

# MULTIDISCIPLINARY: AN APPROACH TO

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**C**URRICULUM theorists have rigorously tried to conceptualize the domain of curriculum and to employ methods of inquiry capable of producing knowledge and improvement. Qualitatively their efforts have led to fragmentation and confusion in the curriculum field. Westbury and Steimer (1971) examined 178 curriculum research studies and concluded that: "Curriculum—as an organized and institutionalized discipline, as a sustained inquiry into an identified subject matter—does not exist" (p. 243). An example of the context in which curriculum thought is generated should provide perspective on this problem.

Curriculum thought cannot be separated from the context in which it is generated—society. Society today exists in a complex form with phenomena not readily discernible; however, certain characteristics with implications for curriculum can be identified. Burns and Brooks (1970) identify 14 characteristics of society which indicate

the need for curriculum reform (p. 8). Four of these have serious implications for curriculum thought.

First, a global society is emerging. Through improved transportation and communications, the world is becoming increasingly smaller. Isolation and provincialism are fading as ideologies, and problem solving takes on a world dimension and affects individuals universally. Complex relationships and interactions exist within society. It can be seen that simplistic problems for the curriculum theorist have been compounded by increased scope.

A second factor affecting curriculum is change. Society and the world are experiencing a period of rapid change. With change comes obsolescence. Curriculum thought must be capable of adapting to the change process so as to avoid static and isolated obsolescence. As change occurs, information concerning this change must be integrated into the existing structure of curriculum knowledge and appropriate modifications made.

A third factor affecting curriculum thought is the information explosion. It is inconceivable that curriculum thought can be the product of all relevant information; however, it is conceivable that improved methods

# ALTERNATIVE CURRICULUM THOUGHT

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can be developed for the acquisition and retrieval of information. A sound design for curricular theorizing or development should therefore include methodologies for handling a rapidly growing body of knowledge.

The fourth factor to be discussed here is changing truth. As new information is discovered, our conception of what is true changes. Epistemology integrates new knowledge into the overall schema and, on the basis of all known knowledge, attempts to identify truth or reality. Curriculum theorists, particularly those with an epistemological orientation, must be sensitive to the changing nature of truth and be willing to adjust to it. If this process does not occur, then the curriculum product (theory or development) becomes irrelevant.

Consequently, when curriculum thought is generated, it is based upon phenomena observed within a rapidly changing, global society. And this society is experiencing an information explosion as well as a changing conception of truth. It is no wonder then that confusion and fragmentation are present in curriculum thought. The curriculum

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theorist's task seems almost insurmountable. The question logically arises: What is the optimum approach to curriculum thought (research, theorizing, and development) within the confines of such a society?

## A Disciplinary Approach

In the past, the approach employed was a disciplinary one. Information was gathered by applying methods of inquiry within the framework of a discipline, and these findings were used to establish generalizable truths. Often the method of inquiry used was inappropriate to the problem. A compartmentalized approach such as this is unable to cope with the dimensions of a complex, modern society.

Curriculum scholars have expressed a dissatisfaction with this approach to curriculum. Lynd (1939) felt that a disciplinary approach lacked integration and was therefore ineffective as a producer of knowledge: "The failure of the social sciences to think through and to integrate their several responsibilities for the common problem of relating the analysis of parts to the analysis of the whole constitutes one of the major lags crippling their utility as human tools of knowledge" (p. 15). Buckminster Fuller (Taylor, 1970) has contended that, "The main task of the human intellect is to put things together in comprehensive patterns, not to separate them into separate compartments" (p. 69). Helen Burchell (1971) advocated the transcendence of disciplinary thought: "Presumably exploration and investigation of knowledge that transcends disciplinary domains can enlarge the individual's capacity to build his own synthesis of knowledge and simultaneously can enable him to grapple with the unknown, thereby enhancing his power" (p. 78). Caswell (1950) thought that too much reliance on a particular principle or concept leads to confusion in curriculum theory. Finally, Fethe (1973) suggested that an obstacle to coherence in today's society is the bridging of disciplinary thought: "Academia's shift toward the coherence of the global village faces a number of obstacles. One of the most serious is the

difficulty, on both the psychological and logical levels, of adapting the modes of thought practiced by one field to the frequently quite different modes of thought in associated areas" (p. 490). It can be inferred from the works cited that the disciplinary approach to curriculum has certain inherent weaknesses which, at least at times, render it ineffective as a method for dealing with modern curricular problems.

It appears that many of the questions which need to be answered in the curriculum field concern phenomena which are complex and global in nature. The methods of inquiry employed by individual disciplines cannot produce the knowledge necessary to deal with these phenomena. Storer (1970), Dewey (1929), Short (1973), and Iannaccone (1973) all point to a structure of generalized knowledge concerning education—a conjunctive domain.

Short (1973), in summarizing Storer, concluded that the conjunctive domain required conjunctive inquiry which he described as "A realm of activity requiring study by many different basic and applied disciplines about a 'whole' rather than about an abstracted, scientifically manageable question, suitable for investigation by the inquiry methods of a particular discipline . . ." (pp. 269-70). He went on to suggest that the methods of inquiry employed by the disciplines do not include special methods which make "intelligible phenomena which come in the raw state of experience as global or undifferentiated puzzles" (p. 270). It follows that the optimum approach for curriculum thought must be one which facilitates interpretation of the conjunctive domain.

## A Multidisciplinary Approach

Tykociner and Buchtel, among others, point to an alternative approach to curriculum thought. Buchtel (1972) said, "One of the realizations that has resulted from the recent soul searching of those concerned with academic research is that an increasing large number of today's problems and needs are horizontal in the sense that their solution

requires cutting across the traditional academic disciplines" (p. 58). Tykociner (1964) also declared, "If our knowledge is to become a coherent unified system, it should be disseminated by treating it as a whole" (p. 144).

The approach discussed here then is holistic and makes use of the collective effort of the disciplines. Hughes (1974), in explaining the appeal of the systems approach to curriculum, referred to an "interdisciplinary capacity" (p. 3). Buchtel (1972) used the term "transdisciplinary" within an interdisciplinary framework to describe this approach: "If no ready-made body of *transdisciplinary* knowledge (knowledge which is universal to all disciplines) exists of immediate usefulness to educational planners, nevertheless, movements toward integration of content on an *interdisciplinary* basis are discernible" (p. 79). Short (1973) used the term "multidisciplinary" to signify a "cooperative approach" which aims at "constructing and validating some theoretical understanding which will account for the entire problem" (p. 270). It was also pointed out that ". . . there is no effort to homogenize the various modes of inquiry into a common method . . ." (p. 270). It is this conception of a multidisciplinary approach which is proposed here as the optimum approach to curriculum thought.

The multidisciplinary approach refers to the pooled disciplines working cooperatively to render global phenomena intelligible. It is holistic and makes use of the combined methods of inquiry available from the disciplines. In addition, its efforts are problem oriented. Following are several examples of multidisciplinary approaches found in the literature of the field; they represent the views of both theorists and practitioners. Henchey (1974) looked upon the multidisciplinary approach as an "integration" process based upon the analysis of "relationships" and establishment of "ties" (pp. 6-7). Curriculum theory ties together the relationships and acts as the medium of communication for "interfacing" or interpreting the complexities across disciplines. Hughes (1974), in contrast, viewed the multidisciplinary approach as a systems process: "The

appeal of systems thought to a wide variety of fields may be traced to its interdisciplinary capacity. . . . The interdisciplinary capacity of systems thought is found in the fact that its concepts are content empty and context free, i.e., they are meta-level concepts which may be applied in a variety of substantive areas" (p. 3).

Taylor and Walker (1972) looked at educational research and development (R&D) as a problem-reduction, multidisciplinary effort: "*Multidisciplinary*: A discipline by definition is an area of inquiry or interest which arbitrarily selects a set of phenomena from an infinitely larger set of phenomena. A problem, on the other hand, is an anomaly in a state of affairs which always transcends the arbitrary boundaries of a discipline. Thus, because R&D is a problem-reduction endeavor, it requires a multidisciplinary structure" (p. 21). Fethe (1973) proposed a multidisciplinary approach based in philosophy. Only through a philosophical base could coherence be obtained in a "global village" setting (p. 490). Alvin Eurich (1972) looked at an idea-centered, multidisciplinary approach (p. 50). In this process, the disciplines are unified by significant ideas which are so significant as to demand systematic treatment. Paul Nelson (1973), echoing Wilson's *The Open Access Curriculum*, saw the multidisciplinary approach as a process

focusing on interactions in three domains: disciplines of knowledge, human processes, and attitudes and values (p. 313).

The examples given here reflect the extent to which multidisciplinary thinking has pervaded the curriculum field. This approach optimizes the inputs available in a complex, global society. It attempts to deal with the conjunctive domain in a way which separate disciplines cannot. It compensates for global problems, change, information growth, and changing truth by utilizing all available human resources.

Sarason (1973), in exploring the problems of change, presented a rationale which can appropriately be applied as justification for a multidisciplinary approach to curriculum thought: "But in my thinking about the problem, particularly as that thinking has taken place in practical efforts related to the creation of complicated settings, I have tentatively concluded that a small group of people focusing together only on the problem of the universe of alternatives applicable to a particular problem or practice is far more productive than what any one of them could come up with" (pp. 223-24). Multidisciplinary thinking is emerging as a viable force in the field of curriculum thought: its increased monitoring and dissemination capabilities should facilitate coherence and minimize confusion.

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