

## TOWARDS A DEFINITION OF INTERDISCIPLINARY STUDIES

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IN recent years there has been almost a craze for curriculum development projects and courses in curriculum studies, apparently arising from the belief that if only we can get the curriculum really straightened out then most of our educational problems will vanish. I believe this to be a naive error, but more of that later. A good deal of the efforts of curriculum revisionists has gone into attempts to construct and publicise what are variously described as "interdisciplinary" or "integrated" courses. It is claimed that such courses enable students to form a better understanding of their subject-matter content; that they make schools and universities more interesting places for learners; that they provide a better preparation for adult life; that they offer a more appropriate foundation for subsequent recondite specialist studies; that they are more consonant with a heuristic approach to learning; that they relieve students and teachers of intellectual cramps resulting from confinement within the traditional disciplines; and that they reflect more faithfully the structure of contemporary knowledge. I do not intend to examine the case for and against such claims since I wish to raise a more fundamental issue the settlement of which is a pre-requisite for any such inquiry, namely, the meaning of some of the basic concepts around which it would revolve.

Any inquiry into the validity of claims such as these would also need to take account of complex and contentious considerations of a philosophical nature derived from epistemology; unfortunately, these are usually ignored by curriculum-makers who rarely bother to acquaint themselves with the work of such theorists as Phenix and Hirst who have been trying to develop a general theory of the curriculum in order that the practicalities of curriculum construction may be based upon a sound foundation.<sup>1</sup> In the making of curriculum decisions a very important role is also played by our ideals of human excellencies: do we want to foster in students a broad range of interests and abilities or is our admiration commanded more by the "narrow specialist" who possesses a very thorough and profound grasp of a small area of knowledge but lacks acquaintance with, and perhaps interest in, other branches of

knowledge? And there is the further complication of empirical considerations relating to the intellectual and psychological equipment required for the advancement of knowledge given the enormous increase in both its scope and depth during this century. In discussing all such issues we need to be quite clear as to whether we are primarily concerned with the demands of scholarship and research or with those of education since these may well lead in quite different directions: all too often there is a failure to make this distinction.

But first we must try to clarify what we are talking about and an essential first step is to define some of the terms which feature prominently in curriculum debates and whose meanings are frequently obscure. Definitions are extremely important since without them we cannot feel confident that we are all talking about the same things and this generates confusion and misunderstandings: definitions are not, as some people seem to imagine, "mere verbal quibbles". I shall now offer some definitions and make brief comments upon the educational significance of four widely used basic terms: these definitions are admittedly rough and tentative and are intended only to stimulate discussion and criticism.

*Interdisciplinary*: A field of knowledge or inquiry which develops in the space between established disciplines but which draws upon their findings and techniques. In recent years there has been a marked proliferation of such fields, especially in the pure and applied sciences, and they often tend to coalesce with one another or to merge with adjacent disciplines since their own boundaries are often extremely hazy. An example of one which has so far maintained a fair degree of independence is palynology which has grown up between geography, botany, prehistory and geomorphology. It would be helpful if the term "interdisciplinary" were to be restricted to the characterisation of research and scholarly activities with the requisite features and not be used to describe attempts to construct courses which draw upon the resources of several disciplines.

*Transdisciplinary*: An activity in which a single person draws together material from a variety of disciplines and interdisciplines in order to illuminate or solve a problem or with the aim of instructing others. This is of immense educational significance and is also frequently very important in the advancement of knowledge. Unfortunately, although it makes very heavy demands upon the practitioner, it tends to be undervalued in academic circles because it runs counter to the prevailing cult of the specialist. An outstanding example of the transdisciplinary approach may be seen in the paper presented to the 44th A.N.Z.A.A.S. Congress held in Port

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<sup>1</sup> References to recent work in this area are provided in: J. P. Powell, *The Philosophy of Education: a Select Bibliography*, third edition, Manchester, The University Press, 1974.

Moresby in 1970 by Professor Golson in which he drew upon prehistory, archaeology, linguistics, anthropology, ethno-science, botany and geology. The great popularisers of science, such as Huxley and Bernal, have also usually worked in this mode. Many successful teachers are also transdisciplinary in style, drawing upon a wide range of knowledge and bringing it together into a meaningful whole.

*Multidisciplinary:* Several experts contribute conjointly from the standpoint of their own specialisms to the solution of a problem or to the exposition of an area of knowledge. This can often be highly productive of research results and there is an increasing tendency for people to work together in teams, especially in the sciences. It has become fashionable for some university courses to be taught in this manner, although they are usually misnamed as "interdisciplinary" or "integrated", but such courses are almost always failures, mainly because they lack coherence from the students' viewpoint. If it is considered desirable to present material from a variety of disciplines then this is almost always better done, although it may involve some sacrifice of rigour, by one person using the transdisciplinary mode. A group of experts may be a success in a television "think-in" but they are invariably a dismal flop in the lecture hall.

*Integrated:* This term is only employed in educational contexts and I am unable to distinguish it from the transdisciplinary mode of teaching. On the whole, I would prefer to adopt the latter term since "integrated" suggests a psychological ordering and grasp of discrete elements of knowledge on the part of the student, and this often may not be achieved. It is a success-word from our psychological vocabulary rather than an apt term for describing an approach to curriculum construction. It is also sometimes taken to mean the possession of some kind of superskill with which an individual can tackle a great variety of problems located within disciplines with which he has little acquaintance: this notion should have been abandoned years ago along with faculty psychology.

It will have been noted that all of the above definitions presuppose the existence of disciplines and the possibility of providing an account of their character. At present the latter remains little more than a possibility since there is still much disagreement concerning the criteria in terms of which disciplines are to be identified. For the sake of argument I have employed a primitive notion of "discipline" similar to that used in university catalogues and which permits us to classify physics, philosophy and history as disciplines.

Finally, to return to a point made at the beginning. I believe

that we should be much more sceptical about the value of expending large quantities of human and material resources on curriculum development projects at a time when we are still far from clear about what we are attempting to achieve in education. I doubt whether the content of the curriculum is as important as many people suppose and concentrating so much of our resources upon changing it only serves to divert attention away from far more significant educational issues. What matters educationally is not so much what students learn but *how* they learn and the *manner* in which they are taught. Until we succeed in making some quite radical changes to the character of teaching-learning transactions in schools and universities there is little point in changing the content of what is taught.

## INTERDISCIPLINARY STUDIES—REVOLUTION OR REVISIONISM?

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### *Introduction*

THERE is a tendency in educational institutions in Australia to seize upon overseas trends, to hail them as brilliant innovations and to impose them on existing structures. There is a danger that "interdisciplinary studies" will fall into this category. The term is rarely defined and its assumptions need careful consideration. It raises important epistemological issues and, unless cautiously appraised, may obscure alternative educational innovations. The purpose of this article is to examine the background of "interdisciplinary studies", to look at some definitions of the term and to assess its usefulness in the educational structure of Australian universities.

### *Background of Term*

Graham Wallas originated the idea of interdisciplinary studies in 1908.<sup>1</sup> His book "The Great Society" brought psychology into touch with contemporary problems. Charles Merriam of the University of Chicago used the term in the early twenties to describe the connection between politics and most of the social and behavioural sciences.<sup>2</sup>

A conference on Social Studies in America tried to develop a unity, instead of concentrating on subject disciplines.<sup>3</sup> Both the American Social Science Research Council, in 1923, and the London

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