines, and its transmission, has become detached from the problems and issues of everyday living. This is not only harmful for the disciplines, it also harms the growth of reflective practice in the wider society. The situation can only be rectified if academics place their commitment to their discipline or interdisciplinary field of inquiry in the broader context of a primary commitment to a form of inquiry which attempts to resolve the practical problems of everyday living. This implies a commitment to collaborative inquiry with practitioners operating in various institutional contexts and social enterprises. In this context it is the role of the academic not only to bring his or her discipline's standards of reasoning to bear in the analysis of practical problems and issues, but also those which are internal to the relevant social practice which in themselves are contestable because such standards derive from different practical traditions.

The academic in the field of education should be the guardian of standards of educational inquiry which are implicit in the practical traditions that inform educational practices, not just the guardian of the standards of reasoning employed in his/her specialism. This not only means representing those standards in collaborative forms of inquiry with educational practitioners and policy-makers, it also means helping educationalists to clarify these standards and the forms of practical reasoning they imply.

Since educational practices can be informed by a plurality of traditions the academic should not seek to avoid commitment to a particular outlook. His/her job is to help practitioners committed to a particular tradition to articulate, clarify and discuss the form of reasoning. But in doing so (s)he will welcome dialogue with the advocates of alternative educational outlooks and encourage the practitioners (s)he is working with to view such dialogue as a methodological necessity for deepening their understanding of educational practice. The academic in education should be making important contributions to mapping out the methodological principles which the process of practical educational inquiry entails. Efforts in this direction are illustrated by Altrichter & Posch, Sockett, House, Kroath, Whitehead and Mary Louise Holly.

Altrichter & Posch give us a timely warning of the dangers in borrowing strategies employed in some of the 'soft' disciplines as a methodological basis for action research. They focus on the currently fashionable 'grounded theory' approach of Glasser & Strauss. It is a superficially attractive one because of its apparent

openness to the complexity of social action and building theory inductively from data. But Altrichter & Posch point out that its strategies, for deriving theory inductively from data, embody assumptions which can alienate teachers from the task of reflectively developing the practical theories or 'problem-frames' tacitly embedded in their practices.

First, they argue, it operates with a restricted notion of theory as a set of well-codified propositions which constitute the end products of inquiry. This tends to rule out giving the professional knowledge embodied in practitioners' practices (knowledge-in-action) the status of theory. Secondly, and related to this, the emphasis on entering the field of inquiry in an unprejudiced state of mind restricts the practitioner's capacity to utilise his or her biases (tacit professional knowledge) in articulating practical problems and devising solutions to them. Thirdly, the approach in general conveys a rationalist view of the relationship between theory and practice which renders the latter a form of technical–rational action in which theory guides the selection of technical means for achieving pre-defined ends, but throws no light on the nature of the ends in themselves. This view implies a division of labour between the researcher as theory-generator and practitioner as theory-applier. Even when it is the practitioner doing the research (s)he operates in a dual role, with the practitioner role subordinated to the requirement to apply the theory developed in the researcher role when selecting technical means to predefined ends. 'Grounded theorising' becomes a method for getting practitioners to view their practices as technical–rational activities.

Altrichter & Posch claim that education is essentially a moral practice aimed at the realisation of values, not so much as an extrinsic outcome of an activity, but within the form of the activity itself. This view is very consistent with Stenhouse's 'process model' of curriculum development as an alternative to an 'objectives model'. The importation of a 'grounded theory' methodology developed by a certain school of sociologists, as a basis for educational action-research can only, according to Altrichter & Posch, serve to distort the nature of educational practice. Methodologists of teacher-based educational inquiry should, Altrichter & Posch argue, "concentrate on further developing reflective features of professional action which in the context of practice itself are responsible for enhancing the quality of action". In this respect they make reference to the contributions of Schön (1983) and Argyris *et al.* (1985) in identifying what these features are.

However, Sockett argues that any comprehensive account of educational inquiry must not simply attend to the reflective dimensions of this process, but also to the nature of the practice itself. Professional knowledge is knowledge of a particular practice. Sockett claims that what counts as knowledge will be governed by the professional standards implicit in an educational practice itself. He argues that "it is *within* the profession of teaching that we locate the standards of research practice". Sockett sees a special role for philosophers of education in helping to articulate what these standards are. There is a need, he argues, to develop an epistemology of educational practice as a context for developing a methodology of inquiry. The form of reasoning which governs such inquiry will fundamentally depend on how the standards implicit in an educational practice are viewed.

Sockett argues that if a practice like teaching is to count as an educational enterprise then its standards must refer to certain moral values. His paper is largely an initial attempt to map out some of those values; namely, those of *care, courage* and *truth.* His account is highly consistent with a 'philosophy of wisdom' perspective on the aims of practical inquiry, i.e. to realise values in social practices. But it illuminates the difference between a social practice and forms of technical–rational action.

On Sockett's account values are not only extrinsic outcomes of social practices. They are also qualities inherent in the practices themselves. What makes teaching an educational practice is not so much its instrumental effectiveness in producing extrinsically related learning outcomes, as the realisation of certain moral values. Such values characterise a desirable relationship between teachers and learners, *within* the activity of teaching itself. Sockett believes that we are losing our vision of teaching as an educational practice framed by moral values, and instead interpreting it as a purely technical–rational activity governed by standards of instrumental reasoning. It is the task of an epistemology of educational practice to keep that vision alive as a context for developing a methodology of *educational* inquiry.

If the standards of practical educational inquiry are moral standards, then what form does theorising take in educational inquiry. This is a question which Whitehead addresses. He argues that any *educational theory* must provide an answer to the question: 'how can I improve my educational practice?' This question is only a particular form of the basic question of all practical inquiry; namely, 'how can I realise my values in practice?' Whitehead claims, rightly in my view, that the specific form of the question arises from a teacher's personal experience of his/her 'self' as "a living contradiction", as a negation of the values by which (s)he would like to define him or her 'self' as an educator.

If educational values are qualities of the 'self' manifested in activities like teaching, as both Whitehead and Sockett claim, then in realising such values the teacher also realises him/herself. But this is not necessarily a reflexive process, in which a teacher's 'self' objectifies itself as a 'me' and thereby constitutes an object of inquiry for 'I'. The 'self' can be realised in action in the absence of reflexive consciousness. This only emerges for a teacher experiencing his/her practice as the negation of the educational values (s)he wants to realise within his/her teaching. This is what Whitehead means by the experience of the 'self' as a 'living contradiction'. He claims it is the necessary foundation for the fundamental question of educational inquiry and the starting point for all educational theorising. Such theorising is the reflexive or "dialogical" (to use Whitehead's terminology) activity of the teacher who is consciously striving to realise him/herself as an educator in practice by overcoming the experience of negation. Educational theorising for Whitehead, is a form of reflexive inquiry aimed at realising the 'self-in-action'. This is why Whitehead argues that an educational theory is the basis of a teacher's claim to know his or her own professional development.

Whitehead concludes that an educational theory, as an answer to the fundamental reflexive (or dialogical) question, cannot be fully stated in the form of

propositional logic, because it does not refer to things which are posited as existing independently of the theoriser. An educational theory can only be constructed in concrete forms of educational practice. Hence, Whitehead talks about a "living educational theory" which is "part of the living form of the practice itself". (A point which echoes the Stenhousian idea of a curriculum as a practical embodiment of educational theory.) Such a theory-in-action, argues Whitehead, constitutes both a description and explanation of an educational practice. The form of the practice itself offers an holistic account of the practical wisdom that cannot be fully articulated in propositional terms, i.e. an account of the values which define education and at the same time explain how they are realised.

Whitehead's point that the reflective practices of teachers embody descriptions and explanations of how to realise educational values is highly consistent with Aristotle's account of moral inquiry in his *Ethics*. He argued that moral values cannot be understood by simply examining the meaning of the terms we use to express them in language. This is because moral values are fundamentally defined in and through the actions we undertake to realise them. The implication of this is that our social practices embody 'descriptions' of our values. And we only develop such 'descriptions' by reflecting upon our actions and ways of improving them.

Aristotle's account also illuminates the inseparability of ends and means in moral practices. Ends as values are realised *in* the courses of action we engage in as means. This is why such courses of action can offer not only descriptions of values, but also explanations of how they are realised.

Whitehead's account of educational theory explains Altrichter & Posch's claim that the inductive bias of 'grounded theory' methodologies is inconsistent with the idea of teaching as a moral practice. Since educational theory, according to Whitehead, cannot be formulated in the form of propositions it can only be communicated through 'records' of concrete events.

Whitehead's view of educational theory is rather different from the view that such theories cover all 'tacit knowledge', 'knowledge-in-action', 'problem-frames', etc. As answers to a reflexive or 'dialogical' question they are consciously developed. From this standpoint we might distinguish between tacitly acquired professional knowledge about how to realise educational values in activities like teaching, and the reflexively acquired professional knowledge which is developed through action-research in response to an experienced problem of realising the 'self', and the values which define it, in practice. The latter kind of professional knowledge necessarily constitutes a critique of tacitly acquired or held professional knowledge, and a development of it. This explains Whitehead's view that in giving others access to records of his or her reflective attempts to realise educational values a teacher invites them to examine the validity of a claim to know his or her own professional development. But Whitehead's view of educational theory leads him to point out that these records must not only provide evidence of the theory (concrete forms of action) but also of the process by which it was theorised (dialogic reflection with self and others).

Whitehead refers to the trouble he gets into when he attempts to transfer these methodological principles as a basis for teacher education in his own university. The

fact that teacher education programmes still largely assess teachers' capacities to theorise about education in terms of their ability to formulate theory in propositional form is a major indicator of the persistent power of the 'philosophy of knowledge' perspective in universities. If teacher educators are to realise their own educational values in their work with teachers within institutions of higher education they will' like Whitehead, have to undertake their own second order action research into ways of transforming the practical culture of academe.

Whitehead's account of the nature of educational theorising is supported by House, Lapan & Mathison's case study of the processes of reflection engaged in by a young university teacher of educational psychology as she attempts to improve her teaching. It is interesting that 'the record' of her actions and reflections is constructed by the teacher's peers (the authors) and not herself. I will return to the question of who constructs 'the record', and why it is necessary later. House *et al.* point out that although the university teacher is teaching formal psychological theories to student schoolteachers, she appears to make little use of such theories in learning to teach herself. Rather, she initially draws on her past experiences as a student and imagines what worked with her and what didn't. It is on the basis of such examples that she infers courses of action as 'hypotheses' about what could or could not work in her situation. But many of the cause–effect inferences she makes are not technical in their fundamental structure. As the authors demonstrate, her interests and concerns go well beyond technical considerations like getting the students to pass tests. She is concerned that they have opportunities to discover personal meaning and significance in the subject-matter, and experiments with a succession of strategies to this 'effect'. Following Sockett one might argue that what she was attempting to do was to realise the value of 'care for students as persons' in her teaching methods. Her inferences are therefore imagined solutions to the problem of realising her educational values in her teaching.

All this is highly consistent with Whitehead's account of educational theorising, and it is interesting that this young teacher, through such a process, comes out top in a rating of teaching quality in her faculty. However, House *et al.* illuminate the evidential basis of the teacher's reflection-on-action. It lies in her own personal and professional life history. The teacher does not imagine possible problem solutions simply on the basis of reflection-on-actions undertaken in the immediate past. The repertoire of cases within her stored experience, and which she draws on in reflection, extends far back in time. The fact that teacher education generally pays so little attention to helping student and in-service teachers to recover their 'life histories', particularly with respect to their experiences of schooling as pupils, is perhaps the highest indicator of its present incapacity to foster practical educational inquiry as the foundation of teachers' professional development.

House *et al.*'s case study of educational theorising is very consistent with those Schön used to illustrate the ways in which professionals draw on a stored repertoire of past experiences as the basis for their reflections *in* and *on* their actions. Like Schön's accounts, that of House *et al.* demonstrates that the form of practical theorising is primarily structured by stored practical examples of personal experience rather than stored sets of theoretical propositions. But House *et al.*'s case study

also shows how formal theory can be incorporated into personal experience. The teacher's students were eventually able to utilise Kohlberg's theory of moral development (her subject-matter) by personally reconstructing its meaning as they reflected upon their actual responses in a simulated 'moral' situation. Their experience in this situation can subsequently be drawn on as they confront similar moral dilemmas in real life. But in doing so they will also draw on Kohlberg's moral theory since it has been incorporated into their personal understanding of the experience.

The repertoire of concrete and personal experiences which constitute an individual's professional knowledge is not necessarily uninfluenced by formal theories expressed in propositional form; as indeed Whitehead acknowledges. Such experiences can incorporate them when they are mediated by reflexive practice.

There is a great deal of 'educational research' currently being undertaking within the 'psychology of education' into the nature of teachers' tacit practical theories, and within 'the sociology of education' into the professional cultures which shape them. The growth of such research within the disciplines of education reflects an increasing awareness of the role of tacit knowledge and the professional cultures/traditions it draws on in shaping and determining the practices of teachers. (In the second volume we shall have contributions from researchers working in these areas.) Such research cannot be dissociated from certain practical concerns abroad in society with how to improve teaching quality.

Kroath's paper, which draws on both German psychological research into teachers' practical theories and the action research perspective on them developed within the UK, reminds us that research into teachers' thinking can be utilised to terminate teachers' practical theories and cultures, in contrast to the aim of making them explicit in a form which enables teachers to improve them through their own reflective inquiry.

Kroath describes how research into 'subjective theories' by some German educational psychologists is being applied to in-service education programmes in the form of an 'exchange approach' to changing teachers' practices. The approach involves making 'deficient' elements in a teacher's subjective theory explicit and then getting him or her to replace it with a formal psychological theory as a basis for changing the practice. As Kroath points out, the assumption which underpins this approach is that the subjective theories of teachers are less valid than the psychological theories which replace them. The whole approach represents a renewed attempt to make a rationalist form of teacher education more effective by controlling not simply the acquisition of formal theory, but also the conditions under which formal theory is applied in practice.

If effective, the 'exchange approach' would not only change elements in teachers' practices, it would also change the way they viewed their practices more generally. The approach encourages teachers to see teaching as the technical–rational activity of applying instrumental rules derived from theory, rather than as the moral activity of realising values *in* the activity as a whole.

Kroath expresses considerable scepticism towards the 'exchange approach' as a theory of teacher change. This scepticism is based on two case studies he carried out to test the usefulness of alternative change theories. The other change theory he

tested was that of educational action research. A teacher was asked to articulate a problem in her practice and then to reflect upon it in the light of questions posed by her peers.

The 'exchange theory' test involved asking the teacher to comment on a videotaped extract of his lesson, and then carrying out an in-depth interview to reconstruct and validate the elements in the tacit theory which underpinned the teacher's commentary. This reconstructed subjective theory then served as the basis for a discussion in which Kroath (a psychologist) challenged elements in the teacher's theory which appeared to be deficient in the light of psychological theory. Kroath reports that the experiment made no impact on the teacher's subjective theory: "The teacher did not intend to change any aspect of his theory" although he found the exercise a "stimulating experience".

The 'action research' test involved a group of teachers in a problem identification process called 'analytic discourse'. The aim was to help teachers analyse their practical problems by looking at them from a variety of points of view, in response to questions from peers, and thereby develop new ways of articulating them. One teacher was extremely defensive in this process, but retired from the group to listen to a tape-transcript of her session at home. Detached from the situation, she gradually developed the confidence to face the questions of her peers in private. As she did so she experienced a profound change in her subjective theory of teaching. She realised that her 'jokes' in the classroom, which had created a problem of control, did not, as she believed, realise the value of making the subject more interesting. They were simply part of her attempt to please the children and win popularity with them. This insight evidently produced "immediate changes in her teaching style and self-concept as a teacher".

Kroath's account of how the action research approach changed a particular teacher's practice provides a concrete illustration again of Sockett's and Whitehead's point; that educational theory is a form of practitioner-based moral inquiry in which the practitioners attempt to discover the conditions under which they can realise their educational values, and therefore themselves, in action. The teacher in Kroath's second case study discovers why her jokes constitute an obstacle to, rather than a means of making her subject-matter interesting. But she would never have learned these things if she had not initially experienced herself as "a living contradiction" in the classroom. The problem she brought to the group was defined by the values she wanted to realise in her classroom. She wanted to make her subject interesting to the children. She thought her jokes expressed this intention. The problem she experienced was that they distracted the children from the subject-matter. The teacher experienced herself as the source of these inconsistencies, which was why she became defensive under questioning from her peers. But it was the starting point for her theorising. She wanted to understand why her jokes did not convey the interest of her subject. And it is in this context that she makes a discovery about herself: her teaching was permeated by the desire to please. This insight changed her 'problem-frame' and enabled her to imagine new problem-solutions.

The methodological principle so graphically illustrated in Kroath's paper is that

problems for practical educational inquiry are not simply problems about practitioners' theories-in-action but problems about the 'selves' they manifest in their practices. If teacher educators ignore this principle they are likely to fall into the danger of attempting to shape teachers' practices as a form of technical–rational action rather than moral endeavour.

CONSTRUCTING 'MIRRORS' OF THE SELF-IN-ACTION: THE ROLE OF TEACHER-EDUCATORS

In facilitating practical educational inquiry or action research it is the task of teacher education to establish conditions which enable teachers to develop their *reflexive powers,* i.e. their capacities to monitor the self-in-action and to direct its future development in the professional context. Central in this task is the construction of records which 'mirror' the self-in-action and enable teachers to reflect about their educational values and the extent to which they are being realised. Such records are important vehicles by which teachers communicate their experience as a basis for dialogue with others.

Dialogue is an important context for developing, as well as validating, educational theory of the kind Whitehead describes. In dialogue teachers are able to utilise reflectively not only the repertoires of personal experience which originate in their own 'life histories', but also the experiences of each other.

This sharing of experience, in practical discourse about each other's problems and issues, enables teachers to incorporate significant cases within the professional experience of other practitioners into their own 'stock of professional knowledge'. In this way a common 'stock of professional knowledge' is constructed and continuously reconstructed as a basis for educational theorising. Practical discourse is therefore the process by which the generalisability of educational theories, encapsulated in cases of professional practice, are established and tested. In dialogue with others, teachers naturalistically generalise (see Stake, 1985) insights and wisdom embodied in case records and descriptions of other practitioners' experiences to their own.

It is this idea of educational inquiry as a form of practical discourse about particular problems and issues which has guided the development of case study approaches to the evaluation of educational programmes by such researchers as Stake (1976), MacDonald (1973) and Simons (1986). Within this approach cases of the programme-in-action are constructed in collaboration with participants, validated in dialogue with them, and then circulated more widely as a basis for discussion about the merits of the programme amongst the interested parties. Much case study evaluation and research in education can be seen as a broad educational strategy for promoting informed practical discourse amongst teachers and other educational practitioners, e.g. administrators and policy-makers.

There are no precise methodological rules for constructing records to enable educational practitioners to reflect on their practices in dialogue with others. Whether practitioners construct the records themselves with support from teacher educators, or construct them collaboratively with the latter, or whether the teacher educators construct the records but validate them with practitioners, will all depend

on the context, e.g. how experienced and confident the practitioners are in reflecting on their practices, the boundaries of the cases to be constructed, the numbers of people involved, and institutional constraints on time etc. It is a matter for *second order* action research by the teacher educators involved, in the light of the values they want to realise as facilitators of *first-order* action research.

There is also little room for dogma about methods for constructing and handling records, e.g. about the relative emphasis to be placed on observational records, such as video and tape recordings, compared with written accounts and subjective records, such as self-commentaries and interview transcripts. There is no such thing as a single valid method, set of procedures, or battery of techniques for facilitating practical educational inquiry. This should be borne in mind when reading a growing number of handbooks and manuals on 'how to do action research'. They can be useful guides for teachers and teacher-educators, but when readers lack much understanding and appreciation of the methodological principles and standards which underpin action research they run into the danger of helping to technologise the thinking of both teachers and their educators. The purpose of applying techniques of data collection, recording, and analysis is to enable teachers to mirror and reflect upon the self-in-action and not to objectify the situation in a form which dissociates the self from its actions.

Methods, procedures, and techniques for constructing 'mirrors' which enable practitioners to reflect about their practices in public discourse with others can, in a certain context, have the unintended side effect of preventing people from developing their reflexive powers. This is a context in which practitioners have received no help to reflect in some private space about their practices. At best they conceal themselves from public and private scrutiny by producing sophisticated rationalisations for the practices 'on record'. At worst they experience, as illustrated in one of Kroath's case studies, so much anxiety that they erect strong self-defence mechanisms which may subsequently persist. In either case the capacity for a reflexive dialogue with 'self' is diminished.

Mary Louise Holly's work on helping teachers to reflectively reconstruct their personal and professional experiences over time through writing, in diary or journal form, has been a welcome corrective to a tendency to emphasise the construction of public records. One could indeed argue that developing a capacity to reflect about one's practice in private is a necessary psychological condition, at least within our culture, for being able to participate reflectively in practical public discourse. It protects individuals, as Holly argues in 'Reflective writing and the spirit of inquiry', against the hierarchical power structures which constrain free and open discourse in public settings and thereby restricts the thinking of at least some participants. This is again neatly illustrated in one of Kroath's case studies. The teacher's capacity to self-reflect in the 'analytic discourse' process is inhibited by the presence of an authority figure. Holly suggests that private reflection may well be a necessary precondition for the development of a strong professional teacher culture, which is both built on reflective practice and able to resist the hierarchical imposition of ideological frameworks which are anti-educational.

She is not making out a case for private rather than public reflection or even

for a sequence of reflection from 'private' to 'public'. Her views are perfectly compatible with the principle that a process of private reflection should operate concurrently and interactively with a process of public dialogue. But they do imply that the capacity for private self-reflection is ontologically prior to the capacity to self-reflect in public. This is consistent with Whitehead's view of educational theorising as being grounded in the emergence of a dialogical relation between 'I' and 'me'. It is necessary to establish the internal discourse as the context for discourse with others. Of course the public discourse can feedback into the private discourse, but the fundamental process is the latter. Again, this is illustrated by the teacher in Kroath's second case study, who found it necessary to retreat from public to private space in order to begin to reflect about her practice.

The same methods and techniques for constructing public records of practice can be employed for constructing private records. But the advantage of reflective writing techniques, as described by Holly, is that it is far easier for practitioners to carve out private spaces for reflective writing than for constructing records which require hardware like video and tape recorders.

It could well be the case that teacher educators have revealed very limited methodological understanding in foisting upon teachers forms of data collection and analysis which have been borrowed from 'research on education' within the behavioural science disciplines. Such techniques may well inhibit a fruitful interaction between self-reflection in private and public spaces, because teachers will find it difficult to utilise them in reconstructing their experiences in private. They will then either 'fall away' at the hands of an over-demanding technology, or in trying to master it, come to see themselves as academic researchers. When they take the latter option they will tend to screen the 'self' out of the construction of their practices by objectifying the data.

One advantage of Holly's approach, compared to other methods of recording is that it is more comprehensive in its scope. It doesn't simply reconstruct current experience but also past personal and professional experiences which can be linked to it. In this way teachers can recover and reconstruct their 'life histories' and thereby reflectively improve the repertoire of cases they utilise in analysing problems and proposing solutions.

Holly's paper implies that since reflective writing appears to be the most accessible and comprehensive method of privately 'mirroring' the self-in-action, there should be some continuity between this method and those employed for constructing public records. A teacher educator or researcher, for example, who constructs a record of a teacher's practices without allowing a self-account produced in private to become part of the record, thereby infringes important *criteria* of validity; namely, those of comprehensiveness and relevance. Underpinning such criteria is a *principle of continuity* between private and public self-reflection which rests on the ontological primacy of the reflexive self in educational inquiry.

In conclusion, the papers I have referred to, taken together, imply a coherent set of methodological criteria which specify the kind of inquiry process it is the

responsibility of teacher educators and specialist researchers in education to foster as a context for their own activities. These may be summarised as follows:

(1) Since educational inquiry originates in practitioners' experiences of the practical problems they face in realising their educational values, it should not be confused with disciplines of knowledge which address specialised problems within the field of education.
(2) Since educational inquiry is a self-reflective (reflexive) form of educational practice, which aims to improve practitioners' articulations of their practical problems and their ability to propose and test practical solutions, it should not be treated as a separate activity to the practice of education itself.
(3) Since the standards of reasoning which govern educational inquiry are constituted by the values which are internal to an educational practice, they should not be confused with the standards of reasoning which shape theorising within the specialised disciplines of knowledge.
(4) Since the aim of educational inquiry is to develop the practical wisdom of practitioners its outcome should not be regarded as a form of propositional knowledge.
(5) Since educational theories are structures of practical wisdom reflectively developed in forms of educational practice, they can only be holistically portrayed in records of reflective practice.
(6) Since educational inquiry is a process whereby practitioners articulate problems and propose solutions on the basis of inferences drawn from analogous cases, in their own and each other's past experience, then such inquiry must give practitioners' opportunities to reflectively reconstruct, in both private 'biographical' reflection and public discourse, their case repertoires.
(7) Public records of reflective practice should incorporate records of private autobiographical reflection under conditions of access controlled by the individuals concerned.
(8) Since in educational inquiry the acquisition of propositional knowledge is subordinate to the acquisition of practical wisdom, then such knowledge can only be utilised, and thereby practically validated, if the specialised problems it addresses are analogous to questions which emerge from practitioners' own analyses of their practices.

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