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RELATING TEACHING METHODS WITH EDUCATIONAL OBJECTIVES IN THE BUSINESS CURRICULUM

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ABSTRACT

Educational research has made a strong case for the setting of educational objectives, and Bloom and his colleagues [2;3;4] have developed and tested a taxonomy of learning levels. This paper suggests that explicit consideration of the desired learning objectives for a particular course should be made before choosing the instructional methods to be used in the course.

INTRODUCTION

Descriptions of curricula are set upon such different bases as descriptions of teacher behavior, descriptions of Instructional methods, and descriptions of Intended behavior [3]. Much research done by ABSEL participants has been concerned with the effectiveness of different teaching methods [5; 6; 8; 9; 13; 15; 17; 26]. For example, in one of the more comprehensive studies, Catalanello and Brenenstuhl [5] found no significant differences in cognitive learning or problem solving skill development when the simulation, experimental and discussion modes of teaching were compared. However, they did find greater perceived learning and more satisfaction occurred when simulations were used.

On the other hand, Bloom et al. [3] developed their classification based upon the intended behavior of students. Their taxonomy of educational objectives is given below:

> Level 1: Knowledge. The student can give evidence that he remembers either by recalling or recognizing, some idea or phenomenon with which he has had experience in the educational process. This level encompasses the knowledge of specifics (terminology and specific facts) , of and means of dealing with specifics (conventions, trends and sequences, classifications and categories, criteria, and methodology), and of the universals and abstractions In a field (principles and generalizations, and theories and structures).
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> Level 2: Comprehension. A type of understanding or apprehension such that the individual knows what is being communicated and can make use of the material or idea being communicated without necessarily relating it to other material or seeing its fullest implications. This level encompasses translation (the paraphrasing of communication from one form to another), interpretation (explaining or summarizing a communication), and extrapolation (extending trends beyond the given data to determine implications that are in accordance with the conditions described in the original communication).
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> Level 3: Application. The use of abstractions in particular and concrete situations.
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> Level 4: Analysis. The breakdown of a communication into its constituent elements or parts such that the relative hierarchy of ideas is made clear and/or the relations between the ideas expressed are made explicit.
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> Level 5: Synthesis. The putting together of elements and parts so as to form a whole. The end product may be a unique communication, a plan, or a set of abstract relations.
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> Level 6: Evaluation. Judgments about the value of material and methods for given purposes. The judgments may be in terms of the communication's internal logic or consistency, or they may be in terms of external standards.

The term taxonomy Infers that the different levels of learning can be classified and that there is a hierarchical structure among them. Several studies have supported the hierarchy presented above [1; 10; 12; 16; 18; 19; 20]. However, some studies have questioned either the classification scheme or the hierarchical structure. Klein [11] questioned the need for the "application" level. Madaus, Woods, and Nuttall [14] found little relationship between the last two levels and the preceding four. Stedman [21] could not find significant differences in the first four levels. Waugh [24] concluded that the taxonomy is not hierarchical.

Even given the existence of a valid taxonomy, it is difficult to classify courses as emphasizing solely one level. While an introductory course In one of the business functions may concentrate on the knowledge level, it may also have comprehension, application and even analysis as learning objectives. On the other hand, a doctoral seminar may concentrate on the synthesis and evaluation levels, but still involve the first four levels as well. We do hypothesize that the teaching objectives will move toward the last level as we move from introductory courses to second courses in a functional area to the area undergraduate capstone courses to the masters-level courses to the doctoral courses. However, we also expect that there will not be a one-to-one correspondence due to multiple objectives for each course.

Bloom, Hastings, and Madaus [4] point out that we now have a wealth of instructional materials available to us, especially when compared to what was available 50 or even 25 years ago. They mention the use of readings, workbooks, programmed materials, games, films, problem materials, and drill materials. They indicate that the use of these materials should depend upon the special needs of the students, suggesting that purely descriptive materials are likely to be most useful for the objectives of "knowledge" and "comprehension' and that problem materials are likely to be most useful for "application and "analysis."

We agree that certain teaching methods in the business curriculum are more conducive for different levels of learning. The traditional lecture/test approach may well be the most efficient approach for courses emphasizing the knowledge level, while cases may be more efficient for courses emphasizing application and analysis. Similarly simulations and experiential exercises

may be more fitting for courses that do not emphasize the knowledge level. The extended live case approach may fit best with the synthesis level.

The discussion in the previous paragraph is, admittedly, very superficial in that we discuss a methodology such as simulation without acknowledging that simulations can vary from very simple tasks such as those in Frazer [7] to complex games such as INTOP [22]. For instance, Walker [23] discussed a teaching approach in which three simulations, increasing in complexity from the first to the third, are used in a three-sequence Cost accounting curriculum. Still, different teaching approaches such as the case method, simulation games, and experiential exercises have less intra-type variation than inter-type variation.

The original intent of our study then was to attempt to relate various teaching methodologies with educational objectives for different level courses. While our desired end product was to be normative theory, our initial step was to be descriptive. We intended to survey faculty teaching courses in the basic business functions at three different universities as to:

1. the educational objectives for the courses they teach, using a constant sum allocation procedure for the six different levels,

2. the teaching methods (or combinations of teaching methods) that they currently use in their courses,

3. the teaching methods (or combinations of teaching methods) that they would use under ideal teaching conditions (small classes, light course load, reward system based on amount of increase in cognitive learning on the part of the students), and

4. their situational constraints as to the use of different teaching methods (class size, student assistance in grading, graduate assistants, course load, level of training, number of years of college teaching experience, reward system, etc.).

We expected to find a strong relationship between the educational objective and the course level. We also expected to find variation in teaching methods according both to the course level and to the level of educational objectives. On the other hand, we hypothesized that we would find frequent occurrences of teachers being one-or-two method persons, regardless of course level or level of educational objective. At one extreme, we expected to find the traditional lecture/test format used almost exclusively by some faculty. Similarly, we expected to find that some faculty into simulation gaming would be using that method in all of their courses.

Our research proceeded to the questionnaire pretest stage. The questionnaire defined the levels of learning (as they appear earlier in this paper) and then asked questions pertaining to the four points mentioned above. The specific teaching methods included were lecture, group discussion, case method, programmed learning, simulation gaining, experiential exercises, short projects, and term projects.

Respondents to the pretest had some difficulty with the constant sum scales for the first three types of questions. However, we thought that these problems could have been overcome by adding additional instructions and by doing more pretesting. A more serious problem was that our respondents experienced a great deal of difficulty in distinguishing the various learning levels from one another. We did not find that this problem was removed when we attempted to redefine the constructs. Another alternative that was considered was to provide examples for the different levels of learning. This approach was not used because (1) it might Introduce a source of bias and (2) we could not agree as to how to categorize several possible examples. Thus, we chose not to conduct the survey research because of the questionable validity of our concepts.

Again, these problems are not new, as the taxonomy has been questioned before [11; 14; 21; 24]. Further, Bloom himself [4, p. [17] has admitted that certain concepts were not included in the taxonomy originally and that they should be included. One such category is that of developing skills in using processes and procedures, which Is somewhat related to the knowledge level but has ties with some of the other levels as well. Looking at the experimental studies in the field of education did not provide clarity for us, as we had envisioned the levels of synthesis and evaluation being emphasized in doctoral seminars; several education studies discussed these levels in the context of grade school classes.

Our original intent was to make a normative statement about the suitability of different teaching methods in different courses, using the learning levels as the intervening variable. Given the problems in communicating the constructs, we did not obtain any data upon which to base such a statement. We do think that the value of a method Is dependent upon the level of learning desired for a particular course. For example, if the perceived learning objective in an introductory marketing course is basically one of factual knowledge, then it may not make sense to use a simulation game in that course.

Our revised purpose for this paper is to encourage faculty to consider systematically the learning objectives for his/her course as well as his/her own predisposition for certain teaching methods. Bloom, Hastings, and Madaus [4] discuss the need to set objectives in terms of (1) what is possible and (2) what is desired. Clearly the course objectives need to be within the students' reach. As for what is desired, they point out that, while we cannot know a person's life pattern in advance, the objectives should be selected so that the student has the maximum flexibility in making a great variety of possible life decisions. The faculty member should be encouraged to set the objectives as high as possible, as research has indicated that the level at which the teacher interacts with the students will be reflected by the level at which the students respond to him/her [2;16;25].

Once the learning objectives have been determined, we encourage the faculty member to consider the suitability of various teaching methods to the learning objectives. On one hand, it may be a questionable practice to use the traditional lecture/test format for all levels as is done by some of our colleagues. On the other hand, it also may be a questionable practice to use games and experiential exercises at all levels as may be done by some of us.

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