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ABSTRACT

Examination of selected national and state level career education curriculum development projects provided the basis for consideration and comparison of major strategies used in deriving curriculum content. Those found most useful included the theoretical base, philosophical base, introspection, function approach, task analysis, Delphi approach, and critical incident technique. Using a theoretical base involves questions of theory validity, whereas a philosophical base can serve as a general foundation even though it may fail to allow for work-related specificity. Introspection has inherent shortcomings since the content may not be relevant and realistic. Adams' DACUM (Developing a Curriculum) approach makes good use of introspection, however. The function approach focuses on identification of content in terms of unifying characteristics across a particular industry or business, and can cut across traditional teaching lines. Task analysis, while expensive and time consuming, has much value in identifying career preparation content. The critical incident technique, focusing on identifying behaviors which are value-laden, has greatest applicability in career preparation and exploration, in contrast to the task analysis approach. The Delphi Technique is most useful in setting priorities, establishing goals, and forecasting the future. It should be remembered that strategies are not mutually exclusive--use of multiple strategies has great potential if one is aware of the comparative strengths and weaknesses (as can be derived from the accompanying tabulation) of each respective approach. (CP)

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REVIEW AND CRITIQUE OF STRATEGIES FOR DETERMINING
CAREER EDUCATION CURRICULUM CONTENT¹

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OVERVIEW

Career education has precipitated one of the most massive curriculum move-
ments of the decade. Some persons even indicate that federal, state, and local
emphasis have produced the curriculum movement of the century.

There can be no doubt that career education content has been provided
to hundreds of thousands, if not millions, of youngsters and adults. However,
while career education curriculum content is readily available through state
and local education agencies, developers, and publishers; information related
to the derivation of this content is not as accessible. Consequently, even
though it is possible to obtain much career education content in the form of
objectives and learning experiences, we may have little idea of the strategies
used to derive that content. This situation would appear to pose no problems;
however, we must realize that the strategy used to derive content has a direct
bearing upon the appropriateness of content selected. The tie between content
and its derivation is quite close. McNeil (1977, p. 70), for example, indicates
that technical strategies for formulating curriculum objectives should align
with institutional purposes. He goes on to state that the formulation of ob-
jectives for an institution with vocational emphasis might require use of a much

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different technical strategy than for an institution whose mission is aimed as furthering purely humanistic goals.

OBJECTIVE

Career education with its expansive goals and mission clearly reflects a range of curricular emphasis. Its "cradle to grave" philosophy denotes a need to approach the curriculum content derivation process with caution. In reality, the derivation of career preparation content may require a much different approach than that needed to identify exploration or awareness content.

This discussion focuses on the examination of several contemporary strategies used to determine career education curriculum content. More specifically, consideration is given to the following questions:

1. What strategies are used in the derivation of career education curriculum content?
2. How do these strategies compare in terms of applicability to various career education areas?

Strategies were identified through examination of selected national and state level career education curriculum development efforts. Major consideration was given to examining projects which focus on generalizability beyond the local level. Those strategies felt potentially most meaningful to the derivation of career education curriculum content included the theoretical base, philosophical base, introspection, function approach, task analysis, Delphi approach, and critical incident technique (Finch and Crunkilton, 1979).

Each strategy is briefly described and critiqued in the paragraphs which follow. Consideration is given to the relative strengths and limitations of each strategy, particularly in relation to ease of data collection, objectivity, validity, and applicability to content dealing with career awareness, exploration, and preparation.

THEORETICAL BASE

Many feel that career education aligns quite closely with career development theory. Even a cursory review of the career development literature and research will reveal many concepts which may serve as building blocks for career education programs. Among them are extensive efforts carried on by Super, Ginzberg, Holland, and Roe. Herr and Swails (1973) classify theoretical approaches which describe career development into the following categories: trait and factor approaches, decision theory, sociological emphases, psychological emphases, and developmental emphases. Any of these has the potential to serve as a basis for formulating career education content.

It is obvious that career development theory served as a foundation for career education conceptualization during its formative years. This may be noted in many of the "think" papers presented during the early 1970's. More recent efforts to operationalize these ideas have probably resulted in some limited success. The developmental work described by Ressler (1978) serves to exemplify the application of career development theory to an ongoing career education program. This statewide career education program draws heavily upon Holland's theory of vocational choice. One of the problems with using a theoretical base for deriving curriculum content is in terms of validity. While theories abound, the validation of them is a different matter; thus, an untested theory may be no better than common sense logical ordering. Fortunately, ongoing research (eg. Westbrook and Cutts, 1978) is focusing on the validity of several theories. However, it appears this will be a lengthy process and for the present, reliance needs to be placed on largely untested career development theories.

PHILOSOPHICAL BASE

The philosophical base for curriculum content derivation is quite evident in education today. Many of the general education offerings found in our

schools are based upon teachers', administrators', and school board members' personal philosophies of education. In a general sense, career education is philosophically based. This may be evidenced by its far ranging character as contrasted with general and vocational education.

Philosophy can serve as a general foundation for career education content. For example, belief statements direct the focus of career education within a school to better meet the needs of women, minorities, and the handicapped. However, beliefs may not communicate the specific competencies needed by an individual in the work environment. Thus, if a curriculum developer is looking for a great deal of work related specificity, he or she must merely speculate and hope the speculation results in appropriate content.

INTROSPECTION

The introspection process basically consists of examining one's own thoughts and feelings about an area. However, within the context of content determination, this strategy may involve either an individual or a group. Teachers, for example, might ask themselves a question such as "what do I feel should constitute the content of this curriculum?" Then a search is made of one's personal employment, teaching experiences, and education to identify what might be most appropriate to include as curriculum content.

Even though introspection may be used to determine content in a rather rapid fashion, it has an inherent shortcoming. While utilizing teacher groups to make curriculum content decisions may be reliable, using introspection does not mean that the content will be valid (i.e. relevant and realistic). Teachers may unanimously agree that all first grade elementary students take a formal career education course with prescribed content, however, this does not exactly make the content or its delivery any more relevant.

A most useful variant of introspection is the DACUM (Developing A Curriculum) approach (Adams, 1975). The DACUM approach utilizes some basic ideas associated with introspection but shares few of its shortcomings. The reason for this is DACUM relies on experts employed in an occupational area to determine curriculum content and allows them to be guided through a systematic content determination process. While DACUM has more relevance in the identification of specific occupational skills; its application to career awareness is limited.

FUNCTION APPROACH

One strategy which has received much attention from professionals in vocational education is the function approach. It examines the functions of a business or industry that may be defined as "the operations that must be performed somewhere in the total business or industry in order for it to be successful or continue in operation (Clark and Meaders, 1968)." The function approach focuses on identification of content in terms of unifying characteristics across a particular industry or business. Whether it may be the agricultural equipment industry, garment industry, or some other business or industry, the whole is examined to determine which parts, as expressed in functions are performed throughout. Examples of function studies include those conducted by Gleason (1967), Berkey (1967) and Berkey, Drake, and Legacy (1972).

While the function approach does require a considerable amount of time and resources to execute, its strength lies in the potential to cut across traditional teaching area lines. The possibility of linking teaching areas into a more relevant, cohesive curricular thrust makes the function approach particularly useful in determining career exploration and preparation content.

TASK ANALYSIS

Task analysis has been utilized in varying forms for a number of years. However, recent refinements to the task analysis process have enabled curriculum

developers to make more objective content decisions. Of particular note was research conducted by Morsh and Archer (1967) which resulted in a more systematic means of identifying behavioral aspects of job requirements. Basically, task analysis may be defined as the process wherein tasks performed by workers are identified and verified. The workers' job consists of duties and tasks he or she actually performs. Data are gathered directly from a worker sample via personal interview or survey form completion.

While conducting a comprehensive task analysis is expensive and time consuming, it has much value in identifying career preparation content. Use of this strategy by groups such as the Vocational-Technical Education Consortium of States (V-TECS) has shown that it is quite applicable to vocational education. However, the relevance of task analysis to career awareness and exploration is rather questionable. Lux (1979), for example, supports the notion that task analysis should not be utilized at all when career exploration (i.e. industrial arts) content is being determined. The use of this strategy in determining career awareness content is, likewise, open to question.

CRITICAL INCIDENT TECHNIQUE

Ever since its development by Flanagan (1954), the critical incident technique has been recognized as a useful tool for observing human behavior in work settings. Basically, an incident is any observable human activity that enables "inferences and predictions to be made about the person performing the act" (Flanagan, 1954). Incidents are classed as critical when the observer sees their purposes and consequences as being clear. A major contribution that the critical incident technique can make to curriculum content identification is its utility in isolating important values and attitudes. While task analysis and similar strategies are useful in the identification of content, they tend to focus on

technical content rather than affective concerns. With the critical incident technique, behaviors can be identified which are value-laden and thus provide a firm foundation for affective curriculum content.

While use of the critical incident technique for career education content identification appears limited, its applicability seems greatest in career preparation and exploration areas. A study by Foster (1978) serves to verify the usefulness of the critical incident technique as a means of identifying non-technical, affective skills. Data of the sort gathered by Foster would serve as a reasonably objective base for affective portions of career education curriculum content.

DELPHI TECHNIQUE

As its oracular name implies the Delphi technique focuses directly on the future of a particular area. Originally developed by the Rand Corporation for predicting alternate defense futures, it has seen widespread use in many areas of education. The Delphi technique has been found to be a most useful tool in setting priorities, establishing goals, and forecasting the future. Basically, the technique consists of a series of interrogations of samples of individuals (experts) by means of mailed questionnaires with the focus being on some curricular content area in which each individual is knowledgeable. Respondents never meet face to face so the group is not biased by one person's outlook. Several rounds of questionnaires are used with group results being fed back to the experts in an effort to shape consensus.

Use of the Delphi technique is particularly meaningful for determining content in an emerging area. It was utilized with much success during initial formulation of goals for the school-based career education model (Center for Vocational Education, 1972). Corbin's (1976) study of goals for the Distribution^{va} Education Clubs of America pointed up the applicability of the Delphi technique

to a content area which has no tie with an external standard (eg. worker behavior). His results support the notion that the Delphi technique has utility as a strategy for determining career education curriculum content in a range of areas.

DISCUSSION

It is evident that much diversity exists among curriculum content determination strategies. The range of possible data which may be gathered presents an interesting challenge to any curriculum developer. Perhaps an answer to the following question might serve a basis for providing direction: Given certain resources, which strategy or strategies might be most useful in determining content for a specific segment of career education?

While obtaining an answer to this question is not simple, the task may be made more manageable via a comparative analysis of strategies as presented in Table 1. This table displays the relative merits of strategies in terms of several key areas; namely ease of data collection, objectivity, validity, and applicability to career education content. Even though the various "ratings" are of a relative nature, they provide a feel for some of the subtle and not so subtle differences which exist among strategies.

Several areas of concern should be noted. First, it appears that ease of data collection is at the expense of validity. Strategies which require more complex and thus more costly data collection processes tend to serve as more valid means of deriving content. A second area of concern has to do with overlap among the various strategies. For example, one's philosophy might impact on the introspection process or reactions to a Delphi survey. The recognition that strategies are not mutually exclusive should aid curriculum developers in selecting strategies and designing content derivation processes. It is often all too easy to oversimplify the curriculum development process.

TABLE 1

COMPARATIVE ANALYSIS OF CURRICULUM CONTENT STRATEGIES

Strategy	Ease of Data Collection	Objectivity	Validity	Applicability to Career Education Content		
				Awareness	Exploration	Preparation
Theoretical Base	+	-	? \	+	+	-
Philosophical Base	+	-	?	+	?	-
Introspection						?
General	+	-	?	?	?	?
DACUM	?	+	+	-	-	+
Function Approach	-	+	+	-	+	+
Task Analysis	-	+	+	-	?	+
Critical Incident Technique	-	+	+	-	+	+
Delphi Approach	-	?	?	+	+	?

In conclusion, it should be emphasized that the use of multiple strategies has greatest potential for deriving high quality content. While each strategy has its own strengths, these strengths follow a rather narrow band of content. The application of several well chosen strategies to a particular career education area should produce content which is more relevant to the needs of today's students and tomorrow's workers and citizens.

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