

ASSESSING AND EVALUATING AN INDIVIDUAL'S  
HIGHER EDUCATION

Jack Whitehead,  
School of Education, University of Bath

---

ABSTRACT

My purpose is to raise a number of questions concerning the nature of what is being assessed and evaluated by the contributors to this Journal. I also wish to challenge a number of the assumptions concerning the concept of Higher Education which is implicit in the work of these contributors.

I will be arguing that important dimensions of Higher Education are being omitted from the Journal, not because they do not concern the contributors, but because of the prevailing view of knowledge in institutions of Higher Education. My particular concern is that the aesthetic dimensions of the concept of Higher Education are omitted from the Journal. I am thinking specifically of the quality of human relationship in education within which the unity of humanity is not violated.

---

Introduction

Brewer and Tomlinson (1, p.152), in "The use of learning profiles in assessment and in the evaluation of teaching", make the point that:

*"A fundamental problem of psychology as applied to education is the measurement of learning. Cognitive learning is usually measured by testing performance in some form of examination. However, measurements of this type frequently do not distinguish overall achievement prior to assessment, nor does it give any information about the efficacy of the teaching technique used."*

What Brewer and Tomlinson take for granted is the application of 'measurement of learning' to education. Their question is how to measure the learning. I suggest that a prior question should be asked by researchers who are interested in the use of psychology in education. This question concerns the elements of an individual's educational development which are amenable to

evaluation. I would say that there are serious inadequacies in the way in which Brewer and Tomlinson are conceptualising Higher Education. They are assuming explicitly that both the measurement of learning and the evaluation of teaching can be carried out with the same type of criteria. The criteria involved in assessing those components of Higher Education which are amenable to measurement are surely different in kind from the criteria involved in the evaluation of teaching.

I will discuss these differences in the presentation of my dialectical concept of Higher Education. I will suggest that assessment requires the explication of criteria in a propositional form which can be applied directly to an educational outcome. In contrast to this I will suggest that evaluation involves the use of values in making choices. Choices which are so intimately related to an individual's form of life that they cannot be adequately represented in a purely propositional form.

My second point is directed at Mathias' (2) work on "Topic Evaluation". A fundamental problem with the present forms of presentation of research on assessment and evaluation in Higher Education is their denial of the individual. Although Mathias presents four short extracts of transcripts of discussions with students in which they refer to *I*, the individual nature of their educational development is ignored. Consider the following extract from Mathias's article (p.115).

*"As one physics student despairingly put it:*

*'I found it difficult at first and because I wasn't keeping up with it, it was getting on top of me; and then eventually I sort of gave up.' "*

In the analysis which follows the *I* is ignored. In my own dialectical conception of Higher Education the *I*, which appears in our educational discourse, the discourse which is part of our educational development, exists as a living contradiction. By this I mean that every developing *I* in education exists as a dialectical unity: a unity which contains the negation of fundamental human values and the struggle to overcome this negation.

This point still forms a focus of debate between formal and dialectical logicians. The formal logic which structures all the past contributions to this journal explicitly excludes contradiction. Yet I assert that in my educational development in Higher Education, *I* exist as a living contradiction. I further assert that any form of presentation of a claim to know my educational

development must contain *I* as a living contradiction, if it is to be an adequate and valid claim to knowledge.

My arguments rest upon my dialectical conception of Higher Education in which I am taking a Platonic view of the dialectic as a process of coming to know through a method of question and answer. This distinction is crucial to the debates between propositional and dialectical logicians. To understand my arguments it is necessary to understand the different ways in which propositional and dialectical logicians use the concept of contradiction. My reason for focusing upon the distinction in logical terms is that everything we assert as a claim to knowledge can be assessed and evaluated in terms of its internal logical consistency. If I make two assertions (in a theoretical exposition) which are mutually exclusive and which I say are simultaneously true, I would be violating a fundamental premise of formal logic, namely the Law of Contradiction. This law holds that two mutually exclusive statements cannot both be true simultaneously.

In contrast dialectical forms of presentation are grounded in contradictions: not contradictions in the relationship between statements in the propositional form, but in the nature of the subject under investigation. A dialectician would argue that individuals exist as living contradictions in the sense that they hold within their dialectical unity mutually exclusive opposite experiences.

This distinction between the formal and dialectical views on contradiction holds the key to the problem of the implicit concept of Higher Education held by the contributors to this journal.

Every contributor has assumed that assessment and evaluation in Higher Education are related to Popper's 'Third World' of Objective Knowledge (3). All the assessments and evaluations are understood in terms of a direct relationship with Objective Knowledge. *My* questions are directed at the view of humanity which is within this view of knowledge: the relationship between knowledge and educational values implicit within this view; and the relationship between papers in this journal and the art of education.

The view of Higher Education which is restricted to 'assessing' and 'evaluating' in a direct relationship to Objective Knowledge has led inevitably to the omission of the aesthetics, ethics and dialectical logic of an individual's educational development.

My evidence for this assertion is my analysis of my own education development. In the analysis I try to demonstrate the nature of the aesthetic and ethical components in my educational development and relate them to my concept of Higher Education.

#### My dialectical conception of Higher Education

In August 1981, fifty-four Nobel Laureates (4) appealed for a dramatic change of political will in the world:-

*"We cannot stand idly by and watch as disaster approaches. Our knowledge tells us that the whole of humanity is increasingly in danger of death and we must use this knowledge to create hope and salvation, to give substance to our beliefs and opinions."*

In this appeal there is the implication that we must learn to integrate and apply in life the knowledge which will help us to improve the world. In learning how to integrate and apply this knowledge we are engaged in a process of educational development. In coming to understand this process we are engaged in educational research. In claiming to know our own educational development (in a way that is amenable to public criticism) we are constituting educational theory.

The words of the Nobel Laureates also reminded me of Kilpatrick's view (5) that Educational Theory is a form of dialogue which has serious implications for the future of humanity. He states that both within his own country (America) and within the world, contending philosophies are so far apart that consensus is made very difficult, if not impossible. He believes this constitutes the greatest single long-term threat to our civilization and that education must face up to this problem in spite of its inherent difficulties.

The idea that educational research must face the problem of contending philosophies of education is a central theme in this paper. I am thinking specifically of the differences between the disciplines approach to educational theory (6) and a dialectical approach (7). In the disciplines approach it is held that educational theory must be presented in terms of the disciplines of education, such as philosophy, psychology and sociology of education. The dialectical approach contends that educational theory may be presented in terms of the explanations which individuals give for their own educational development. In the dialectical approach, an educational enquiry begins with the experience of an affront to our aesthetic sensibilities. This experience is related to the idea that education is a form of art and to the idea of

Humanity as a Whole.

The art of education and Humanity as a Whole

If we take an artist to be essentially concerned with giving form to whatever material he is working with, we can take the art of education to be concerned with the giving of form to human existence. If we take our own existence to be the material, then we can take the art of education to be our own struggle to give form to our existence. This struggle can be related to a conception of *Humanity as a Whole*.

I am making the assumption that the existence of fifteen million children dying of starvation each year, and the dropping of the nuclear bombs on Hiroshima and Nagasaki, violate our understanding of 'Humanity as a Whole'. This is an aesthetic form of understanding in the sense that we have a view of humanity as a whole in which the existence of starvation, torture and nuclear war has been overcome. The actual existence of these events in the world violates our aesthetic understanding of humanity and prevents the integration of our understanding into a unity.

If the above events are central examples of the violation of our aesthetic understanding of humanity, more limited cases in which our aesthetic sensibilities are affronted occur in our work in education. In my own work as a teacher and as a lecturer in education, I have found myself watching a teacher who has made racist comments in the classroom. I have seen others, including myself, making sexist comments. There have been occasions where I have denied my pupils the freedom to organise their own learning, not because it wasn't in their interests to do so, but because of my own failure to organise the learning resources in a way that made it possible.

There have also been long periods when I have drawn back from the struggle to establish democratic forms of control in my workplace because of the stress involved in the struggle. There have been other times when I have violated the basic respect and quality in human relationships which are required for a conception of humanity as a whole.

So these are important components in my conception of Higher Education: concern with the art of education which contains a conception of 'Humanity as a Whole'; a concern with educational values, such as freedom, justice, consideration of interests, respect for persons, worthwhile activities, and democratic forms of social organisation.

In making such statements I am also evaluating the quality of my own Higher Education. I am pointing out that the quality of my Higher Education rests within the art, ethics and dialectical logic of the process of higher education itself.

The distinction I would draw between assessment and evaluation concerns the criteria we use to judge an individual's educational development. I have suggested that evaluation is concerned with those areas which involve the aesthetics, ethics and logic of educational enquiries. I would distinguish assessment from evaluation by considering assessment in terms of the Popperian 'Third World' of Objective Knowledge.

Let me give an example of assessment in relation to my own educational development. As part of my educational development, I have produced a series of research reports which constitute a research programme and which embody my knowledge producing activities. (These are listed in chronological order under (8)).

When analysed, these reports demonstrate that my educational development can be understood in terms of a scientific and methodological form of life. The research programme conforms to Popper's (3) Schema for describing the growth of Scientific Knowledge; to Medawar's (9) classification of the phases of a Scientific Enquiry; and to Mitroff and Kilman's (10) classification of Methodological Approaches to the Social Sciences.

Popper's Schema is that we formulate a problem, propose a solution of tentative theory, eliminate the error, and reformulate our problem. Medawar says that this formulation has a serious defect in that it disavows any competence to speak about the generative aspects of an enquiry. Medawar separates a scientific enquiry into two phases: a creative phase and a critical phase which alternate and interact. In the creative phase we have an idea and the formulation of this idea is outside formal logic. It is the generative episode of thinking which takes the investigation forward. In the critical phase we subject the idea to empirical and logical testing.

Mitroff and Kilman distinguish four methodological approaches to the social sciences with a set of criteria which include the mode of enquiry and the preferred logic of four distinct groups of scientists: the Analytic Scientist; the Conceptual Theorist; the Conceptual Humanist and the Particular Humanist. The application of the criteria from these classifications reveals

the following pattern:

<u>REPORT</u>	<u>METHODOLOGICAL APPROACH</u>	<u>SCIENTIFIC SCHEMA</u>	<u>PHASE OF ENQUIRY</u>
1	ANALYTIC SCIENTIST	S(1)	CRITICAL
2	NONE	NONE	CREATIVE
3	CONCEPTUAL THEORIST	S(2)	CRITICAL
4	NONE	NONE	CREATIVE
5	CONCEPTUAL HUMANIST	S(3)	CRITICAL
6	NONE	NONE	CREATIVE
7	PARTICULAR HUMANIST	S(4)	CRITICAL
8	NONE	NONE	CREATIVE
9	outside the classification	S(5)	CRITICAL

Report nine is interesting because it is outside the Mitroff and Kilman classification. In report nine I give the following explanation for my own educational development in asking, 'How do I improve this process of education here?':

- (1) I experience a problem because some of my educational values are negated.
- (2) I imagine a solution to my problem.
- (3) I act in the direction of this solution.
- (4) I evaluate the outcomes of my actions.
- (5) I modify my problems, ideas and actions in the light of my evaluations.

I would distinguish my attempts to assess and evaluate my Higher Education in terms of the different criteria which can be applied to that education. For example, where the criteria can be explicated in a propositional form and applied directly to an educational outcome I would say that I was *assessing* some aspect of my educational development. Where the criteria are the values I use in making choices, rather than rules of choice, I would say that I am *evaluating* the quality of my educational development.

In making a claim to know my own educational development in Higher Education I can show the separate ethical, scientific, methodological and aesthetic enquiries taking place. These separate enquiries exist within the one enquiry, 'How do I improve this process of education here?'. In claiming to know this

enquiry I am making an aesthetic claim to know the art of education in the sense of a struggle to give a form to one's existence in a way which does not violate the integrity of humanity as a whole.

Each of these claims is open to public criticism. The scientific and methodological enquiries were distinguished through the application of explicit criteria in the analysis. I 'assessed' the nature of my educational development by applying these explicit criteria in the analysis. The claim to know my educational development as a valued form of life (in Report 6) included the presentation of visual records of my educational practice which, together with a description of the practice, is open to public criticism. I 'evaluated' the nature of my educational development in terms of the values I used in making the choices which gave a form to my life in education.

My purpose in offering this analysis is to draw attention to a number of important implications for papers in this journal. If propositional logic is used in the linguistic form of presentation of papers this actually masks the ethical components in Higher Education and fails to communicate the nature of the art of education.

Propositional forms of discourse are certainly appropriate for assessing those components of education which are amenable to purely propositional forms of representation. In evaluating the quality of an individual's educational development, however, it will be necessary to supplement linguistic statements with other records, possibly visual ones, in order to build up a body of discourse which has shared understanding of the meaning of statements which contain value judgements.

In judging the aesthetic qualities involved in the art of education, a poetic form of presentation may be more appropriate. This may of course be anathema to the majority of the readers of the journal. I would, however, like to bring these issues into public debate.

#### Conclusion

I have presented an analysis of my own educational development in Higher Education in an attempt to question the concepts of Higher Education and Knowledge which underlie the papers in this journal. I have argued that the present conception of Higher Education treats education as if it were solely concerned with the 'Third World' of Objective Knowledge - of propositional forms of discourse. In contrast to this conception I have presented an



analysis which contains aesthetic and ethical dimensions in an individual's form of life rather than in a propositional form.

Thus I am questioning the concept of Higher Education which is implicit in the epistemological position of the contributors to the journal. As the journal is now concerned with educational evaluation as well as assessment, it seems an appropriate time to consider the epistemological implications of attempting to evaluate the quality of an individual's Higher Education. In such an examination it could well be that the problems of assessing and evaluating an individual's educational development will focus upon the question of what it means for you and I to be human beings in education.

#### REFERENCES

- (1) BREWER, I.M.A. and TOMLINSON, J.D. (1981), "The Use of Learning Profiles in Assessment and in the Evaluation of Teaching", Assessment and Evaluation in Higher Education, 6, 2.
  - (2) MATHIAS, H.S. (1981), "Topic Evaluation", Assessment and Evaluation in Higher Education, 6, 2.
  - (3) POPPER, K. (1972), Objective Knowledge, Oxford University Press.
  - (4) GUARDIAN (1981), Article on "The Third World", Guardian Newspaper, August 6th 1981.
  - (5) KILPATRICK, W.H. (1951), "Crucial Issues in Current Educational Theory", Educational Theory, 1, 1.
  - (6) PETERS, R.S. (1977), "The Place of Philosophy in the Training of Teachers", Article in Education and the Education of Teachers, see the discussion on pp.138-140 on the logic of the disciplines approach to educational theory.
  - (7) WHITEHEAD, A.J. (1981), "A practical example of a dialectical approach to educational research", Chapter in Human Enquiry (Eds.) REASON, P. and ROWAN, J., J. Wiley.
  - (8) I (1970), "A preliminary investigation of the process through which adolescents acquire scientific understanding", Unpublished M.A. (education) dissertation, University of London.
- II (1975a), "Wiltshire Science Teachers project themselves into improving learning situations for their pupils", Wiltshire Curriculum Development Centre.

- III (1975b), "An 11-14 Mixed Ability Project - The Report of a Local Curriculum Development, Wiltshire Curriculum Development Centre.
- IV (1976), "Improved learning for 11-14 year olds in Mixed Ability Groups", Wiltshire Curriculum Development Centre.
- V (1977), "The process of improving Education within schools", Paper delivered to the British Educational Research Association Annual Conference, September 1972.
- VI (1978), Two video tapes of J. Whitehead's classroom practice in his enquiry, "How do I improve this process of education here?".
- VII (1979), "How do I improve the process of education here?", Paper presented to BERA conference, 1979.
- VIII (1980), "Educational Practice and its Theory", Unpublished paper, University of Bath.
- IX (1981), "A dialectical approach to an individual's in-service education", Unpublished paper, University of Bath.
- (9) MEDAWAR, P. (1969), Induction and Intuition in Scientific Thought, Methuen.
- (10) MITROFF, I. and KILMAN, R. (1978), Methodological Approaches to Social Science, Jossey-Bass.

First version of paper received : October 1981

Final version of paper received : February 1982

Further details from:

Mr. Jack Whitehead,  
School of Education,  
University of Bath,  
Claverton Down,  
Bath.

---

A lecturer in the School of Education who previously taught for six years in the science departments of London comprehensive schools after graduating in physical sciences. His academic study of education included the philosophy and psychology of education for both the Academic Diploma and a Master's degree at the Institute of Education London.

Experiencing a gap between his academic study of educational theory and his educational practice, he has spent the past eight years in focussing his research on the problems of bridging that gap.

---