

# Developments in Business Simulation & Experiential Exercises, Volume 8, 1981

## TEACHING STYLES IN SIMULATION EXPERIENTIAL LEARNING VERSUS "TRADITIONAL" TEACHING STYLES

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### ABSTRACT

Research in simulation and experiential learning has, for the most part, focused on evaluation of learning outcomes, analysis of learning styles, and only to a very small extent, the behavior and attitudes of the instructor. A review of the literature reveals that this issue, instructor role or user attributes, has been singled out as a "new frontier for research. This study looks specifically at the "teaching philosophy" of the simulation/experiential learning user versus the non-user. The results of a pilot study of teaching philosophy provide insights into the assessment of readiness of simulation/experiential learning and directions for future research.

### INTRODUCTION

ABSEL members, have for several years now, called for research towards a "theory of simulation/experiential learning." From a variety of sources, Faria and Nulsen's call for work into the "life cycle of the game administrator" (1) and Burns and Gentry's movement toward "a theory on the use of simulation games and experiential exercises," (2), come statements which indicate that the attitudes of the instructor may play a critical role in the success of any particular teaching style. These authors lay down a critical framework for any research study into teaching styles.

Faria and Nulsen raise the particular issue concerning the simulation administrator. In their survey of ABSEL and non-ABSEL university teachers, they attempted to get answers to:

Why did (the simulation user) start to use this technique? What does he expect from simulation gaming? What satisfactions and dissatisfaction does the simulation user experience? (3)

The results of the survey showed that users have a variety of motives for using and continuing to use simulation/experiential materials. The overall conclusions indicated that "the reasons for adopting this method revolved around the enthusiasm of students, the realism of the method, the effectiveness of it as a teaching tool and the innovativeness of the technique. (4)

Burns and Gentry, in their monumental call for a theory of experiential/simulation learning, further define the role of the user. They raise the issue of user motive by specifying "self-serving versus student-serving" (5) as variables in their proposed model. They further point out that the degree of user involvement is attributed to user motives and that

Clearly, the most critical factor in the use of games and experientials is the degree of user involvement necessitated by or permitted by internal and situational factors. The success of the use of games and experientials seems highly dependent on the degree of use involvement with the exercise. (6)

Other ABSEL members have referenced, or attempted, research into the questions of user or administrator involvement. Catalanello (7), examined the question for a cost/benefit perspective: "...whether from the perspective of

the professor the inducements offered as rewards are reasonably equivalent to the contributions required of him as an instructor." Schreier (8) examined the administrator role as an element in simulation/experiential learning success. A model of administrator behavior was identified and research yielded the following results:

The role that the instructor plays in a simulation or experiential exercise can clearly affect the outcome of that exercise, particularly if students do not accept the behavior of their instructor as important or helpful to what they are trying to accomplish in the exercise. Knowledge of the student perception, therefore, fulfilled the traditional function of evaluative feedback to the instructor in the classroom. (9)

### LEARNING STYLES

Learning styles, exemplified by a variety of ABSEL research projects using David Kolb's concept of learning styles, play a key role in the analysis of teaching styles because, as Johnson and Stratton (10) state:

If this is true (different learning styles), then it suggests that a variety of teaching approaches should be consciously offered and that the student should be helped to choose the approach that matches his style.

The student of instructor styles have included examination of materials, and to some extent, teaching style. The literature has examined questions concerning the lecture versus discussion style. The most significant research, however, has focused on the style of the trainee as in Kolb's model of learning styles. In the development of his theory, Kolb has clearly developed the importance of understanding different learning styles.

If managers and administrators had a model about how individuals and organization learn, they would better be able to enhance their own and their organization's ability to learn. (11)

Kolb's identification of learning styles clearly differentiates among the behavior and preferences of the four styles. The CONVERGER deals best in practical situations where there is one correct answer. He/she is relatively unemotional and prefers dealing with things rather than people. The DIVERGER has an imaginative style and can develop a variety of solutions. He/she is the opposite of the CONVERGER and is emotional and interested in people. The ASSIMILATOR is not particularly interested in people. He/she is concerned with the soundness of an idea and/or the preciseness of a theory. The ACCOMODATOR is the "Doer" who can quickly accomplish things, performs well in new situations, and tends to be the most impulsive of the styles. He/she is results-oriented and fits in well in people contact positions. (12)

One of the practical applications of the learning styles is when the instructor realizes how the different members of his/her audience will perform according to the implications of Kolb's model. The selection of a teaching methodology which applies exclusively to one of the learning styles precludes the effectiveness for 75% of

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the audience (assuming the audience is of mixed backgrounds). Kolb's research has found favored styles among the functional areas of business administration which demonstrate this reality (13). He also discussed the seriousness of misplaced styles.

Our research on learning styles has shown that managers on the whole are distinguished by very strong active experimentation skills and are very weak on reflection observation skills. Business school faculty members usually have the reverse profile. To bridge this gap in learning styles, the management educator must somehow respond to pragmatic demands for relevance and the application of knowledge while encouraging the reflective examination of experience that is necessary to refine old theories and to build new ones. In encouraging reflective observation, the teacher often is seen as an interrupter of action-as a passive "ivory tower" thinker. Indeed this is a critical role to be played in the learning process. Yet if the reflective observer role is not internalized by the students themselves, the learning process can degenerate into a value conflict between teacher and student, each maintaining that theirs is the right perspective for learning (14).

### New Directions

The application of a 'styles model' in management development and learning styles can be extended to the teaching situation by the creation of a teaching styles model. In many teaching situations the instructor uses some type of experiential material, cases, role play or a computer simulation. Other teachers prefer a dominant style of lecture and/or class discussion. These types of education provide a framework for an analysis of different teaching styles. The instructor may assume one style exclusively or in most cases he/she may create a composite of all possible roles. The role or style of the instructor may be dictated by the particular learning situation or by the material being used. However, the style of the teacher in turn affects the outcomes of the teaching experience and the teaching styles model allows for an examination of the impact of teacher behavior on the goals of the educational activity.

Richard Brostrom (15) has developed a Training Style Inventory which concerns itself with different behaviors that individuals are likely to exhibit under a teaching situation and various values which individuals have concerning the learning environment. Brostrom defined four 'training style types': the Behaviorist, the Structuralist, the Functionalist, and the Humanist.

The orientation of the Behaviorist is that new behavior can be caused and "shaped" with well designed structures around the learner. The basic assumptions of this approach are that the teaching designer selects the desired end behaviors and proceeds to engineer a reinforcement schedule that systematically encourages the learner's progress towards these goals. Imaginative new machinery has made learning fun and thinking unnecessary; learners often control the speed. The interpersonal style of the behaviorist emphasizes outcomes; cooperative stimulus response mentalities are valued and the process is product centered.

The orientation to teaching and learning of the Structuralist is that the mind is like a computer; the teacher is the programmer. The basic assumptions of the model are that content properly organized and fed bit by bit to learners will be retained in memory. Criterion tests will verify the effectiveness of teaching. The teacher "keeps people awake" while simultaneously entering data - a much envied skill. The interpersonal style of the structuralist teacher is

directive, focusing on planning, organization, presentation, and evaluation. The process is teacher centered.

The orientation to teaching and learning of the Functionalist is that people learn best by doing and that they will do best at what they want to do. People will learn what is practical. The basic assumptions of this model are that the learner must be willing or motivated by the process or the product otherwise it is useless to try teaching. Performance on the job" is the true test. Opportunity, self-direction, thinking achieving results, and recognition are important. The interpersonal style of the functionalist teacher is assertive, a problem-focus confrontational climate striving, stretching, achieving. The process is task oriented and learner centered.

The orientation to teaching and learning of the Humanist is that learning is self-directed discovery. People are natural and unfold (like a flower) if others do not inhibit the process. The basic assumptions of this style are that anything that can be taught to another is relatively inconsequential. Significant learning leads to insight and better understanding of self and others. Being a better human being is considered a valid learning goal. It can be a very inefficient time consuming process. The interpersonal style of the humanist model is reflective authenticity; equity and acceptance mark the relationship. The process is relationship centered.

Brostrom further defined his model with key words and strengths and limitations. The assessment of training styles is based on a Training Style Inventory, composed of fifteen items each with four alternatives that respondents are asked to rank in a most favored to least favored order. Sample questions from the inventory are shown in Figure 1. The complete description of Brostrom's model is shown in Figure 2 on the following page.

Figure 1

### TRAINING STYLE INVENTORY-SAMPLE QUESTIONS

In a training event, I try to create

- the real world-problems and all-and develop capacities for dealing with it.
- a learning climate that facilitates self-discovery, expression, and interaction.
- a stimulating environment that attracts and holds the learners and moves them systematically toward the objective.
- an interesting array of resources of all kinds-books, materials, etc.- directed at the learner's needs.

People learn best

- when they are free to explore-without the constraints of a "system."
- when it is in their selfish interest to do so.
- from someone who knows what he or she is talking about.
- when conditions are right-and they have an opportunity for practice and repetition.

### A Pilot Study

Interest among ABSEL members in assessing the learning style of participants and the teaching style of the instructor plays a key role in the evaluation of simulation/experiential learning effectiveness. A method to objectively assess a teacher's 'pre-disposition' to simulation/experiential learning would be a key van-

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Figure 2

TSI STYLE CONTRASTS				
	Behaviorist	Structuralist	Functionalist	Humanist
Orientation to Teaching-Learning	New behavior can be caused and "shaped" with well-designed structures around the learner.	The mind is like a computer; the teacher is the programmer.	People learn best by doing, and they will do best what they want to do. People will learn what is practical.	Learning is self-directed discovery. People are natural and unfold (like a flower) if others do not inhibit the process.
Basic Assumptions	Training designers select the desired end behaviors and proceed to engineer a reinforcement schedule that systematically encourages learners' progress toward those goals. Imaginative new machinery has made learning fun and thinking unnecessary. Learners often control the speed.	Content properly organized and fed bit-by-bit by learners will be retained in memory. Criterion tests will verify the effectiveness of teaching. The teacher keeps people awake while simultaneously entering data—a much-envied skill.	The learner must be willing (or motivated) by the process or the product; otherwise it is useless to try teaching. Performance "on-the-job" is the true test. Opportunity, self-direction, thinking, achieving results, and recognition are important.	"Anything that can be taught to another is relatively inconsequential" (Rogers). Significant learning leads to insight and understanding of self and others. Being a better human being is considered a valid learning goal. Can be a very inefficient, time-consuming process.
Key Words and Processes	<ul style="list-style-type: none"> <li>stimulus-response</li> <li>practice</li> <li>shaping</li> <li>prompting</li> <li>behavior modification</li> <li>programing</li> <li>habit formation</li> <li>reward and punishment</li> <li>teaching machines</li> <li>environmental design</li> <li>successive approximation</li> <li>sensitizing</li> <li>extinction</li> <li>token economy</li> <li>mastery</li> </ul>	<ul style="list-style-type: none"> <li>task analysis</li> <li>lesson planning</li> <li>information mapping</li> <li>cloning</li> <li>sequencing</li> <li>memory</li> <li>audiovisual media</li> <li>presentation techniques</li> <li>standards</li> <li>association</li> <li>evaluation</li> <li>measuring instruments</li> <li>objectives</li> <li>recitation</li> </ul>	<ul style="list-style-type: none"> <li>problem solving</li> <li>simulation</li> <li>"hands-on"</li> <li>reasoning</li> <li>learner involvement</li> <li>reality-based consequences</li> <li>achievement</li> <li>failure</li> <li>confidence</li> <li>motivation</li> <li>thinking</li> <li>competence</li> <li>discipline</li> <li>recognition</li> <li>feedback</li> <li>working</li> </ul>	<ul style="list-style-type: none"> <li>freedom</li> <li>individuality</li> <li>ambiguity</li> <li>uncertainty</li> <li>awareness</li> <li>spontaneity</li> <li>mutuality</li> <li>equality</li> <li>openness</li> <li>interaction</li> <li>experiential learning</li> <li>congruence</li> <li>authenticity</li> <li>listening</li> <li>cooperation</li> <li>feelings</li> </ul>
Interpersonal Style	Supportive; emphasis on controlling and predicting the learner and learning outcomes—cooperative; stimulus-response mentalities are valued. Process is product centered.	Directive; planning, organization, presentation, and evaluation are featured. Process is teacher centered.	Assertive; a problem-focused, conditional, confrontational climate—striving, stretching, achieving. Process is task oriented and learner centered.	Reflective; authenticity, equality, and acceptance mark relationship. Process is relationship centered.
Strengths	"The Doctor": clear, precise, and deliberate; low risk; careful preparation; emotionally attentive; complete security for learners; a trust builder; everything "arranged"; protective; patient; in control.	"The Expert": informative; thorough; certain; systematic; stimulating; good audio-visual techniques; well rehearsed; strong leader; powerful; expressive; dramatic; entertaining.	"The Coach": emphasizes purpose; challenges learners; realistic; lets people perform and make mistakes; takes risks; gives feedback; builds confidence; persuasive; gives opportunity and recognition.	"The Counselor": sensitive; empathic; open; spontaneous; creative; a "mirror"; non-evaluative; accepting; responsive to learners; facilitative; interactive; helpful.
Limitations	"The Manipulator": fosters dependence; overprotective; controlling; manipulative "for their own good"; sugar-coating; hypocritical agreeing; deceptive assurances; withholds data.	"The Elitist": preoccupied with means, image, or structure rather than results; ignores affective variables; inflexible (must follow lesson plan); dichotomous (black or white) thinking; superior.	"Sink or Swim": ends justify means; loses patience with slow learners; intimidating; insensitive; competitive; overly task oriented; opportunistic; return-on-investment mentality.	"The Fuzzy Thinker": vague directions; abstract, esoteric, or personal content; lacks performance criteria; unconcerned with clock time; poor control of group; resists "teaching"; appears unprepared.

able in an individual teacher's or an organization's program to implement simulation/experiential learning materials in a curriculum. Such information would also develop the research suggested by Burns and Gentry and by Faria and Nulsen.

A pilot research study was conducted to develop the teaching styles based on the Brostrum model. The 'Training Style Inventory' was modified slightly to reflect more the teaching environment of the typical ABSEL member and questionnaires were sent to all current members including participants at the 1980 conference. In addition to the questionnaire mailed to ABSEL members, each member was provided with an additional questionnaire to be given to and completed by a non- ABSEL member who did not use simulation or experiential learnings in their teaching behavior. Return envelopes were provided to increase the response rate. Responses were received from 113 individuals, approximately 50% of the initial mailing.

## RESEARCH HYPOTHESIS

The basic hypothesis of the research study is that individuals who believe in the use of simulation and experiential learning techniques to the extent that they are active members in ABSEL will have different teaching styles than individuals who do not use simulation/ experiential learning materials in the classroom. While the pilot study clearly has limitations in its

design, such as the selection of only ABSEL members and the use of ABSEL members to recruit other respondents, it is strongly felt that the results of this pilot study would serve as a basis for refinement of the instrument and possible use in a more controlled research project.

## RESULTS

The results of the study, as shown in Table 1, disprove the key hypothesis. There are no significant differences between the ABSEL and non-ABSEL groups on any of the four key areas.

## CONCLUSIONS

The failure of Brostrum's Training Style Inventory negates to some extent the proposition that instructor attitudes or "philosophy" differ in experiential, versus non-experiential teaching styles. This conclusion, however, is offset by the limitations of this pilot study and its limited sample. It does appear, however, that individuals preferring different teaching techniques can subscribe to each of the philosophies represented in Brostrum's model. It is equally possible that teaching philosophy does not effect the choice of teaching strategy. An effective lecturer may be equally disposed to one philosophy as the person using experiential materials. Continued research is indicated in each of these areas.

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TABLE 1

	Behaviorist	Structuralist	Functionalist	Humanist
Range	21-47	19-44	20-50	22-49
Mean	38.14	36.34	38.73	37.95
ABSEL Members	38.35	36.47	38.75	37.67
Non-ABSEL Members	37.90	36.21	38.72	38.26
F-Value	1.21	1.20	1.21	1.01
Significance	.48	.50	.48	.96

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