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**EXPERIENTIAL LEARNING: TOWARD THE DEVELOPMENT
OF A THEORETICAL BASE AND THE IDENTIFICATION
OF VARIABLES AND HYPOTHESES TO GUIDE RESEARCH**

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Both in their attempts to develop students' analytical, problem-solving, and conceptual skills which have been cited as necessary for successful managerial careers [6] and in their desire to improve the effectiveness of their instructional efforts, Business Schools have developed (and borrowed) a variety of innovative instructional methods. Generally, these modifications in teaching method fall into the category of learner-based, participative techniques [see e.g., 3, 7, 11, 13]. One group of such innovations includes computerized simulations and/or business games of various types meant to stimulate a specific aspect of organizational functioning. A second category, the one of primary interest in this paper, includes role-playing, case studies, internships, field experience, problem-solving laboratories, and other various forms of experiential learning activities [1]. While shifts in the roles of learner and instructor vary in degree within different instructional settings, they do represent a definite departure from the primary role of arbiter, evaluator, and information transmitter given to instructors and that of passive information receiver, retriever, and recaller given to learners in the more traditional instructional settings which rely so heavily on the cognitive aspect of learning (i.e., lecture). It is obvious that more and more business curricula, instructors, and students are beginning to adopt the roles these participative instructional methods bring, as evidenced, for example, by the sheer volume and increase in both these types of instructional materials available and in reports of their use appearing in the literature.

What is not obvious, however, is whether or not these methods are, in general, more effective than the more traditional techniques for business education, what specific advantages they may have, and for what particular types of learners they are most beneficial. This is due in large part to inadequate research results regarding these methods. The broad deficiencies in research on experiential participative instructional techniques outlined below thus form the rationale for the objective of this paper, to develop a set of explanatory variables and operational hypotheses to guide research on experiential learning.

Deficiencies in Experiential Learning Research

First, research on the effectiveness of various experiential! participative techniques at all

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educational levels and in various fields generally conflicts as to their effectiveness as teaching tools [see e.g., 4, 12, 14]. It is generally agreed, however, that these methods facilitate improved motivation and attitudes but not learning of content or concepts, as opposed to traditional instructional methods [see e.g., 4, 10, 14].

Yet claims made for these techniques' effectiveness have been very high [12]. Further, they have several intuitively appealing features as learning techniques. They allow learners to participate in learning and to work the "real" problems; they facilitate social interaction amongst peers, and they are also based upon well-supported learning theory principles and research, such as the use of practice and the use of vicarious learning.

Coupled with the evidence for improved attitudes and motivation of learners noted above, this intuitive appeal, sound developmental rationale, and likelihood of transfer of learning indicates that the potential of various participative educational techniques for management is noteworthy and should not be discounted on the basis of previous limited research.

2. Lack of a conceptual framework. There is also little or no conceptual framework which guides experiential learning research. No standard criterion for effectiveness of these methods has been decided upon and since the many measures of "learning" or "effectiveness" used tap different constructs, replication is difficult. Few variables have been delineated and, other than those concerning differential learner performance as a function of instructional method, few operational hypotheses have been generated.

3. Scarce research available on experiential learning. The third deficiency of current management-related research on these instructional techniques is that the research is almost exclusively dominated by studies assessing business games and/or computerized simulations [e.g., 2, 5, 9]. Very little research is available concerning the effectiveness of other popular participative techniques; such as role-playing, skill building "practice" exercises (e.g., for such courses as accounting, statistics, or personnel), or the many forms of the popular participative techniques falling under the broad category of experiential learning.

Based upon the potential of experiential learning and the deficiencies in research on participative innovations noted above, the objective of the present paper has been developed-- to derive a set of variables and operational hypotheses from relevant theoretical and empirical literature in the behavioral sciences which would seem to have potential explanatory power in research assessing experiential learning and to develop a framework or conceptual scheme in which to categorize the variables. This type of activity would be necessary in order

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to help guide future research efforts toward a more efficient use of resources and toward the generation of a systematic body of knowledge.

TOWARD THE DEVELOPMENT OF A SET OF VARIABLES AND HYPOTHESES FOR USE IN RESEARCH ON EXPERIENTIAL LEARNING

One source of conceptual framework for which to derive specific variables and operational hypotheses to guide experiential learning research is that body of knowledge in the behavioral sciences concerned with individual behavior, small group behavior, and interpersonal relations. These broad topics are typically located within the disciplines of psychology and social psychology. Because experiential learning is basically a vehicle for experiencing and learning about phenomena in social settings (i.e., organizations) and because this instructional technique typically requires group participation, the literature dealing with group processes and dynamics, attitudes, interpersonal communication, leadership, and social influence is also a rich source of pertinent information.

Another obviously useful body of research and theory which has potential for explaining and guiding empirical inquiry into experiential learning is that branch of psychology dealing with learning itself (i.e., educational psychology), as well as the more specific literature of learning theory.

A review of several specific topics from the literature noted above suggests specific variables and hypotheses which may be found to influence the experiential learning process. The variables and hypotheses cited here were derived in a somewhat subjective manner (i.e., the criterion for their choice being only that research has found them important in understanding small group and learning phenomena which have obvious experiential learning analogues). Further, some previous research into participative learning techniques in management education has investigated a few of them [e.g., 2, 5, 7, 10, 15]. However, no comprehensive list of potentially relevant variables was uncovered which can facilitate inquiry into experiential learning.

The variables and sample hypotheses developed here were meant to facilitate research which attempts to identify particular characteristics of the total learning setting (i.e., task, learner, instructor) which signal the conditions under which experiential learning might be most effective. This emphasis is in contrast to the bulk of past research [e.g., 7, 8, 9, 16] which has had as its primary objective the comparison of two or more instructional techniques as to their impact on a criterion variable (e.g., amount of learning). While the latter research is certainly valuable in order to build a rationale for the use of certain instructional techniques, the comparison between techniques cannot realistically be answered in such general terms. Rather

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than universal statements of the relative effectiveness between techniques, research efforts may be more efficiently aimed at identifying those learners and task for which each technique may have merit.

Toward this research objective Table 1 was developed. It contains variables gleaned from behavioral science theory and research in the areas mentioned above. The variables are grouped into the following four major categories: individual- level, group-level, environmental, and task variables. It is proposed that such a list can provide an initial overview of the basic phenomena involved in experiential learning. As each variable has been shown in previous research to help explain some aspect of individual, interpersonal, and/or group behavior and as each can be measured with a readily available validated instrument, they can become independent, dependent, and/or moderator variables in research. For example, as one's intolerance for ambiguity has been shown to influence one's behavior in a group this variable can be measured and related to a criterion measure or dependent variable (e.g., group performance or learning in an experiential task), perhaps through a regression analysis in order to ascertain its ability to predict group performance. Of course, more complex research designs, involving variables from all four categories in Table 1, as well as possible interactions, would typically be required in order to explain the complex phenomena of experiential learning. In addition, Table 1 is meant only as a first step. As empirical evidence accumulates, arguments for deleting certain variables and adding others not now present can be made.

Table 2 presents a sample of operational research hypotheses which have been derived relating to experiential learning. A descriptive phrase which indicates the theoretical foundation or body of empirical data from which the hypothesis was derived also appears. Most hypotheses have already been tested in settings other than instructional ones (e.g., laboratories), but as a good deal of this research in social psychology has been conducted with students in laboratories performing "contrived" tasks, the setting of this social psychological research, and hence its results, may be closely related to research on experiential learning methods as it typically uses similar procedures and samples. The hypotheses are offered merely as examples. As with Table 1, Table 2 is therefore an initial attempt at developing a guide to further empirical inquiry and as such would be expanded based upon results of such inquiry, as well as upon further conceptualization of key issues.

CONCLUSION

In conclusion, the tables are meant to provide a conceptual framework for research on

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TABLE 1
A PROPOSED SET OF VARIABLES WITH POTENTIAL EXPLANATORY UTILITY IN RESEARCH ON EXPERIENTIAL LEARNING

Individual-Level	Group-Level	Environmental	Task
<u>Demographic:</u>	Group size	Self-selected into setting or not	Level of difficulty
Age	Group composition	Use of text, readings, etc. in setting or not	No. of moves, plays, subtasks
Sex	(heterogeneity/homogeneity)	Characteristics of physical setting (e.g. sizes of room, chairs or not)	Degree of randomness
College major	Interpersonal attraction	Methods of evaluation of participants (e.g. no. and types of tests, papers)	Multiple or single solution possibilities
Work experience	Group atmosphere	Use of pre- and/or post-activity discussions	Competitive or cooperative strategies urged
Grade/Class	Group cohesiveness	Length of learning period	Criterion used for evidence of performance
<u>Cognitive/Affective:</u>	Role conflict/ambiguity	Amount of out-of-class assignments	Goal clarity
Cognitive style	Group maturity	Degree evaluation based upon performance	Disjunctive, additive, or discretionary tasks
Cognitive complexity	Coalition formation		
Conceptual level	Status differentials		
Values & attitudes			
I.Q.			
Grade Point avg.			
Empathy			
<u>Personality:</u>			
Self-esteem			
Intern-extern.control			
Intolerance for ambiguity			
Funda. Interpersonal Relations Orientation (FIRO-B)			
Needs for achievement, power & affiliation			
Personality charac. (dominance, well-being, self-control)			
<u>Behavior:</u>			
Sociometric choices			
Interac. Process Anal. (IPA) of communica.			
Leadership style			

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TABLE 2
A PROPOSED SAMPLE SET OF OPERATIONAL RESEARCH HYPOTHESES WITH
POTENTIAL TO GUIDE RESEARCH ON EXPERIENTIAL LEARNING

Hypothesis	Brief Description of Theoretical Foundation & Illustrative Reference
1. The style of leaders of experiential learning groups can be predicted, based upon characteristics of the situation.	Fiedler's Contingency Model of Leadership
2. Experiential groups perform certain tasks slower than individuals working alone, but will generate higher quality solutions.	Small Group Behavioral-General
3. If experimental learning tasks are rewarding, those groups whose members have highest need for achievement (Nach) will perform most favorably.	Achievement Motivation Theory
4. There are differences in the strategies adopted by males and females (i.e., degree of competitiveness) in order to form coalitions in experiential groups.	Coalition Theory
5. Seating arrangements and size of room influence decision-making, performance, and satisfaction in experiential groups.	Personal Space; Communication
6. Participation and satisfaction of members decreases with increasing size in experiential groups.	Group Size
7. Persons higher in cognitive complexity, tolerance for ambiguity, socialability, need for dependence, and need for inclusion will be more satisfied with experiential learning techniques than those low on these variables.	Personality Theory-General; Cognitive Development
8. Groups whose members are compatible as to their needs will have higher overall satisfaction scores than those whose members are incompatible.	Interpersonal Relations and Attraction-General; Group Composition-General
9. Positive reinforcement for behaviors leading to desired performance in experiential learning will increase the frequency of these behaviors.	Operant Conditioning; Behavior-Modification
10. Performance in experiential learning is enhanced if the entire task and ultimate objective is explained before specific tasks are assigned (i.e., "whole" is better than "part" learning).	

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experiential learning. If major theoretical positions (*e.g.*, small group processes, leadership theories) can be analyzed and specific variables and hypotheses generated, these can in turn be operationalized and systematically investigated in experiential learning research. Such investigations would in turn provide new theory, variables, and relationships and amend and delete others. In this way a systematic body of data can be developed which is related by conceptual frameworks; existing gaps in research can be identified, and inquiry can proceed in a more related and sequential nature. Thus, some of the larger questions concerning experiential learning can be answered in light of evidence, as opposed to opinion and assumption.

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