

The Management of Unlearning: Exploding the “Clean Slate” Fallacy

By JOHN W. NEWSTROM

The objective of most training and development efforts is to help trainees improve performance on the job. To do this, trainers select course content and methods that are designed to change the knowledge, skills or attitudes of trainees. Emphasis has been placed on identifying factors that facilitate the transfer of newly acquired principles or skills to the work environment.

A classic model for characterizing the complete learning process is Kurt Lewin's three-stage approach. Lewin suggests that trainers must consider events prior to learning (unfreezing), as well as what takes place during training (learning itself) and after training (refreezing). Although great strides have been made in our understanding of how people learn (e.g., right/left brain differentiation), little attention has been paid to the equally critical process of unlearning.

Unlearning is defined here as the process of reducing or eliminating preexisting knowledge or habits that would otherwise represent formidable barriers to new learning. In some cases, trainees may be saturated with earlier knowledge; in other cases trainees resist the imposition of training because they were not

involved in determining the need for change. Whether the barrier to learning is tangible or psychological, it must be confronted before new learning can effectively take place.

This article develops a contingency model of training situations and identifies those in which unlearning is most important. The model is followed by a series of strategies—some relatively positive, others somewhat negative and the remainder neutral—for combatting the unlearning challenge.

Figure 1 presents a typology of six generalized learning situations. The objective of change is different in each; therefore, the significance of the unlearning task varies from negligible to maximum across the six situations.

The first situation represents one of the easiest tasks for trainers. It consists of creating a behavior where none previously existed. Consequently, there are no behaviors to replace, and few impediments to the acquisition of new skills are present. A simple example would be teaching novice card players how to play their first game of cards.

Situations 2, 3 and 4 are interrelated, as they all involve either sustaining or changing (increasing or decreasing) an existing behavior. Situation 2 involves an attempt to encourage the continuation of previously learned behaviors. This situation often takes place on the job but becomes formalized when trainees

return for refresher training or when they attend review sessions. Here, unlearning is not a significant problem, as in the case of an automobile driver who takes a refresher course before taking a road test for a renewed license.

Situation 3 occurs when an employee has attained a minimum level of satisfactory performance and the current training task is intended to add depth to the existing skill level. In this case, the challenge is to help the trainee surpass plateaued performance and advance to new levels of achievement. Almost any competitive athletic endeavor provides a relevant example of this moderate-unlearning task, as with a golfer who takes a new series of lessons from a club pro in order to improve his or her game.

The fourth type of learning situation occurs when an individual tries to decrease the frequency of a current behavior. For example, a smoker who recognizes the desirability of non-smoking but finds it impossible to break the habit entirely, may resolve to reduce consumption to one half of the current level. Since smoking is a learned behavior, a moderate level of unlearning is required in order for the individual to break part of the previous pattern.

Trainers frequently face tasks in which the objective is to add a new behavior to the trainee's repertoire which is unrelated to,

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or not complementary to, the existing set of behaviors. This is learning situation 5, and it involves almost no need for unlearning. Elementary school programs which require students to proceed from topic to topic throughout the day illustrate this type of learning.

The greatest unlearning challenge occurs in learning situation 6. Here, trainers are confronted with the task of replacing one behavior with another, totally different one. The trainee must eliminate the first before the second can be acquired, otherwise the original behavior will interfere with the acquisition and demonstration of the new behavior. Rich examples abound where such a dramatic change is required:

- Americans have measured distances in inches and yards all their lives, but are now being asked to discard that system and substitute centimeters and meters as their new measurement system.

- U.S. managers transferred to some foreign countries must learn to drive on the left side of the road. Since the consequences of an error are substantial, it is

important that the previous pattern be blocked out successfully.

- Management development and organizational change programs that seek to change a supervisor's leadership style from one type to another often suffer from the "clean slate fallacy." These programs assume that merely providing information about the nature and advantages of the new style, and modeling it, is sufficient to convince supervisors to adopt a recommended pattern. However, such trainees do *not* have a clean slate, but a deeply entrenched behavioral pattern that has been reinforced for years.

- In the domain of physical rehabilitation and therapy, individuals who have incurred severe trauma to a limb or lost its use due to stroke, must undergo training to develop skills to accommodate the new condition (e.g., stroke victims with permanent paralysis on one side must learn how to write or feed themselves by using the unaffected side).

- Unlearning can be critical in the role of an aircraft pilot. After spending years as a co-pilot, an individual is promoted

to pilot and shifts from the right seat of the cabin to the left side. Although the instrumentation set-up is similar, the controls on the console must now be manipulated with the right hand instead of the left.

- A final illustration of reluctance to break old habits relates to the use of the standard keyboard on typewriters and computer consoles. The "QWERTY" system has existed for a century, but presents gross inefficiencies. More efficient alternatives have been designed (e.g., the Dvorak and Maltron systems place highly used letters on the home row and shift the emphasis to the right hand), but they fail to be embraced by manufacturers, schools and users. Regardless of their merits, these systems would create a significant unlearning task for millions of keyboard operators if they were to change from one system to another.

Strategies for unlearning

These varied examples indicate the broad range of situations that involve the concept of unlearning. Although professional trainers unconsciously may consider the challenge of breaking

Figure 1.
A Typology of Learning Situations

Situation No.	Model*	Objective of Change	Significance of Unlearning
	Old New		
1	0—A	Create a new behavior	Negligible
2	B—B	Sustain previous behavior	Low
3	B—B+	Increase amount of behavior or skill level available	Moderate
4	B—B-	Decrease amount of behavior or skill level available	Moderate
5	B—B+C	Add a new behavior to existing repertoire	Low
6	B—D	Replace one behavior with another	Maximum

* 0 = No previous behavior; A, B, C and D = new behaviors

and unfreezing old habits before instilling new ones, it appears that little conscious attention has been paid to the problem, thus perpetuating the "clean slate" phenomenon described earlier.

The research study sponsored by the American Society for Training and Development on the roles and competencies of professional trainers includes the implementation role of the transfer agent who helps individuals apply learning after the learning experience. No comparable role focuses specifically on the unfreezing process, although this process may be considered by the program designer.

The competencies identified in the ASTD study do provide direction for the unlearning process. The two most relevant competencies for guiding the unlearning process are: adult learning understanding—knowing how adults acquire and apply knowledge, skills and attitudes; and organization change and understanding—knowing what aids and inhibits individual, group and system changes in organizations. Within that framework, a collection of action strategies designed to facilitate the unlearning process has been developed.

Drawing on the concept of force-field analysis, the objective is to encourage change by introducing positive forces or by decreasing the forces that cause resistance. This concept is important in view of the fact that the unlearning task frequently involves movement from the known to the unknown, from relative certainty to uncertainty, from stability to instability and from predictable rewards to unpredictable ones. Without careful management of the unlearning process, training efforts may result in a drain on trainee energies, with subsequent costs in employee frustration. In accordance with the force-field analysis concept, the strategies for change are classified here as positive, negative and neutral approaches.

Positive strategies

• *Public commitment.* The power of public exposure of in-

tentions to change is well documented in our personal experiences. Resolutions to oneself can be bent or broken with little consequence; resolutions made in front of others—especially persons important to us such as spouse, boss or close friend—are generally potent inducements to change. One common element of well-known change programs (e.g. stop smoking, stop drinking) is to publicly acknowledge intentions to cease one behavior and replace it with another.

• *Intrinsic rewards.* People usually continue to do things for which they are rewarded, and rewards may be either intrinsic or extrinsic. Intrinsic rewards are derived from the behavior itself, and can be built into the unlearning process as a part of the reward structure for change. For example, participants in a weight-loss program look forward to an improved self-image upon achievement of their goal. The anticipated improvement can become a driving force which perpetuates the unlearning process necessary for successful goal attainment.

• *Extrinsic rewards.* Continuing the reinforcement theme, extrinsic rewards strengthen the change process. Praise for non-use of the old behavior heightens awareness and can diminish the frequency with which the old behavior is exhibited. Other conspicuous methods of reinforcement, such as an award to the work group that attains the greatest reduction in accident rates, are equally useful.

• *Peer pressure.* Dropping old habits and adding new ones does not necessarily have to be faced on an individual basis. Peer support for the change can be a useful strategem that provides social rewards for the diminution of one set of activities and the enhancement of others. Competition among peers who are all striving for the same unlearning goal can be a motivating force toward change.

• *Feedback.* People can cling tenaciously to old patterns of behavior in the face of mild pressure to change. Only when

faced with overpowering feedback on the ineffectiveness of old methods do some people succumb to reality. Morris Massey suggests that even deeply-held values can undergo change if a person experiences a "significant emotional event"—something so forceful as to awaken a person into new awareness. Shocking statistics such as the financial cost of retaining old procedures or the deleterious impact on physical well-being of a certain life-style, can stimulate the unlearning process.

Negative strategies

• *Fear of failure.* Somehow, the trainer must help the trainee experience dissatisfaction with the old behavior and elicit the conviction that it is truly ineffective. Logical argument sometimes works to convince a person that continuation of previous behaviors may result in failure or personal pain of some type. Since most people are pleasure seekers/pain avoiders, this type of learning is usually effective.

• *Social constraints.* In many cases, new legislation, common social customs or evolving social mores literally dictate our behaviors. Rational people will recognize such constraints, and adapt to the imposition of such controls on their behavior. Examples include "no smoking" areas in public buildings, or federal laws prohibiting discrimination in employment practices.

• *Direct barriers.* When attempts fail to change attitudes and to add new knowledge, a more overt method is to erect barriers to prevent repetition of undesirable behavior, thereby forcing initiation of the unlearning process. Examples are replacement of yardsticks with meter sticks, replacing one tool with another in a journeyman's toolkit or eliminating access to liquor for the alcoholic.

Neutral strategies

There are at least two relatively neutral techniques for facilitating the unlearning process. Time is quite passive and slow. Immersion is more dramatic and extreme. Each has its merits.

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•**Time.** The simple passage of time, assuming that the old behavior is not practiced continually, can lead to a decline in the skill level of an employee. This is the behavioral process of extinction, in which any behavior not rewarded will be practiced less and less frequently. Its advantages are simplicity and economy; however, the product—unlearning—is slow to materialize. This process may be appropriate in situations where it is not critical that the old behavior be discarded, as long as it does not interfere with new responsibilities.

•**Immersion.** Sometimes the most powerful learning strategy can be combined concurrently with the most forceful unlearning strategy. In immersion, the trainee is placed in such an intensive new environment that it is nearly impossible to retain the

old skills. For example, in language camps offered to prepare people for overseas travel, speaking one's native language is forbidden, instructors speak only the language to be acquired and even the food offered is native to the new country.

After just a few weeks, the trainees begin to think, talk and act in the manner of a foreign native. The more a trainer can control the environment of the trainees, the more effective the immersion strategy will be.

Conclusion

The fact that trainees seldom come to training programs with a clean slate—either cognitively, attitudinally or behaviorally—will become increasingly apparent as the number of workers to be

retrained in the 1980s rises due to unemployment. Trainers need to accept this fact, ascertain whether the existing repertoire of the trainees will interfere with new learning and design unlearning strategies to facilitate that process. Trainers can do a better job of managing the learning process and achieving learning goals by understanding and employing appropriate unlearning techniques.

