LEARNING STRATEGIES IN ARMY TRAINING

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ABSTRACT

There are currently six primary learning strategies used for training in the Army. These are programmed, traditional, exercise, small group, pure group, and mentor instruction.

Historically several of these strategies have been accepted as the way to training only to fail to meet the expectations of the Army in some way. Considerable training resources have been lost transitioning major portions of the Army's training program form strategy to strategy.

All of these strategies are useful, but none of them are "the way " to train . The purpose of this study is to propose criteria to help training developers to determine when to use a specific training strategy.

The student-teacher relationship which characterizes a strategy provides the key to determining when to use each strategy. Arraying these strategies along a continuum from the strategy with the most teacher structured learning environment(programmed instruction) to the least structured learning environment (mentorship) reveals that in each less structured strategy the student progressively takes more responsibility for his own learning. This change in the teacher -student relationship becomes increasingly appropriate as the maturity of the student in the area of study advances.

The progressive change in student-teacher roles is also marked by increasingly personal relationships from the relatively impersonal nature of programmed instruction to the intensely human relationships of mentor led learning. High levels of human interaction are required if the student is resistant to the training or if a high degree of personal commitment is desired form the student at the completion of training.

Author Biography

Dr. William T. Melton is an Instructional Systems Specialist assigned as the team chief for the development of the Automated Systems Approach to Training (ASAT) for the Training and Doctrine Command, Deputy Chief os Staff for Training, Fort Monroe, Virginia. He was responsible for writing the guidance pamphlet on the Design Phase of the Systems Approach to Training, for developing the expert system for media selection and for teaching *Planning, Resourcing, Analysis and Design in the Training Developer Middle Manager's Course.* Prior to his assignment to HQ TRADOC, he was an instructor for the Training Developer Course at the Combined Arms Training Activity, and held various positions at the Army Air Defense School including Chief of Analysis, Chief of SQT and STP Development, and Chief of Program Management. He also served evleven years active duty as an officer in the Corps of Engineers. He holds a Doctor of Education Degree in Adult Education from Texas A & M University where he published a report of study on media selection in the Army.

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PURPOSE:

All six of these strategies have proven to be useful, but none of them is "the way" to train. The purpose of this study is to propose criteria to help training developers to determine when to use a specific training strategy. The purpose of selecting an appropriate learning strategy is to take full advantage of these powerful and proven learning tools without misusing them. The primary requirement for systematically selecting a learning strategy is the need to properly identify the learning situations in which each of these learning strategies will assist soldiers in meeting their learning objectives. Equally important is the identification of the situations in which certain learning strategies are inappropriate and may have a negative impact on learning.

DISCUSSION:

Learning Strategies.

There are currently six primary learning strategies used for training in the Army. These are programmed, traditional, exercise, small group, pure group, and mentor or apprenticeship instruction. These six learning strategies and the type of learning materials associated with their delivery are described below.

Programmed Learning.

Programmed learning is highly interactive training which is normally media delivered(i.e.programmed texts or interactive computer driven course ware).

The instruction materials in programmed learning are prepared to lead the student though a carefully structured set of learning events and activities which will allow the student to master the objective with very little additional live human interaction.

Programmed learning is especially effective for learning the basic terminology and procedures of a new skill.

Traditional Learning.

Traditional learning is teach led classroom instruction. The instructional materials in traditional learning are prepared to support lecture, conference, and discussion.

Instructors utilize introduction, motivation, demonstration, practice and evaluation of performance to transfer their knowledge and expertise to the student. They carefully structure the events and activities of learning to accomplish this transfer through continually encouraging the students to read the literature of the skill area and testing them on their master of the material.

Traditional instruction is especially effective for mastering the existing knowledge base of the skill area.

Exercise Learning.

Exercise learning is instructor planned experiments or experiences which lead the student to discover the principle or concept being taught.

The instructional materials in exercise or experimental learning are prepared to allow the learner to perform instructor structured experiments or exercises as the primary tool in learning. It is the trial and error process that leads the learner to discover the theoretical principles involved in the skill being learned.

Experimental learning is especially effective for committing to long term memory the principles and theories which under gird the performance of a skill and developing those skills necessary to expand the base of knowledge.

Small Group Learning.

Small group learning is the use of facilitator led groups of 10 to 15 students to assist one another in learning to apply their collective group skills and knowledge to accomplish facilitator assigned objectives.

Instructional materials used in small group learning are prepared to allow a group of learners to work through problems structured by the instructor/group facilitator. the students have considerable freedom to choose their own learning materials and pace.

Small group learning is especially effective for mastering those skills which require several people to work together to solve complex problems. It is a very useful tool in training experienced personnel when consensus and commitment to implement change are important elements of the training.

Pure Group Learning.

Pure group learning is the use of peer groups to solve student selected problems with the instructors assistance primarily as a learning resource coordinator.

The instructional materials used in pure group instruction are prepared or selected to support the objectives chosen by the group itself. the instructor becomes a coordinator of the activities of the group. The instructor may provide some initial guidance and direction to the group to ensure their objectives are compatible with the broad goals of the institution providing the training.

The pure group process is especially effective for providing training to highly experienced people in the skills of creating new policy or involving very complex problems.

Mentor or Apprenticeship Learning

Mentor or apprenticeship learning is the assignment of one student or a very small group of students to an expert performer for his personal supervision and modeling to assist them in mastering or gaining expertise in task performance.

The instructional materials in mentor tutor learning are often developed by the mentors/tutors themselves. this is in many ways the ideal form of learning from which all others are partial simulations. the expert with s single student at a time, with the actual equipment in the job environment is the ultimate learning strategy and media.

Mentor learning is effective when the purpose of the training includes a high degree of commitment to the task from a student who is highly experience d and may be resistant to change.

REQUIREMENT.

If all of these strategies are useful, but none of them are "the way" to train, there must be some method for determining when to use a specific training strategy. The selection of a learning strategy has often been made almost unconsciously(How did I learn to do this tasks) or, as indicated by past history, by command mandate (you must use small group instruction). Each learning strategy has been proven to be very effective when used with certain student populations. But, each strategy has also been found to be less effective when it became "the way" to train. How can we determine when a specific strategy should be used?

METHOD

Criteria

The student teacher relationship which characterizes each strategy provides the key to understanding the relationship between these strategies. When we array the strategies along a continuum (Table 1) from the strategy in which the teacher provides the most structured learning environment (programmed instruction) to the least structured learning environment (mentor ship) we can see that the student progressively takes more responsibility for his own learning. this change in teacher student roles is appropriately based on the increasing maturity of the student in the area of study. the more mature the student is the more the student is able to take responsibility for his own learning.

LEARNING STRATEGIES						
	Programmed Instruction	Traditional Instruction	Exercise Simulation	Small Group Instruction	Group Process (Pure)	Mentor Or Apprentice
Objectives	Teacher Manages	Teacher Selects	Teacher Provides	Student Selects	Student Provides	Situation Or Or Job
Teacher	Controls	Instructs	Organizes	Facilitates	Coordinates	Models
Student	Interacts	Studies	Experiences	Directs	Creates	Emulates
Content	Language	Literature	Theory	Application	Activation	Operation
Process	Practice	Lecture	Experiment	Relates	Acts	Operates
Philosophy	Behaviorist	Liberal	Progressive	Humanist	Radical	Idealist
Maturity	Beginner					Master
Resistance	Supports the Change Being Taught					Resists the Change
Commitment Level of	Simply Do the Task				Seek to Teach Others the Task	

Table 1

The progressive change in the student teacher relationships is also marked by increasingly personal human relationships from the relatively impersonal, media delivered, programmed learning to the intensely human relationships of pure group and mentor instruction. Learning strategy is the principal vehicle for providing the level of human interaction required to meet the learning objective. High levels of live human interaction are required if the student is resistant to the training or if a high degree of personal commitment is desired from the student at the completion of training.

Considering these selection criteria as parts of a process, we could break it into the following Input, Process and Output structure.

Input

The input criteria are as follow:

a. The experience level of the soldier in the skill
b. the degree of commitment to the task desired of the soldier after training is completed(i.e. simply do the task, sustain the skill to do the task on you own, *teach others to do the task , or actively seek others to* teach to do the tasks.)
c. The degree of anticipated resistance to training expected form the soldier.

Process.

The process for using these criteria should consider the type of personal human interaction involved in

each of the learning strategies. Programmed learning has the least personal human interaction. The interaction becomes progressively greater with traditional learning, exercise learning, small group learning, pure group learning and mentor or apprenticeship learning. the soldier also takes progressively greater responsibility for structuring his own learning objectives and meeting them.

Consider the level of experience of the soldier in the specific tasks or skill area being trained. The height the experience level of the soldier the more personal the interactions must be to meet his individual learning needs related to the objective.

Consider the level of commitment that the soldier must have to the task on completing the training. the grater the need for commitment the more personal the level of human interaction required.

Consider the degree of probable resistance to learning the task or mastering the objective that is presented to the soldiers when they appear for training. If resistance to training is present personal or peer group interaction will likely be required to overcome it.

The three characteristics of the student which influence the need for personal human interaction should be considered cumulatively. the strategy with the least acceptable level of human interaction consistent with the requirements considered should be selected because it is the least demanding in terms of human resources.

Output

The recommendation of an appropriate learning strategy of the initial training of each task or objective considered in the plan for the training program being developed.

The plan should recommend learning strategies which reflect the efficient use of training resources consistent with the demands of effectively training the tasks or objective.

SUMMARY

Training developers can use the criteria presented above and the learning strategies table to assist them in determining the appropriate use for various learning strategies. This should reduce the waste of resources involved in shifting from one strategy to another based on the latest educational fad or the whim of the commander. The recognition that all of these strategies have a legitimate place in Army Training should increase the flexibility of the training system to meet the real needs of students at different levels of maturity in the skill area. It should also enable the developer to better meet those special training needs in which the student is likely to resist adopting the practice being taught or require a high degree of commitment to the task solution.