

Interdisciplinary Studies: A Matter of Definition

by L. Richard Meeth

In spite of many efforts to define interdisciplinary studies, the answers continue to confuse more often than satisfy. At the risk of adding to the confusion but in the hope of clarifying the debate, we propose here a new set of definitions. They were used specifically in the selection of programs described in this issue, but they are also universal in that they apply to all programs that go beyond a single discipline. Thus, although these descriptions are as arbitrary as others from the past, they have the advantage of having been applied on a broad scale and shared with many educators who have contributed to their refinement.

We might think of courses as occupying various levels on an interdisciplinary pyramid. *Cross disciplinary* is the next level after *intradisciplinary*, which forms the base of the continuum. *Cross disciplinary* is viewing or observing one discipline from the perspective of another: Describing the physics of music or the politics of literature are examples. The synoptic fields of philosophy, history, and theology are often viewed in relation to another discipline; for instance, art history is cross disciplinary even though it has come to be a field of study itself. *Cross-disciplinary* programs are the easiest to develop because they allow faculty to remain in their own disciplines, while adopting only what is applicable from another.

Multidisciplinary goes a level higher. It involves several disciplines focused on one problem or issue—the juxtaposing of disciplines, each of which offers a different perspective on a common question or theme. Most thematic of general education courses are multidisciplinary. For instance, the traditional western civilization courses most often divide class time among the disciplines of art, literature, science, and history. Each discipline contributes its own knowledge or approach to the theme with no attempt to integrate or interrelate ideas. Multidisciplinary courses require the student to do the integrating; and the best structured of these teach students how, recognizing that integration is a skill to be learned, not a natural ability.

But, as Alfred Whitehead said, "Education is not a

process of packing articles in a trunk," so *interdisciplinary* courses and programs are developed. The fundamental difference between multidisciplinary and interdisciplinary, in practice at least, is that interdisciplinary programs attempt to integrate the contributions of several disciplines to a problem, issue, or theme from life. This meaning requires further definition of the word "integration." In mathematics, integration refers to a specific procedure for the summation of infinitesimals. In physiology, it means the balance of functions which produce a unified organism, and in the social sciences the term describes a state of organization of a social unit. In interdisciplinary studies integration means bringing interdependent parts of knowledge into harmonious relationship. It involves relating part to part, part to whole, and whole to part.

The highest level of integrated study is *transdisciplinary*, which is not of the disciplines at all. *Transdisciplinary* means beyond the disciplines. Whereas interdisciplinary programs start with the discipline, transdisciplinary programs start with the issue or problem and, through the processes of problem solving, bring to bear the knowledge of those disciplines that contributes to a solution or resolution.

Transdisciplinary programs are certainly the most difficult to teach. Professors and students must know not only the techniques of problem solving but also where to search among the disciplines for contributions. Thus teachers need to be resource persons, broadly acquainted with many fields or thoroughly grounded in knowledge theory. Consequently, very few institutions attempt transdisciplinary study, even though it is the most common approach to the major issues that confront society. Perhaps long-range planning is not widely practiced in education or in our society because so few are prepared to think in transdisciplinary ways.

These definitions may help readers better understand the articles in this issue. Every attempt was made to find courses or programs of each type, at differing stages of an undergraduate experience, both in general education and in majors. Because few programs fit neatly into any one of the classifications, most presented here combine the elements of all.

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