

Computer Simulation and Learning Theory, Volume 3, 1976

SEQUENCE OF TRAINING TASKS AND PERCEIVED LEARNING: AN EXPLORATORY INVESTIGATION OF THE EXPERIENTIAL TRAINING UNIT¹

Samuel C. Certo
Department of Management-Finance
School of Business
Indiana State University

One suggested experiential exercise training strategy suggests that an interpersonal skill is composed of a set of performance-related subskills which should be developed somewhat sequentially through an Experiential Training Unit (ETU) as opposed to a commonly used barrage of experiential exercises² (4). An ETU is defined as a sequential series of related training activities involving at least one climax experiential exercise and aimed at developing interpersonal skill through appropriate subskill development.

According to the ETU concept, subskills making up interpersonal skill include: 1) Cognitive Skill - the ability to grasp and understand a particular theory; 2) Transformation Skill - the ability to cognitively designate specific behaviors which would reflect a particular theory; 3) Activation Skill - the ability to perform transformed behavior in such a way that it is perceived by others as intended; 4) Preliminary Diagnostic Skill - the ability to cognitively determine what behavioral cues displayed by another would indicate when a particular theory should be applied; and, 5) Advanced Diagnostic Skill - the abilities to identify these behavioral cues in an interaction situation and to assess the quality of the application attempt making modifications when necessary.

ETU strategy suggests that these subskills are developed most effectively through the performance of related training tasks arranged in the above prerequisite sequence. The purpose of this study is to investigate the influence of the sequence of training tasks on perceived learning in an ETU situation.

METHOD

Sample

Subjects were juniors and seniors who enrolled in one of two sections of an experientially taught management course at Indiana State University. Each section was treated as a distinct experimental group: Group I (N = 30) and Group II (N = 33). Students were not aware of their involvement as subjects until after the

¹ This research was partially supported by a grant from the Indiana State University Research Fund.

² An experiential exercise is defined as a task designed with specific circumstances to generate trainee behavior which can be observed, discussed, and evaluated against interpersonal theory (3).

Computer Simulation and Learning Theory, Volume 3, 1976

experiment was concluded. Students were randomly assigned both to a small group for the entire ETU and to training conditions within the small groups.

Treatment

An ETU was specially designed and administered which focused on understanding and dealing with the grief involved in the firing process. Although the same ETU activities were administered to both groups, the sequencing of the activities was different. Figure 1 presents the specific ETU activities and the sequencing of the activities for each group. The sequence for Group I was consistent with ETU prerequisite recommendations, while the sequence for Group II was randomly generated. The entire ETU took approximately ten hours to administer with each activity lasting a similar amount of time. The same instructor taught both groups.

Questionnaire

Five four-item scales were developed to measure the amount of learning subjects perceived they obtained from each ETU training activity. These scales focused on: 1) reading and discussing assigned articles; 2) demonstrating appropriate dialogue for a grief-related firing situation; 3) behaviorally demonstrating appropriate dialogue for a grief-related firing situation; 4) conceptually generating behavioral cues which probably indicate grief is being felt in a firing situation; 5) performing experiential exercise activities. Subjects were asked to designate how much they learned about managing people on a seven-point scale (anchored "very much about managing people" to "very little about managing people"). One additional four-item scale was also developed to measure the amount of overall learning subjects perceived they obtained from the entire ETU. All questionnaire items were randomly positioned. A pre-experimental testing of the questionnaire with a separate group of fifty-two students yielded an alpha coefficient of .52. Nunnally (14) has suggested that alpha coefficients of .5 to .6 are useful for preliminary or exploratory research.

Analysis of Data

Data were analyzed in two steps: first, a t-test for variation between two independent means (1) was employed to test for significant group differences in perceived learning both for the ETU overall as well as individual ETU activities. Second, for the group which evidenced the more effective learning sequencing, perceived learning scores for each individual activity were stepwise regressed against overall perceived learning to empirically determine the relative contributions of each activity to the overall learning.

Computer Simulation and Learning Theory, Volume 3, 1976

Figure 1

SEQUENCING OF ETU TRAINING ACTIVITIES

Group I

1. Cognitive Skill Activity
Students were instructed to read two articles (9,10) which focused appropriately on the firing process. Related discussion was led by the instructor.
2. Transformation Skill Activity
Students were broken into groups of five or six and assigned the task of developing appropriate dialogue for a firing situation. Related discussion was led by the instructor.
3. Activation Skill Activity
Trainees were asked to actually demonstrate appropriate dialogue for a firing situation while being video-taped. The video-tape was then analyzed by the group as a whole.
4. Preliminary Diagnostic Skill
Small groups were assigned the task of listing as many significant cues as possible which probably indicate that an individual should be fired. Discussion led by the instructor.
5. Advanced Diagnostic Skill Activity
The experiential exercise Pink Slips (7) was: 1) administered, 2) video-taped, 3) replayed, and 4) evaluated to identify cues indicating a firing would be necessary and to evaluate the appropriateness of the firing process. Instructional role closely followed the generally accepted role of an experiential exercise instructor (5).

Group II

1. Preliminary Diagnostic Skill
Small groups were assigned the task of listing as many significant cues as possible which probably indicate that an individual should be fired. Discussion led by the instructor followed.
2. Transformation Skill Activity
Students were broken into groups of five or six and assigned the task of developing appropriate dialogue for a firing situation. Related discussion was led by the instructor.
3. Activation Skill Activity
Trainees were asked to actually demonstrate appropriate dialogue for a firing situation while being video-taped. The video-tape was then analyzed by the group as a whole.
4. Cognitive Skill Activity
Students were instructed to read two articles (9, 10) which focused appropriately on the firing process. Related discussion was led by the instructor.
5. Advanced Diagnostic Skill Activity
The experiential exercise Pink Slips (7) was: 1) administered, 2) video-taped, 3) replayed, and 4) evaluated to identify cues indicating a firing would be necessary and to evaluate the appropriateness of the firing process. Instructional role closely followed the generally accepted role of an experiential exercise instructor (5).

RESULTS

Table I presents, for each group, perceived learning mean scores and t-ratios for the overall ETIJ and individual ETU activities. Group I perceived learning scores were significantly higher than Group II scores for overall learning and each ETU activity except the reading activity which evidenced no significant difference between the groups.

Table 1

PERCEIVED LEARNING MEAN SCORES AND t-RATIOS FOR
OVERALL ETU AND INDIVIDUAL ETU ACTIVITIES

Activity	Mean Perceived Learning Scores		t-Ratio
	Group I	Group II	
Reading	3.63	4.16	1.42
Developing Dialogue	5.29	4.19	2.43*
Demonstrating Dialogue	5.82	4.15	3.01*
Behavioral Cues	5.73	4.35	2.88*
Experiential Exercise	5.89	4.47	2.97*
Overall Learning	5.91	4.82	2.39*

*p < .05

NOTE: The higher the score, the greater the amount of perceived learning.

For Group I, results of a stepwise regression of perceived learning scores for each activity against overall perceived learning are presented in Table 2. Two observations are noteworthy: first, as a group, the five activities were significantly related to overall learning at the .05 level. Second, the experiential exercise activity and the dialogue demonstration activity accounted for 33.2% and 12.7% of the variation in overall learning respectively. All five activities collectively accounted for 60% of the variation in overall learning, 45.9% of which is attributable to the experiential exercise and dialogue demonstration activities. The activity which contributed least to variation in overall perceived learning was the reading activity with 3.6%.

Table 2

RESULTS OF STEPWISE REGRESSION OF PERCEIVED LEARNING SCORES FOR EACH ACTIVITY AGAINST OVERALL PERCEIVED LEARNING - GROUP I

Activity	Cumulative R ²	F Ratio
Experiential Exercise	.332	20.88*
Demonstrating Dialogue	.459	17.39*
Behavioral Cues	.521	14.49*
Developing Dialogue	.564	12.63*
Reading	.600	11.38*

*p < .05

CONCLUSIONS

The generalization of the results of the present study should be cautioned because of possible effects of such factors as multicollinearity and an exploratory level coefficient alpha. With caution, therefore, the following conclusions are advanced as being noteworthy:

First, the sequencing of training activities can influence not only overall perceived learning from all the activities, but also perceived learning related to the individual activities themselves. Although various task sequences have been proposed for a general experiential learning model (6, 12), exactly what this sequencing should be to maximize overall learning effects can only be settled through future research.

Second, several presently existing pedagogic strategies recommend including appropriate theory in the experiential training situation. This theory has been similarly termed content (11), abstract generalization (13), and knowledge (6). From the results of the stepwise regression, this study seems to imply that conveying this theory through experiential activities rather than more traditional activities would increase perceived trainee learning.

Third, perceived learning via experiential exercise materials can be significantly influenced by a preceding sequence of instructional activities. As investigations concerning the comparative effects of experiential instructional materials have been valuable (2, 18, 15), future research focusing on related sequential effects of experiential exercise training units can provide needed insight.

Computer Simulation and Learning Theory, Volume 3, 1976

REFERENCES

1. Bruning, James L. and B. L. Kintz, Computational Handbook of Statistics (Glenview: Scott, Foresman and Company, 1968).
2. Byrne, Eugene T. and Douglas E. Wolfe, "The Design, Conduct and Evaluation of a Computerized Management Game as a Form of Experiential Learning," Proceedings of Association for Business Simulation and Experiential Learning, 1974, pp. 22-30.
3. Certo, Samuel C. "Experiential Training Methodology, Traditional Training Methodology, and Perceived Opportunity to Satisfy Human Needs," in Richard H. Buskirk (Ed.) Simulation Games and Experiential Learning in Action. Association for Business Simulation and Experiential Learning Proceedings, 1975, pp. 31-37.
4. Certo, Samuel C. "Interpersonal Skill Development: The Experiential Training Unit (ETU) and Transfer of Training," Southern Academy of Management Proceedings, 1976 (in review).
5. Certo, Samuel C. "The Experiential Exercise Situation: A Comment on Instructional Role and Pedagogy Evaluation," Academy of Management Review, Vol. 1, No. 2, (1976), (in press).
6. Certo, Samuel C. and Robert H. Dougherty. Organizational Leadership: Skills Through Theory and Experience (Dubuque: Kendall/Hunt, 1975), p. 2.
7. Dougherty, Robert H. "Pink Slips," in Samuel C. Certo (Ed.) Sourcebook of Experiential Exercise: Interpersonal Skills (Indiana State University: Bureau of Business Research, 1976).
8. Fritzsche, David J. "The Lecture vs. the Game," Proceedings of the Association for Business Simulation and Experiential Learning, 1974, pp. 41-46.
9. "How Companies Deal with Cutback Jitters," Business Week, April 24, 1971, 88-89.
10. Levenson, Harry. "Easing the Pain of Personal Loss," Harvard Business Review, Vol. 50 (1972), 80-88.
11. Keys, Bernard. "Socrates, All Other Teachers Fit on Learning Grid Somewhere," Simulation/Gaming/News, Vol. 3, No. 2 (1976), 9-10.
12. Kolb, David A. "On Management and the Learning Process," in Kolb, David A., Irwin M. Rubin, and James M. McIntyre, Organizational Psychology: A Book of Readings, Englewood Cliffs: New Jersey, Prentice Hall, Second Edition, 1974, pp. 27-42.

Computer Simulation and Learning Theory, Volume 3, 1976

13. Kolb, David A. and Ronald Fry, "Toward an Applied Theory of Experiential Learning," in Cary Cooper, (Ed.) Theories of Group Process, London, N.Y., John Wiley and Sons, 1975.
14. Nunnally, Jum C. Psychometric Theory (New York: McGraw-Hill, 1967).
15. Roberts, Ralph M. and Stephen E. Field. "Using Student Opinion in Evaluating Results with a Business Game," Proceedings of Association for Business Simulation and Experiential Learning, 1975, pp. 92-99.