A Learning Theory Model

A Report on Developmental Work with "Laws of Learning" of Internal Revenue Service

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Some of my colleagues in the Training Division of the Internal Revenue Service, and I, have expressed a feeling that most of the training directors and educators that we know operate under the assumption that because they once took courses in educational psychology and philosophy of education, the laws of learning or learning theory principles have been implanted in their nervous systems and somehow or other automatically influence their judgments, decisions and behavior whenever they function in an educator role.

Challenging Assumptions

For what it is worth, we challenge this, and a number of other assumptions which are implied in much of what we say and do as training and management development directors.

As a part of this challenge, let's begin by first setting forth some of these assumptions that one can easily read into much current training, and then explore what we think needs to be done to make learning theories functional.

Implied Assumptions

That acquisition of knowledge or principles of human behavior actually influence behavior.

That a training director must simply identify a learning need and provide learning experiences and growth will take place.

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This article is a result of the combined efforts of a number of training personnel in the Internal Revenue Service from the districts, the regions, and the National Office, who were given the task of developing a seminar for IRS Employee Development Officers. The seminar was designed to cause IRS personnel to examine, in depth, some of the current trends in training methodology. As an integral part of this effort the participants were being asked to examine training methods as they relate to laws of learning. This learning theory model evolved out of an intensive effort on the part of the course designers to construct a functional theory of learning applicable to IRS training efforts. The author appreciates the efforts of the many people who contributed comments and critiqued the operational statements included with each of the propositions. The author would appreciate comments, suggestions and experiences others in the field may have as they attempt to "reality test" the model.

That the process of re-education is basically the same as the one in which the individual receives his original education.

That attitude change is brought about by using instructional techniques similar to those used to impart knowledge and skills.

That we know how to get a learner committed to a desired attitude.

That by recitation and by hearing what is said by a learner we can evaluate the degree to which an attitude we are intending to impart or change has been accepted.

That a teacher motivates the learner.

These assumptions are some of the more readily identifiable ones that come to mind. We are sure that there are many more which can be identified.

Learning Propositions

How much attention we pay to the so-called "laws of learning" as we go about our tasks as educators can best be testified to not so much by what we say but by how much we worry and become anxious when we have not considered them, when we have overlooked an important one, when we have violated one or when we have made excuses for our efforts because the principle was misapplied.

That we sometimes feel guilty or anxious over our failures to examine the what, when, how, where, or why of our efforts in terms of learning theory bespeaks of a real professional attitude toward training. It is toward the end that more guilts and anxieties are created that this article is addressed.

The measure of this article's success can only be determined in terms of the degree to which it causes training people to challenge the assumptions under which they operate as they go about playing the various educator roles expressed or implied in their position.

It is hoped that all of our associates from the programmed instruction, mathetics and cybernetics fields will excuse any implied reference to them as they read this article. Many of them, by the nature of their research orientation, are continually challenging the assumptions we educators operate under. Furthermore, we recognize that some of the propositions and operational statements contained in our learning theory model are not stated in as functional a context as their fields demand.

Model Construct as a Way of Examining Abstract Relationships and Adherence to Principles

In recent times behavioral scientists and analog computer systems analysts and computer designers have resorted to model constructs* as devices for examining complex processes, relationships and abstractions. To the behavioral scientist the model is the ideal, the purest of the unattainable state of the thing being examined or ascribed to. In this context the model he designs is the comparator he uses to determine the degree that impurities, deficiencies,

*Webster defines model as ". . . an example for imitation" and construct as ". . . a product of the uniting of immaterial elements; specif. Psych. An intellectual construction; an object of thought which arises by a synthesis or ordering of terms, elements, or factors."

inaccuracies or other short-comings exist in the thing being compared to, or matched against, the model. As a comparator the model helps the examiner define, describe and communicate degrees of these variances. It does not, however, necessarily prescribe remedies.

Learning Theory Model

In an effort to communicate and to create learning experiences where Internal Revenue Service Training Officers would be forced to examine some of the assumptions stated earlier and to come to grips with the laws of learning, the Training Division of the IRS developed a Learning Theory Model. This model construct is based on a series of seven propositions concerning adult learning set forth by Dr. Jacob W. Getzels, Professor, Departments of Education, Psychology and Human Development, University of Chicago.

He set forth these propositions in 1959 in a film-strip tape lecture developed for the Center for the Study of Liberal Education for Adults. In his words he ". . . presented seven specific propositions of human learning common to a number of current theories and indicated some of the implications of these propositions for classroom practice in the adult education setting."

The IRS Learning Model

The Internal Revenue Service Model is an effort, built upon Dr. Getzels' seven propositions, and made functional by the inclusion of operational statements, to help the user of the model when he creates and examines learning situations:

Seven Propositions Underlying Learning Theory, Useful as Guideposts in Developing Internal Revenue Service Learning Situations

Learning Depends on Motivation—Instructional time and techniques must be provided for in order to help the learner overcome resistance to change and to stimulate and implant a desire to achieve the knowledge, skill to be taught, or to change the attitude which is being dealt with in the instructional effort. The instructor, or the course designers, cannot motivate the learner, only the learner can motivate himself. The motivation, the drive to learn, must, in the final analysis, come from the learner. The instructor prepares the setting for self-motivation to take place.

Learning Depends on Capacity—Attention must be paid, both in the course design and in the instructional effort, to not only assess the learner's capacity based on his ability, interests, needs and experience, but also to deal continually with these individual differences during all phases of the instructional process.

Learning Depends on Previous Experience—Data collection techniques should be built into the instructional process to ascertain what factors are active which tend to interfere with or facilitate the learning process. Instructional techniques must be provided for in the design or exist in the instructor's repertoire to help him effectively deal with the data that has been collected. Particular attention has to be paid to the gathering of information which brings to light the incorrect assumptions, biases, erroneous hypotheses, faulty judgments the learner uses as he exposes

his thinking-rationale in order that he can be helped to see, and then correct and modify his thought processes. The instructor must gauge the pace of the learning process and determine when over-learning is necessary for desired retention results.

Learning Depends on Perceiving Relevant Relationships—Processes must be built into the learning experience to assist the learner in discovering relationships for himself, and to relate these to past or anticipated experiences. Instructors and course designers have to provide types of learning experiences where the principles and generalizations deduced by the learner are "reality tested" through his frame of reference as being meaningful and useful. Instructional techniques must be built into the course design which will assist the instructor and the student to link up bits and pieces of data, experiences, assessments of situations which are relevant to the gaining of the insights and understandings being sought. Instructor attention has to be focused on helping the learner dispel or discard distractions or stimuli which prevent the learner from reaching the desired response, reaction or behavior.

Learning Depends on Feedback—At all phases of the educational process, originating with the determination of the need through the evaluation and follow-up phases, positive efforts must be sought after and built into the teaching and the course design which causes feedback to happen, be interpreted and be acted upon by the learner and the instructor. Feedback has to be looked upon as the data which the learner uses to evaluate how he is doing, how his goals and needs are being met and how his attempts at application of the knowledge and skills are meeting his own, as well as the expectations of the job for which he has been trained. Feedback helps both the learner and the instructor determine how effective the instructional efforts have been. Feedback provides the opportunity for reinforcement of learning. In this context, reinforcement should occur as quickly as possible after the learning incident.

Learning Depends on Satisfactory Personal and Social Adjustment in the Learning Situations—Students must feel free to search and fumble without fear of institutional or interpersonal threat. Individual, group and institutional goals need to be clearly identified by all members. The instructor has to be prepared to perform as consultant, resource person, demonstrator, diagnostician, task master and evaluator. The instructor must understand the importance of learner conflicts and recognize that he has no chance of understanding all of the generalizations and discriminations which influence the learners' reaction to pre-planned learning situations.

Learning Depends on Active Search for Meaning—Students must have the opportunity to engage in problem-solving situations where trial and error solutions may be applicable. Everyone should be involved in the problem-solving activity so that the greatest number of hypotheses and experiences can be shared by the greatest number. The instructor has to provide an atmosphere of permissiveness in learning situations, permitting students to search for meanings without a feeling of embarrassment, criticism or reprimand. Learning con-

stitutes its own end. The optimum state is activity. The learner needs excitement, novelty and challenge; he will enthusiastically accept these conditions and the curriculum must present them. The human being need not be driven to explore problems—he is intrinsically constructed to do just that.

The Model as a Template

The developers of the IRS Learning Theory Model view it as a sort of transparent template that one can place upon a learning situation in order to see whether the training method, course design or learning situation falls within, short of, or outside of the template.

In this context, then, the instructor, course designer, or training officer can take positive steps to attempt to build in instructional techniques to overcome any deficiencies that this "teasing out" process might bring to light.

In the hopes of making the model functional the designers visualized the user taking each of the operational statements under the learning concepts such as, *Learning Depends on Capacity,* and examining the degree to which the learning situation he is concerned with does or does not provide for coverage of each of the dimensional statements under that concept. If not, then here is an area about which he might find it necessary to become concerned about and take remedial steps. In this respect, this model construct might be looked upon as a tool for making learning theories operational and for testing assumptions.

Conclusion

The rationale underlying our endeavor to build a model construct is that a knowledge of existing assumptions about learning and our willingness to test those against other assumptions, are a requirement for understanding and utilizing learning theory.

Author's Note: For an insightful description of the role that model constructs can play in the analysis of, studying about and describing administrative practices and behavior, see, "The Nature and Contributions of Administrative Models and Organizational Research" by Fremont Shull, Jr., *Journal of the Academy of Management,* Vol. 5, No. 2, Aug., 1962, pp. 124-138.