A Problem With Benchmarking: Using Shaping as a Solution

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For years, organizations have been concerned about the quality of their products and services along with their quality-management processes. Only since the mid-1980s, however, have they paid serious attention to the implementation of total quality management (TQM; Waldman, 1994). Though originating in the manufacturing sector, TQM now has applications in all areas of the economy.

One practice widely used in TQM is benchmarking. Ever since Xerox Corporation popularized benchmarking in the early 1980s, it has attracted an increasing number of advocates, and many books provide recipes for its implementation (e.g., American Productivity & Quality Center, 1993). As defined by Xerox, benchmarking is the continuous process of measuring a company’s products, services, and practices against the world’s toughest competitors to identify areas for improvement (Ford, 1993). Benchmarking has been recommended as a means of setting a goal for organizational performance and “leads to profitable . . . businesses that meet customer needs and have a competitive advantage” (Camp, 1989, p. 3).

But not in all cases. The International Quality Study commissioned by the American Quality Foundation (1992) found that benchmarking produced positive results on bottom-line variables only in the best-performing companies.Companies rated medium- or low-performing showed no improvement. The study showed that, “In fact, low performers who benchmark their marketing and sales systems can actually expect their performance to suffer” (American Quality Foundation, 1992, p. 16).

In summary, benchmarking may facilitate improved performance, but not always. Benchmarking can be effective when it results in moderately difficult goals for an organization, but when the goals are seen as radical departures from the organization’s past, employees either fail to understand the change or perceive it to be unacceptable or impossible to reach (Reger, Gustafson, DeMarie, & Mullane, 1994). In these situations, radical attempts to replace old organizational goals with new benchmarked ones are much more likely to be met with resistance.

It is easy to see why the American Quality Foundation (1992) obtained these results. The best-performing companies probably found the gap between current performance and their benchmarked goal to be challenging but obtainable (Higgins, 1989). This gap may have helped to redefine employees’ beliefs about the upper limits of achievable performance. Benchmarking also may have forced management to admit that their current beliefs about potential organizational performance were inaccurate (Munroe-Faure & Munroe-Faure, 1992).

Conversely, many of the medium- and low-performers may have been overwhelmed by the discrepancy between their performance and that of the benchmark, therefore viewing the goal as impossible. A large body of research has
demonstrated that impossible goals do not lead to performance enhancement (Locke & Latham, 1990).

The optimum situation is when the difference between current and ideal is large enough to create the stress necessary to motivate change (Huff, Huff, & Thomas, 1992), but is not so great that the goal is perceived as unreachable (Osgood & Tannenbaum, 1955). Asking for quantum leaps in performance will only discourage the performer and disappoint the manager.

**Shaping**

From a practical standpoint, what can management do to help ensure that benchmarking will be an effective, positive strategy? The answer lies in "shaping," a behavior change technique that promotes gradual improvement from a known, initial behavior to the desired goal (Grant & Evans, 1994). In shaping, reinforcement or reward depends on behaviors that are increasingly similar to the terminal or goal response, i.e., the benchmark. The key idea is to encourage gradual approximations to the end goal. Shaping shares certain features of the children’s game of “hot and cold” (Morgan, 1974). In general, the reinforcing consequence, saying “hotter,” occurs only when movement is closer to the object than previous movements. In this way, only responses that are increasingly similar to the goal are reinforced.

The old adage, “A thousand-mile journey begins with a single step,” is analogous to the shaping process if each step forward is rewarded. Most complex organizational behavior begins with a single step and successively builds upon it. Hill (1963) described the process as follows: “The behavior is shaped through a series of successive approximations, each made possible by selectively reinforcing certain responses and not others. Thus behavior is gradually brought closer and closer to the desired pattern” (p. 71).

Shaping is often required when teaching new responses or activities and when working with people who have been unsuccessful at a particular behavior or performance in the past. For example, the performance of new employees and poor performers may require extensive shaping.

An example of how shaping has been used successfully in business involved a management trainer who wished to shape public speaking behaviors in supervisors who feared public speaking. Although the supervisors experienced much discomfort reading a prepared speech to others, they had much less trouble reading lists of unrelated words to an audience. Therefore, list reading was selected as the initial step in the shaping process, and the trainer provided abundant praise when each supervisor successfully mastered the reading. Subsequent steps included reading a written paragraph to the class without looking at the listeners, followed by reading a written paragraph to the class and looking at the class briefly after each sentence, and so on toward the target goal of giving a 15-minute extemporaneous speech to the class. After each step in the process, the instructor complimented the trainee and solicited praise for the presenter from the other classmates.

As this example shows, managers must be creative in selecting a starting behavior and imaginative about shaping responses in the direction of the benchmarked goal. Shaping steps should be large enough so that progress is rapid but small enough to be attainable. When too large a step is required, the behavior may be “lost” and the response must be reshaped by reverting to an earlier step.

**Setting Subgoals in Shaping**

When using shaping, the criterion for reinforcement is any improvement, no matter how small. Generally, the smaller the improvement that is reinforced, the faster the progress (Daniels, 1989). Therefore, shaping consists of setting subgoals toward the specified final outcome. It is important to remember that the new level should be reinforced/rewarded several times until it stabilizes, before proceeding to the next logical subgoal.

Having many subgoals instead of one large goal is not the distinguishing feature of shaping. Rather, it is the subgoals and receiving consequent reinforcement that defines it. For example, if people are performing at 75% efficiency and you set goals at 95%, 96%, and 97% you are not shaping. The initial goal may be too far from current performance to motivate behavioral change.

Successful shaping requires knowledge, skill, and patience: knowledge of the proper behaviors and the sequence of behaviors that constitute the desirable performance; the patience to watch others make mistakes at something you do well; and the skill to recognize and reinforce even small improvement. Most of us are not highly skilled at identifying small improve-

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ments in performance and reinforcing them. We tend to look for "all or nothing" changes. Yet this ability is essential for the most effective and efficient managers, teachers, counselors, and coaches and can be learned. When done properly, shaping is the most efficient and quickest route to high performance (Daniels, 1989). What was believed to be unattainable becomes reachable through a series of small incremental changes (Quinn, 1980).

A Shaping Strategy for Managers
To implement an effective shaping strategy, several steps should be followed (Luthans & Kreitner, 1975):

1) Precisely define or pinpoint the goal or target behavior. This target behavior should always be related to performance.

2) If the target behavior is a complex chain of behavior, reduce it to a discrete, observable, and thus measurable sequence of specific behavioral events or steps.

3) Make sure organizational members are capable of meeting the skill or ability requirements for the new goal. Train them in appropriate behaviors if needed.

4) Select potentially effective positive reinforcers on the basis of the organization’s history & members’ perceptions.

5) Make all positive reinforcement contingent upon successively closer approximations to the target or goal. The behavioral chain must be built link by link.

6) Maintain and strengthen target behavior. Once the desired target response is achieved, it must be continually monitored, managed, and reinforced.

For a better understanding of the shaping process, these steps are explained in more detail.

• Define the target behavior. What we want accomplished must be pinpointed precisely. This requires precise descriptions of behavioral results that are observable and measurable as well as indications of where and when the behaviors are expected to occur. Results are tangible, observable behaviors, not beliefs, attitudes, or anything internal, subjective, or abstract. Overgeneralization or imprecision during this first step will sabotage the later steps and permanently cripple any attempt to successfully shape organizational behavior.

This initial step in the shaping process is similar to management by objectives (MBO; Drucker, 1954). It can be defined as setting behavioral objectives and appraising performance results. MBO experts generally agree on the need for specific, measurable objectives. The close correlation between objectives and pinpointed behavior in the shaping process may seem obvious. However, there are differences. The shaping process gives closer attention to specific performance-related behaviors. MBO relies heavily on self-control with the commitment to and accomplishment of mutually determined objectives. Shaping entails a more precise and systematic program of positive consequences for improvement than the typical MBO approach.

• Break down behavior into sequential steps. A natural follow-up to the first step is to divide complex behavior into sequences of observable behavioral events, so observers can decide whether they have occurred or not. We have discussed the progression of shaping and recognize that the responses that intervene between the starting point and the terminal goal are broken down into a set of steps, or successive approximations of the target behavior. Now we need to consider how large each step (approximation/subgoal) should be and how long the organization needs to remain focused on each step before proceeding to the next.

What action should be taken if the organization’s behavior begins to deteriorate? Unfortunately, there are no hard and fast rules. In general we can say that each step must be small and specific enough to be accomplished but not so small as to be boring or trivializing. Let us generalize from what we already know about training and instruction.

First, observe the organization’s behavior closely. If progress is consistent and satisfactory, we can assume that the step size and time spent with each step is appropriate. But if progress begins to level off or falter, the steps should be reexamined. If goal levels are increased too rapidly, failure to earn reinforcement will impede progress. The situation should be structured so employees succeed much more often than they fail. The best mistake to make is to set the goals too low. If the goal is low, the probability of success is greater. If the goal is reached and success is celebrated, the motivation to do even more the next time is usually increased.

• Meet skill requirements. The third step empha-
sizes the technical skill requirements which, if not mastered by the employees, could block the attainment of the target behavior. Managers are cautioned against using labels like “lazy,” “talks drive,” and “bad attitude” in describing employee skill deficiencies. Such vague generalities imply that the problem, and therefore the solution to the problem, is within the person. Using labels to prescribe performance not only cannot change it, but also produces blame with all the problems associated with that process. Labels put individuals on the defensive and interfere with their cooperation. When a manager approaches job requirements this way, the only solution is to tell the person to “shape up or ship out,” which introduces another set of managerial problems and provides little benefit. Skil deficits, conversely, can usually be overcome.

- Select positive reinforcers. Just as the target behavior and its components must be identified, appropriate positive reinforcers must be specified as well. One place to start is to analyze individual employee histories of reinforcement and self-report instruments. The critical point is to make sure that the potentially most powerful reinforcers or rewards are made part of the shaping process.
- Apply contingent reinforcers to approximations. Complex chains of responses leading to the target behavior must be built link by link. This is accomplished through a carefully managed program of positive consequences. Each link in the behavioral chain is positively reinforced initially and later is not reinforced, as the next behavior closer to the benchmark occurs. The new behavior is rewarded instead. Thus, only the newest link or the most behavior closest to the target behavior is reinforced.
- Celebrate results. Remember that how you set goals in relation to present performance is critical, but an equally important consideration is the celebration of goal attainment. Avellan is a great motivator. David McClelland, a Harvard psychologist who has studied achievement for decades (McClelland, 1961), determined that the highest achievers in our society set moderate goals. To become high achievers these persons undoubtedly have high aims, but they set moderate goals to manage their day-to-day performance. Employees are no different; they can operate at their best nearly every day. What we have to do is help them reach that benchmark one step at a time. “Goals that are celibated are records waiting to be broken.” (Daniels, 1994; p. 124).

Conclusion
The foregoing six-step strategy permits the practicing manager to systematically reduce performance deficits in an employee’s behavior. Shaping permits the attainment of goals initially thought impossible. Supervisors and managers can benefit from a working knowledge of how organizational behavior is shaped and developed. Executives using benchmarking strategies to set goals and improve organizational performance must be aware that the procedure can be helpful only when the goals established are perceived by employees as possible and attainable. Benchmarking that results in too large a gap between current and desired performance can be counterproductive.

Dr. Von Bergen, an industrial psychologist and professor, has worked for over 20 years in business management applying psychological principles to industrial situations. Dr. Soper is a frequent consultant to management in work motivation and counseling and has published extensively in these fields.

REFERENCES
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